

An aerial photograph of Onondaga Lake, a large body of water with a deep blue hue. The lake is surrounded by a mix of green fields, residential neighborhoods with small houses, and industrial areas with larger buildings and parking lots. A multi-lane highway runs along the western and southern shores of the lake. In the distance, a small white plume of smoke or steam is visible on the horizon under a blue sky with scattered white clouds.

ONONDAGA LAKE

BEACH FEASIBILITY STUDY

FINAL REPORT

APRIL 2021

Cover Photo Credit: Honeywell

ACKNOWLEDGMENTS

ONONDAGA LAKE BEACH FEASIBILITY STUDY & DESIGN

Prepared For:

Onondaga County

J. Ryan McMahon II, County Executive
Travis Glazier, Director, Office of the Environment
Bill Lansley, Commissioner, County Parks
New York State Department of State

Prepared By:



Project Steering Committee:

Legislator

Judith A. Tassone
e: tassone@twcny.rr.com,
p: (315) 457-5458

Onondaga County Parks

Brian Kelley
e: BrianKelley@ongov.net

Onondaga County Health Department Bureau of Public Health Engineering Director

Jeffery Till
e: JefferyTill@ongov.net
p: (315) 435-6600 ext. 4503

Onondaga County Department of Water Environment Protection Commissioner

Frank Mento
e: FrankMento@ongov.net
p: (315) 435-2260

Onondaga County Department of Water Environment Protection, Sanitary Engineer II

Janaki Suryadevara
e: JanakiSuryadevara@ongov.net
p: (315) 435-2260 Ext. 317

Onondaga County Community Development Director

Martin Skahen
e: MartinSkahen@ongov.net
p: (315) 435-3558

Liverpool Mayor

Gary White
e: mayor@villageofliverpool.org





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INTRODUCTION

PURPOSE OF PROJECT

Onondaga Lake has experienced a remarkable recovery over the past two decades. Located just northwest of the City of Syracuse (City) in Onondaga County, New York (County), the lake is emerging as a community asset following extensive cleanup programs to address legacy industrial contaminants and improve municipal wastewater treatment and stormwater management. Water quality in the northern portion of Onondaga Lake has consistently met New York State swimming standards since 2010.



Onondaga Lake

With funds awarded by the New York State Department of State (NYSDOS) Local Waterfront Revitalization Program (LWRP), the County hired a consultant team to conduct a Beach Feasibility Study (FS) and Design Project and prepare construction documents for a potential beach on Onondaga Lake. In 2018, the County's Office of Environment began to explore the feasibility of a public beach within Onondaga Lake Park, a project that is consistent with the broader goal of restoring Onondaga Lake as a vital natural resource and returning the lake to the community. The consultant team is led by Barton & Loguidice with subconsultants Anchor QEA, LLC.; EcoLogic, Economic Development Strategies; and the Popli Design Group.

The purpose of the Onondaga Lake Beach Feasibility Study and Design Project is threefold:

- 1.** Assess the current level of community interest and public utility of a beach on Onondaga Lake, and the extent to which the public might use a beach on the lakeshore.
- 2.** Identify the best location for a potential beach on Onondaga Lake, based on an assessment of shoreline conditions; land use constraints; transportation and access considerations; infrastructure needs; and public input regarding desired location, in-water conditions, and features.
- 3.** Develop a shovel-ready design for the identified best location, including amenities, that would make the beach a success for the community. Upon completion of the FS, all information collected will be provided to the public and local lawmakers to guide future decision-making on the potential for a beach on Onondaga Lake. There were no funds, local or state, allocated in association with the FS for construction.

PROJECT BACKGROUND

Overview of Onondaga Lake and Its Watershed

Onondaga Lake is relatively small, with a surface area of 4.6 square miles, an average depth of 36 feet, and a maximum depth of 64 feet. The lake basin is characterized by two minor depressions, referred to as the northern and southern basins, separated by a shallower region near the center. The lake's watershed encompasses approximately 285 square miles, almost entirely within the County, including six natural subbasins: Onondaga Creek, Nine Mile Creek, Ley Creek, Harbor Brook, Bloody Brook, and Sawmill Creek. In addition to these natural tributaries, treated wastewater is discharged to the lake, as is storm runoff from developed

areas. The watershed of Onondaga Lake is relatively urbanized compared to other lakes in central New York: 18% of the watershed is urban/suburban, 9% is developed open space, 34% is forested or scrub/shrub, 29% is cultivated lands or pasture, and the remaining 10% is composed of wetlands, lakes, and barren land (UFI et al. 2019).

Urban areas of the City of Syracuse, two towns (Geddes and Salina), and two villages (Liverpool and Solway) border the lake. The County owns most of the shoreline and maintains a popular park and trail system around the lake. Syracuse residents and visitors use the parklands for varied recreational activities and cultural entertainment. The lake is increasingly popular for boating, and local and regional fishing tournaments attract anglers to the lake each year.

Onondaga Lake's History and Recent Restoration

Onondaga Lake was the site of the founding of the Haudenosaunee Confederacy in the late sixteenth century, and it was important to the Onondaga peoples for its natural resources and as a source of food (OEI 2010). Settlers began harvesting salt on the lake's shores in the late 1700s, and Syracuse first incorporated as a municipality just south of the lake in 1825. During the late nineteenth and early twentieth centuries, Onondaga Lake was a popular tourist attraction. The western and northern lakeshore areas were home to resorts, beaches, pavilions, and amusement parks.

As industry grew and Syracuse's population expanded during the twentieth century, the southern and western portion of Onondaga Lake became increasingly exposed to contamination by both industrial discharges and municipal wastewater. In the 1940's New York State Department of Health (NYSDOH) advised against swimming in Onondaga Lake.

In 1994, the lake was added to the federal Superfund National Priority List, and state and

federal agencies pursued cleanup agreements to address legacy industrial contaminants and improve wastewater treatment.



Spectators watching regattas race on Onondaga Lake

Since 1998, the County has invested heavily in advanced wastewater treatment and a successful stormwater management program. In addition to this municipal investment, actions to remediate the legacy contaminants in lake sediment and adjacent areas have improved water quality and habitat conditions in the lake. These coordinated efforts to address wastewater, stormwater, and industrial contamination have brought about the lake's remarkable transformation. The County has also helped to spur lake revitalization by creating opportunities for the public to enjoy Onondaga Lake through a vibrant park, an extensive trail system, and the St. Joseph's Health Amphitheater. A second public boat launch on the lake's west shore adjacent to the Honeywell Visitor's Center is expected to open in 2020.

Public Interest in a Beach

The public has expressed interest in an Onondaga Lake swimming beach consistently over time. Since the 1930s (Sargent 1945), the County has explored a recreational goal of adding a bathing beach on the northern end of the lake. The 1975 Onondaga County Environmental Plan incorporated future bathing beach plans for Onondaga Lake, stating

that due to limited public access to and drinking water supply status of other nearby lakes, “Without question the water resource with the greatest potential for future recreational development is Onondaga Lake.” (OCEMC 1975) The Onondaga Lake Partnership’s 2007 report, *Reconnecting with Onondaga Lake 2007 Report (Ecologic 2007)* cited public interest in a swimming beach of the shores on Onondaga Lake and emphasized keeping the shoreline open to the public for recreational use. A 2012 report, FOCUS Greater Syracuse (Foraging Our Community’s United Strength) on Onondaga Lake (F.O.C.U.S. 2012) synthesized 54 past public surveys and visioning sessions on the lake since 1928 and presented the results of a new public opinion study with diverse local stakeholders. The 2012 report concluded that a majority (52%) of the 1,100 respondents indicated that having a public beach on Onondaga Lake would be important or very important to them.

One goal of the FS and Design Project is to further examine public interest in new beach amenities and swimming access for Onondaga Lake. Results of a 2019 online survey (see [Appendix 5](#)) (Onondaga County 2019), which collected the opinions of over 2,000 respondents, reflect that it is reasonable to assume there would be at least 31,600 potential first-time beach visitors in a season. This calculation is based on those who are already using Onondaga Lake Park, believe the lake is safe for swimming, are currently visiting other beaches in the region, and indicated they would use a beach at the park if it were developed (Onondaga County 2019b)

This FS and Design Project examines public interest in a beach and provides a detailed analysis of what it might entail with full consideration of public comments.

Involved Agencies

Several regulatory agencies are involved in environmental quality and public health decisions regarding the feasibility of a beach on the shores of

Onondaga Lake:

- The New York State Department of Environmental Conservation (NYSDEC) is responsible for classifying water bodies in the state and monitoring whether ambient water quality standards are met. NYSDEC has also been responsible for oversight of a major long-term study of lake water quality and ecosystem health.
- In addition, NYSDEC has been the lead agency supervising the remediation of industrial contamination in the lake.
- The US Environmental Protection Agency (EPA) has supported NYSDEC during the investigation and remediation of industrial contamination associated with the lake. While the in-lake remediation was completed in 2016, the EPA continues to review monitoring data and issue Five Year Review Reports that evaluate the ongoing protectiveness of the remedy.
- New York State Department of Health (NYSDOH) and the County Department of Health (OCDOH) set and enforce water quality standards for new beaches before they open, and they monitor existing beaches for compliance with these standards. NYSDOH criteria include assessment of a water body’s bacteriological, chemical, physical, and biological quality.
- The United States Army Corps of Engineers (USACE) has regulatory jurisdiction over any fill and excavation within the Ordinary High Water (OHW) of Onondaga Lake.

NYSDEC, NYSDOH, USACE, and OCDOH have been involved in the FS process, and in January 2019 they issued the following statement:

“The Onondaga Lake Beach FS and Design Project offers an opportunity for the Central New York community and involved regulatory agencies to consider a new public swimming beach on the northern shore of Onondaga Lake. A beach on

Onondaga Lake is now a real possibility, thanks to the significant improvements in lake water quality evident for more than a decade, and the recent completion of the Onondaga Lake remediation. The FS is an inclusive County project that will involve NYSDEC, NYS, OCDOH, and the EPA throughout the process. This project is funded through an Article 11 Environmental Protection Fund Local Waterfront Revitalization Plan Grant. The agencies have agreed to participate in this community conversation. The final decision to move forward with constructing a beach rests with the County Executive and Legislature. This project is consistent with the goal of returning the lake to the community and the revitalization of Onondaga Lake as a vital natural resource.”

LAKE CLEANUP HISTORY, PROGRESS, AND CURRENT CONDITIONS

Industrial Remediation

Salt springs near Onondaga Lake supported the development of commercial salt recovery operations in the 1800s, which led to development of the railroad and the Erie Canal. In turn, this infrastructure contributed to the emergence of numerous industries in the Syracuse area, including manufacturing of chemicals (such as Honeywell’s predecessor companies), fertilizer, steel, pottery, china, and other products (ROD 2005). These industries were supported by manufactured gas plants, petroleum storage facilities, and other companies. Collectively direct and indirect industrial discharge of waste to the lake itself continued for over 100 years.

In 1992, Allied Chemical Company, a predecessor of Honeywell International Inc. (Honeywell), began a multi-year investigation of contamination in the lake under the direction of NYSDEC and EPA. The work culminated with a 2005 Record of Decision (ROD) issued by NYSDEC and EPA; that laid out the remedial plan for the lake (NYSDEC, 2005)

Consideration of risk to human health and the

environment was evaluated during this process. In 2002, NYSDEC completed a rigorous Human Health Risk Assessment (HHRA) of Onondaga Lake using EPA protocols (NYSDEC 2002). Researchers and regulators examined both water quality and sediment quality and evaluated the potential for adverse health impacts on swimmers and waders. NYSDEC and EPA concluded that human health risks related to exposure to water and/or sediments in the north basin of Onondaga Lake did not exceed levels that posed adverse risks to human health.

Honeywell commenced dredging of contaminated sediment in 2012, and over 3 years removed approximately 2.2 million cubic yards of contaminated sediments. The remediation also involved construction of an isolation cap over 425 acres in shallow areas of the lake, a thin-layer cap over 154 acres in deeper areas, and habitat restoration in nearshore and shoreline areas (EPA 2019)



Solvay Process Company, Syracuse, New York

The dredging, capping, and initial restoration phase of the cleanup effort was completed in 2017. Additional restoration projects are being implemented to improve habitat and compensate for lost use of resources.

Municipal Wastewater and Stormwater Improvements

As Syracuse grew during the early twentieth century,

inadequately treated wastewater became an increasing source of pollutants entering Onondaga Lake. The County constructed the Metropolitan Syracuse Wastewater Treatment Plant (Metro) at the southern end of the lake in 1960. Despite upgrades to Metro’s treatment processes in the 1970s to 1990s, treated effluent produced elevated levels of ammonia, phosphorus, and bacteria in the lake, as well as low concentrations of dissolved oxygen. The problem was exacerbated by the City of Syracuse’s aging stormwater infrastructure, portions of which include combined sewers, which carry both storm runoff and sewage to Metro. During wet weather, pipe capacity can be exceeded, causing combined sewer overflows to nearby streams.

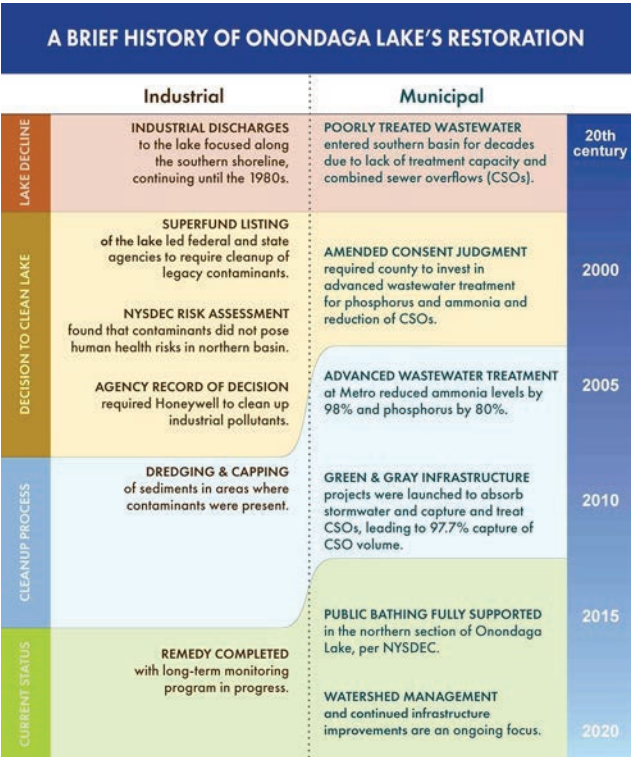
In 1998, the County committed to improving its wastewater collection and treatment infrastructure through an Amended Consent Judgment program, which included three central elements: (1) improvements to Metro to enhance ammonia and phosphorus removal; (2) improvements to the collection system to reduce combined sewer overflows; and (3) comprehensive monitoring through an annual Ambient Monitoring Program (AMP) to measure the effectiveness of the improvements and evaluate whether impaired uses are restored.



Onondaga Lake clean-up

FIGURE 1: A Brief History of Onondaga Lake’s Restoration:

Figure 1



Installation of an advanced treatment systems at Metro in 2004 to 2005 led to rapid improvements in lake water quality, bringing the lake’s southern basin into compliance for both ammonia and phosphorus (see [Figure 1](#)). In addition to these improvements, the County upgraded its stormwater infrastructure to reduce the amount of stormwater entering sewers and built additional capacity to store runoff and prevent overflows. An award-winning green infrastructure program, Save the Rain, in conjunction with extensive investment in gray infrastructure solutions such as storage, has resulted in over 97% capture of combined sewer overflow volume.

The investment in improved wastewater collection and treatment has achieved remarkable improvement in the quality and usability of Onondaga Lake. Habitat for aquatic life has been greatly enhanced by reduction in ammonia and

increased dissolved oxygen. The reduction in phosphorus levels has reduced phytoplankton (algae and cyanobacteria) levels and improved water clarity. With clearer water, habitat for rooted aquatic plants has expanded; the plants stabilize bottom sediments and provide habitat, and shelter for fish spawning and nursery areas. Onondaga Lake now has water quality and aquatic habitat conditions comparable to other regional lakes.

Onondaga Lake's North and South Segments: Classification and Best Use

NYSDEC is responsible for classifying the state's lakes, streams, rivers, and estuaries according to their "best use," which indicates their suitability as a water supply, recreation (swimming and boating), aquatic life protection, etc (Clean Water Act 1972)¹. Water quality standards are defined based on scientific analyses that reflect these designated best uses. Regular testing is conducted to ensure that water quality and habitat conditions support these designated uses.

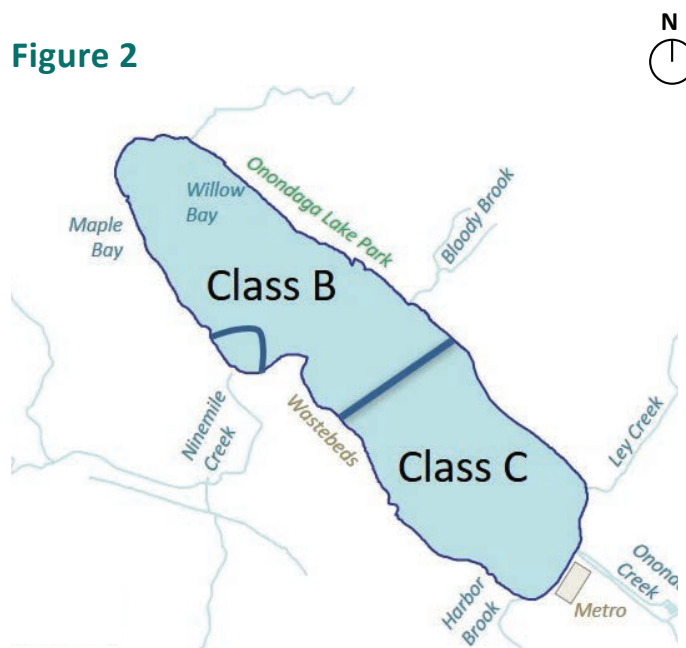
Waters in the northern portion of Onondaga Lake are classified as Class B (see **Figure 2**), which means the best uses for Class B waters are for primary and secondary water contact recreation and fishing. Waters in the southern portion of the lake are Class C waters. The best usage of Class C waters is fishing and is also suitable for primary and secondary water contact recreation. Class B and Class C waters are sufficient for fish, shellfish, and wildlife propagation and survival. Onondaga Lake has a NYSDOH fish consumption advisory, which provides information on fish species and quantities suitable for consumption.

FIGURE 2: WATER QUALITY CLASSIFICATION, Onondaga Lake:

NYSDEC's 2014 Waterbody Inventory and Priority Waterbodies List (NYSDEC 2014) states that, in the northern two-thirds of the lake,

"public bathing and other recreation uses are fully supported although currently there are no designated public beaches on the lake. Previous assessments had indicated these uses to be impaired; however data for the period from 2002-2012 show pathogen (coliform) standards for protection of contact recreation to be consistently met." An independent study has confirmed the northern segment of the lake has consistently met state swimming standards since 2010.

Figure 2



Source: Onondaga County Ambient Monitoring Program

¹ The 1972 federal Clean Water Act defines the regulatory framework for water pollution control in the US and identifies fishable, swimmable waters as a key element of national goals (§101(a) PWL 92-500). The Clean Water Act recognizes that states have primary responsibility for meeting these goals.



EXISTING CONDITIONS & PLANNING CONTEXT

EXISTING CONDITIONS

The north basin of Onondaga Lake is a Class B waterbody, meaning the NYSDEC deems it suitable for use as a public beach, general recreation and support of aquatic life. Onondaga Lake Park surrounds most of Onondaga Lake with the northeastern portion (in the Village of Liverpool) representing the primary park area. Onondaga Lake Park has a multi-use trail system that covers 7.5 miles of off-road paved pathway which is referred to as the Loop the Lake Trail (see [Figure 3](#)). The east shore portion of this trail system is within the Village of Liverpool and accessible in various location via sidewalk and neighborhood streets. Currently there are no designated public beaches in Onondaga Lake Park or anywhere on Onondaga Lake. The data collected for the FS identified three potential locations for public beach development within the boundaries of the study area.



Community Connectivity & Existing Trails

The east portion of Onondaga Lake Park and the east section of the Loop the Lake trail are primarily located within the Village of Liverpool. The Village has sidewalks, crosswalks and a village owned park which encourages residents to access the assets at Onondaga Lake Park and the Onondaga Lake shoreline.

Signage exists in and around the Park to inform visitors of access points and amenities. The Loop the Lake Trail is comprised of over 7.5 miles of trail network which connects the Park amenities and natural environment around the lake. The Loop the Lake Trail is a paved trail that is between 8' and 12' wide throughout. Portions of the trail connect directly to village sidewalks and neighborhood streets.

Land Use & Amenities



The land surrounding Onondaga Lake Park's eastern portions is a mix of commercial and residential with all zoning and planning outside of the park controlled by the Village of Liverpool and its comprehensive plan. The Village Hall, History Museum and Village Park are in close proximity, only a few blocks, from the entrances to Onondaga Lake Park and the Loop the Lake Trail.



Existing surrounding land use



Onondaga Lake Park marina



Photo credit: Julie Brown, riders: Matt Widay & Ryan McGraw



Kayakers on Onondaga Lake



Rowers competing at the regatta

Water Use & Amenities

The east portion Onondaga Lake Park includes a marina and public boat launch which provides various types of boating access to Onondaga Lake. There is also a 50' floating pier, outlet jetties, and highway bridge abutments which provide various shoreline angler access points. The marina a yacht club promote public recreational use of the waters of Onondaga Lake. Onondaga Lake is a popular location for rowing, kayaking and canoeing with access being provided by the east areas of Onondaga Lake Park.

FIGURE 3: CONTEXT MAP
Existing Land / Water Use & Amenities



LEGEND

- | | | | | | |
|--|-------------------------|--|--------------------------------------|--|----------------------------------|
| | POTENTIAL PROJECT SITES | | EAST SHORE TRAIL | | BIKE TRAILS |
| | PROJECT STUDY LIMITS | | LAKELAND NATURE TRAIL | | BOATING / KAYAKING |
| | ONONDAGA LAKE PARK | | JOHN HALEY MEMORIAL WEST SHORE TRAIL | | BOAT LAUNCH / MARINA |
| | GREEN SPACE | | PARK / GREEN SPACE | | HISTORIC SITES / PUBLIC BUILDING |
| | COMMERCIAL USE | | ATHLETIC FIELDS | | PICNIC AREAS |
| | RAILROAD | | SCHOOL | | PLAYGROUNDS |

FIGURE 4: CONTEXT MAP
Existing Wetlands & Flood Plains



LEGEND

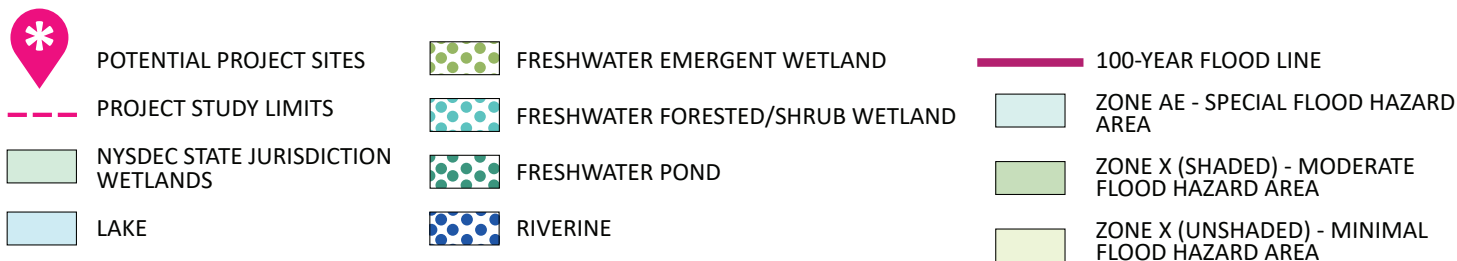


FIGURE 5: EXISTING WETLANDS & FLOOD PLAINS
Willow Bay Area



FIGURE 6: EXISTING WETLANDS & FLOOD PLAINS
Bloody Brook Area



PARKING & ACCESS

The eastern park area can be accessed by a number of adjacent streets including Lake Drive, South Willow Street, the Onondaga Lake Parkway, Long Branch Road, Birch Street, Sycamore Street, and Vine Street. Each of these streets provides direct access to the park. The most traveled route, the Onondaga Lake Parkway runs east to west along the lake's waterfront, connecting this large linear greenway.

Willow Bay Area

Parking:

The Willow Bay area currently has one large parking lot that can be accessed from Long Beach Road and Loop the Lake Trail. It consists of approximately 89 parking spaces on the right portion, and approximately 147 on the left side, each with parking islands and a few large shade trees. Existing overflow parking is located on the large green lawn area northwest of the parking area. It is used to accommodate park users when there are large events and can be accessed by following the roadway under the New York State Thruway bridge.



Willow Bay parking area

Access:

The Long Branch Road is the main vehicular route to access the Willow Bay area, it runs along the lake to and from the main park area and up to Willow Bay. Long Branch Road can be used to enter the Willow Bay portion of the park from the north. A meandering multi-use trail known as Loop the Lake Trail can also be found along the lake's waterfront. This trail runs from the Griffin Visitor Center to

Willow Bay and across Long Branch Road to the other side of the Onondaga Lake Outlet to the Seneca River.



Access under NYS Thruway and overflow parking area

Bloody Brook Area

Parking:

The Bloody Brook area has two large parking lots within its vicinity. The first is adjacent to Onondaga Lake Park's main entrance, located in front of the Griffin Visitor Center. It consists of approximately 195 parking spaces, 12 spaces of which are Americans with Disabilities Act (ADA) accessible. The other parking lot is located at the end of South Willow Street near the Salt Museum and contains approximately 207 spaces, including six ADA accessible spaces.



Parking lot near the Griffin Visitor Center



Parking lot at the end of South Willow Street

Access:

Many side streets draw park users from the Village of Liverpool, including Vine Street, Sycamore Street, Birch Street, and South Willow Street. South Willow Street is the most convenient route for those entering the main park near the Griffin Visitor Center and Bloody Brook area. It travels past both parking lots and into Onondaga Lake Park. Onondaga Lake Parkway is another route that accesses this portion of the park, leading park users through the main park area and up to Willow Bay. Loop the Lake Trail, is an extensively used multi-use trail that meanders along Onondaga Lake encouraging many cyclists, pedestrians, and rollerbladers to travel along the waterfront.



Loop the Lake Trail



* WILLOW BAY

* BLOODY BROOK

ONONDAGA LAKE

SITE ALTERNATIVES & SELECTION

POTENTIAL SITE LOCATIONS

The project team studied three locations along the northeastern shore of Onondaga Lake, for consideration of further study. Two locations at Willow Bay and a third location near Bloody Brook. The research included review of existing features and facilities surrounding each site and any proposed components necessary to accommodate the public (i.e... public restrooms, changing areas, or existing parking lots).

Willow Bay Locations:

The Willow Bay area is a popular picnic space for visitors to Onondaga Lake Park. Large canopy trees and several pavilions provide shaded areas and can be found along the East Shore Recreation Trail, a multi-modal path that leads visitors to this portion of the park. Willow Bay hosts events annually and offers many seasonal activities. Waterfront access, two large parking lots, existing building facilities, and spectacular views of the City make this a great location for further study. (See **Figure 10** for a map of the existing inventory and future opportunities for a beach in Willow Bay)

Shoreline Edge Conditions

Willow Bay is located within the north basin of Onondaga Lake, just east of the Seneca River Outlet. The rock jetties that extend out from the Seneca River Outlet help to protect Willow Bay from wind-generated waves from the prevailing wind directions (from the west and northwest) as well from boat wakes as boats enter and leave Onondaga Lake via the lake outlet to the Seneca River.

At the Willow Bay - Site 1A (see **Figure 3**), the shoreline consists of a gentle slope that extends from the Onondaga Lake Park property into the lake. This area has formed a natural beach in the lake with the shoreline consisting of shell fragments, sands, and gravelly material. Vegetation along the shoreline in this area has also been controlled to allow for kayak access to the lake. There are a small number of large trees

located along the shoreline near the eastern end of this site. Willow Beach Site 1B (see **Figure 3**) is located to the east of Willow Bay - Site 1A (See **Figure 3**). The shoreline in this location consists of large armor stone and vegetation intermixed with a small number of large trees located along the shoreline. This Onondaga Lake Park greenspace extends right up to shoreline.

Lake Bottom Constraints

The lake bed continues into a gentle slope off the shoreline in this area. Water depths range up to 4 feet within 65 to 70 feet from shore and up to 6 feet approximately 100 feet from shore, which provides a range of water depths for swimming near the shore. The lake bottom sediments nearshore in the beach area also consist of shell fragments, sands, and gravelly materials that are seen along the shoreline. The offshore area contains submerged aquatic vegetation (SAV) that would need to be considered as part of operations and maintenance at this location.

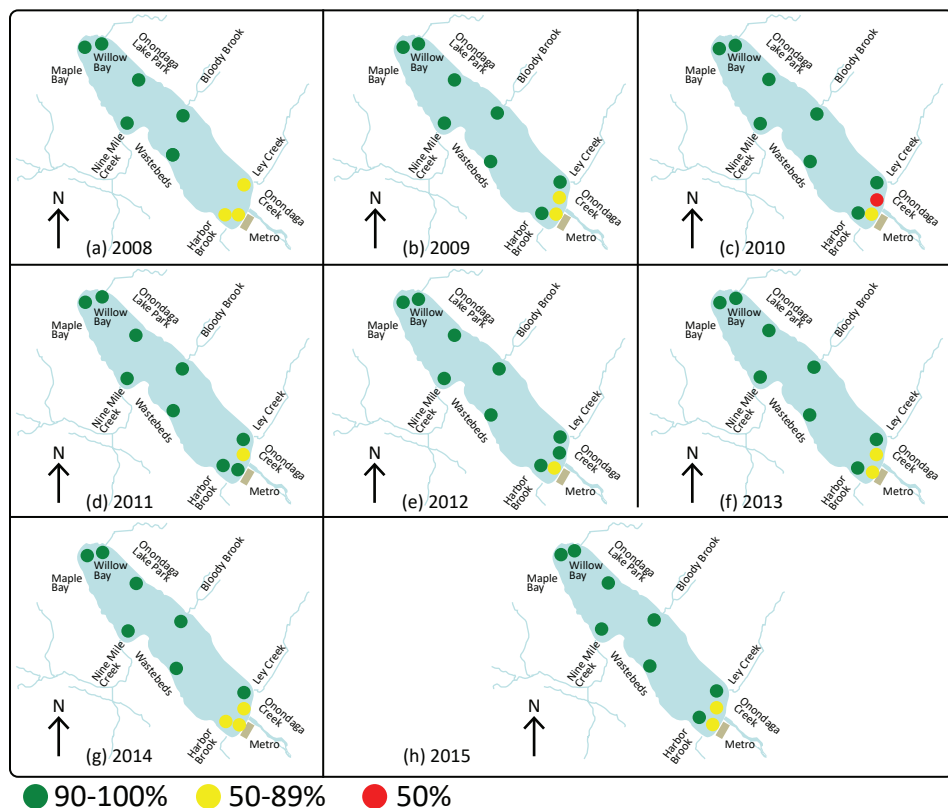
Water Quality

Willow Bay is located in Class B water, which is suitable for public swimming. Long-term measurements of water quality (fecal coliform bacteria and Secchi Disk Transparency) performed by the County under the Ambient Monitoring Program, which is overseen by NYSDEC, have consistently shown that the water quality has been acceptable for swimming for the last 10+ years (see **Figures 7, 8** for Onondaga Lake Monitoring Program, AMP Water Quality Results).

Sediment Quality

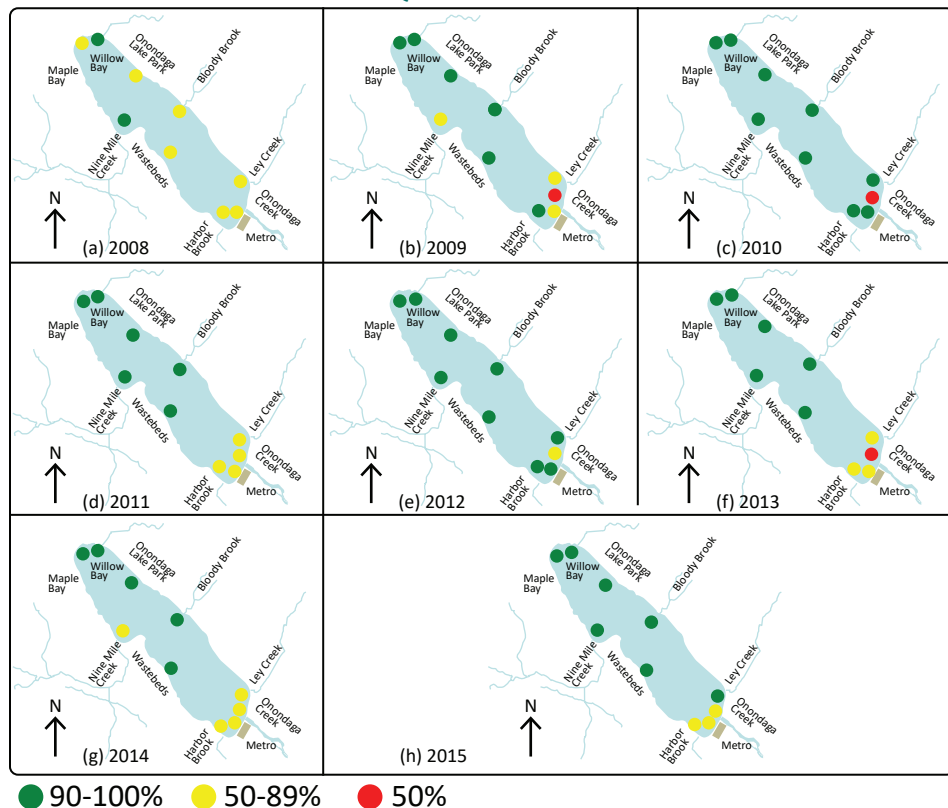
Sediment throughout the northern basin of the lake was extensively sampled as part of the NYSDEC-approved Remedial Investigation (RI) completed under the Superfund program for the lake. Using those data, NYSDEC approved a (HHRA) in 2002 (NYSDEC 2002) and determined that there were no unacceptable risks to people potentially exposed to sediment via wading or swimming,

FIGURE 7: AMP WATER QUALITY RESULTS: FECAL COLIFORM BACTERIA



The percentage of months in compliance with the water quality standard for fecal coliform bacteria for nearshore stations in Onondaga Lake, April through October: (a) 2008, (b) 2009, (c) 2010, (d) 2011, (e) 2012, (f) 2013, (g) 2014, and (h) 2015.

FIGURE 8: AMP WATER QUALITY RESULTS: SECCHI DISK TRANSPARENCY



Percentage of nearshore Secchi disk transparency measurements greater than 1.2 meters (4 feet) during June through September: (a) 2008, (b) 2009, (c) 2010, (d) 2011, (e) 2012, (f) 2013, (g) 2014, and (h) 2015.

which is a scenario comparable to what would be experienced at a swimming beach. For any beach location along Onondaga Lake, the existing sediment would be covered with sand to create a substrate suitable for a swimming beach that meets NYSDOH requirements.

Willow Bay - Site 1A

Land & Water Use

Site Access / Vehicular Circulation

Willow Bay - Site 1A (see **Figure 3**) can be easily accessed. The Onondaga Lake Parkway leads north through the Village of Liverpool to State Route 370 and eventually reaching Long Branch Road, it guides park visitors to two large parking lots, approximately 280 feet from the future beach location. With 233 parking spaces, including 11 ADA accessible spaces. There are also existing trails and footpaths within the park, including the walking path which runs along the waterfront and the Loop the Lake Trail, that runs inland toward the parking area in Willow Bay.

Utilities & Infrastructure

Electric service currently extends to various facilities within the park, including restrooms and a navigation light at the end of the pier. Water service is also available for many of the facilities as well. Several water spigots are located in close proximity to the existing pavilions. There is sewer access, as well as, storm water services within the park to accommodate restrooms, and site drainage.

Structures

There are several structures that are located within this portion of the Willow Bay area, including several pavilions and a restroom facility. The Willow Bay shelter and existing restroom building are located in close proximity to the lake shoreline.



Willow Bay restrooms



Willow Bay pavilion

Recreation Facilities & Water Activities

Play spaces and other recreational facilities located within Willow Bay include the following: a playground, trails, boat rentals, a walking and fishing pier, and picnic areas with grilling stations.



People fishing on pier

Willow Bay - Site 1B

Site Access / Vehicular Circulation

Willow Bay - Site 1B (see **Figure 3**) can be easily accessed. The Onondaga Lake Parkway leads north through the Village of Liverpool to State Route 370 and eventually reaching Long Branch Road, it guides park visitors to two large parking lots, approximately 850 feet from the future beach location. With 233 parking spaces, including 11 ADA accessible spaces, the existing parking lot will require minimal improvements to accommodate this new program element. There is an existing drop-off loop and a small parking area in close proximity to this location. There are also existing trails and footpaths within the park, including the East Shore Recreation Trail, which runs along the waterfront and towards the parking area in Willow Bay.

Utilities & Infrastructure

Electric service currently extends to various facilities within the park, including restrooms and a navigation light at the end of the pier. Water service is available for many of the facilities as well. Several water spigots are located in close proximity to the existing pavilions. There is sewer access, as well as, storm water services within the park to accommodate restrooms, and site drainage.

Structures

There are several structures that are located within this portion of Willow Bay, including several pavilions and restrooms. Two pavilions, the Bay View



Saw Mill Creek Shelter

Tent and the Saw Mill Creek Shelter, are located on either side of the Willow Bay - Site 1B beach location (see **Figure 3**).

Recreation Facilities & Water Activities

Play spaces and other recreational facilities located within Willow Bay include the following: a playground, trails, site furnishings, open lawn space, and picnic areas with grilling stations.



Lakefest at Onondaga Lake Park



Yoga in the park



People picnicking

FIGURE 9: LAND USE & AMENITIES MAP
Willow Bay Area



LEGEND

	POTENTIAL PROJECT SITE		EAST SHORE TRAIL		BIKE TRAILS		FOOD
	ONONDAGA LAKE PARK		TRAILS / FOOTPATHS		BOATING / KAYAKING		PICNIC AREAS
	ROADS		ATHLETIC FIELDS		BOAT LAUNCH / MARINA		PLAYGROUND
	RAILROAD		PARKING		HISTORIC SITES		BOCCE
							ARCHERY

FIGURE 10: EXISTING INVENTORY & FUTURE OPPORTUNITIES MAP
Willow Bay Area

1A BEACH AREA

Existing: Waterfront area closest to pier.
Proposed: Multi-use beach space and ADA accessible walkway along waterfront designed to accommodate activities including: picnicking, wading, swimming, etc.
Approx. Size: .66 acres

1B BEACH AREA

Existing: Waterfront area closest to bay view tent.
Proposed: Multi-use beach space and ADA accessible walkway along waterfront designed to accommodate activities including: picnicking, wading, swimming, etc.
Approx. Size: .56 acres

P PARKING LOTS

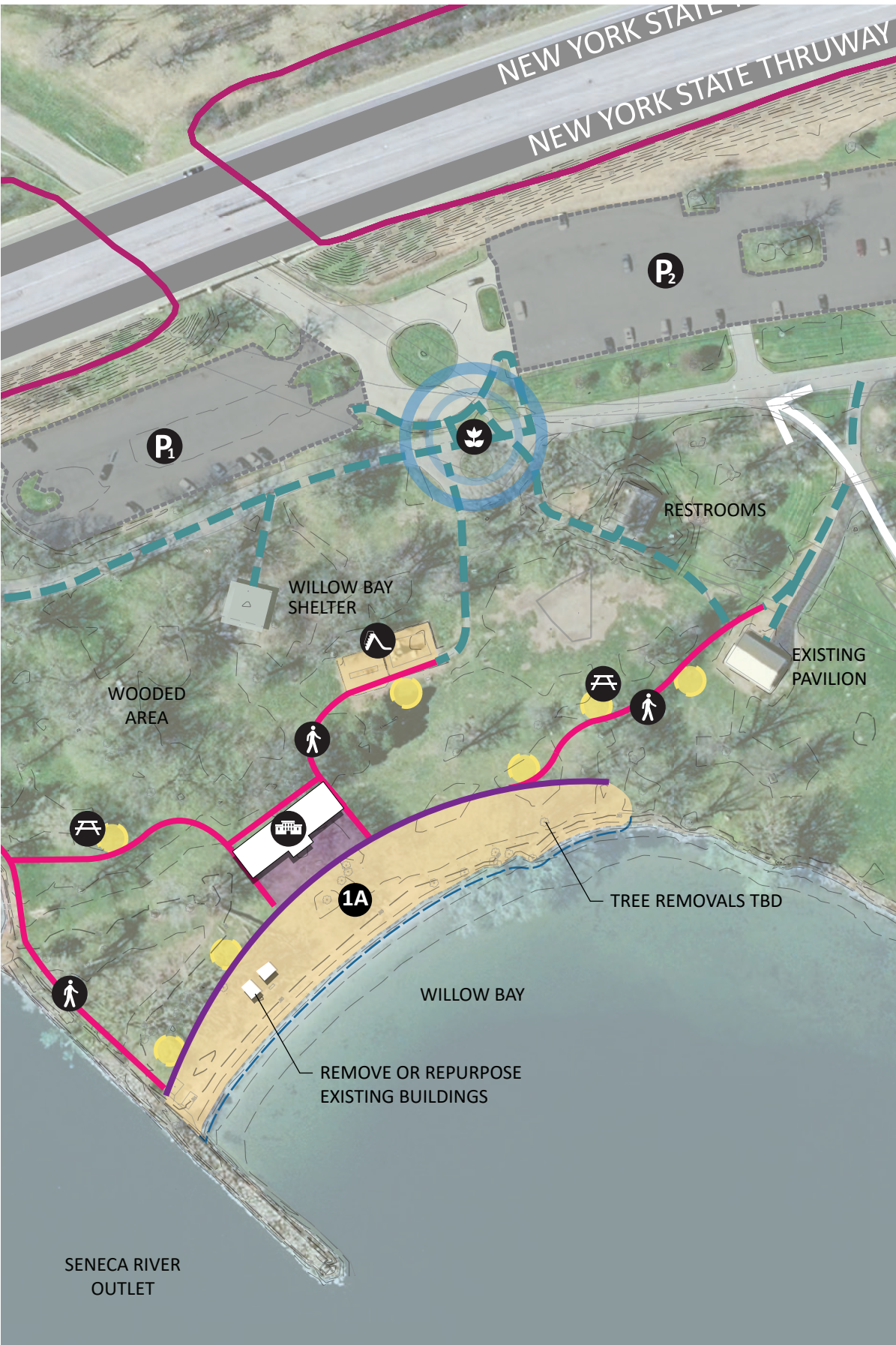
Existing: 2 large parking lots, P1 with 86 total parking stalls including 6 ADA stalls, P2 with 147 total parking stalls including 5 ADA stalls.
Proposed: Maintain, resurface, and restripe existing asphalt lots, provide planted areas / shade trees at either side.

GATEWAY

Existing: Drop-off loop with multiple trails.
Proposed: Define and enhance main entrance, install signage, and provide planting and seating area.

MULTI-USE TRAIL SYSTEM

Existing: East Shore Trail within Onondaga Park.
Proposed: Provide new paths throughout park to link existing and new program elements.





PEDESTRIAN NODES

Existing: Picnic areas.
Proposed: Provide gathering areas adjacent to program elements and provide new site furnishings and interpretive signage elements.

ACCESS LOOP

Existing: Access loop driveway near Beach Location 1B.
Proposed: Restore / repair existing access road as needed. Resurface and stripe existing asphalt parking lot to accommodate handicap accessible spaces for Beach Location 1B.

NEW BATHHOUSE + PROMENADE

Proposed: Provide bathhouse to accommodate new program elements and park visitors, including M/W restrooms, concessions, and storage space at Beach 1A Location. Create adjacent promenade from Bathhouse along beach with ADA accessible pathway and gathering nodes.

BAY VIEW PAVILION + PROMENADE

Existing: Picnic pavilion
Proposed: Expand existing pavilion to accommodate additional facilities for Beach 1B Location, including M/W restrooms and concessions, and waterfront promenade.

PLAYGROUND IMPROVEMENTS

Existing: Playgrounds
Proposed: Maintain existing playground equipment (repair and clean as required). Provide new natural play elements and new safety surface.

Bloody Brook Location

Bloody Brook is considered the eastern segment of Onondaga Lake Park. Filled with numerous program elements and trails, it acts as a gateway to the Onondaga Lake waterfront and to the rest of the park. This park location consists of open waterfront, vegetated riparian creekside areas, woodland areas, and recreation amenities such as ball fields, a skate park, and other active play spaces. It is also the home to Wegmans Landing, a 10 acre venue, including a large playground and spray park, the Salt Museum, and the Griffin Visitor Center, which has courts for shuffleboard, bocce, and volleyball. The park hosts large seasonal events along its waterfront and within the park that use this space. A few of these popular events include: Lakefest, Yoga in the Park, live music, the Leon Festival, and Lights on the Lake. (See [Figure 14](#) for a map of the existing inventory and future opportunities for a beach in Willow Bay)

Shoreline Edge Conditions

This site is located along the eastern shoreline north of the Bloody Brook outlet to Onondaga Lake. The shoreline in this area consists of rip-rap armor stone (ranging in size from 4 to 12 inches). Upland of the armor stone are large trees intermixed with Onondaga Lake Park green space. This section of the shoreline is subject to wind-generated waves from the prevailing westerly wind directions as well as ice that is pushed up and along the shoreline during winter break-up periods.

Lake Bottom Constraints

The slope of the lake bed in the area is relatively flat with water depths of up to 4 feet deep approximately 200 feet from shore. As a result, the range of water depths is limited. The lake bottom sediments nearshore in the beach area also consist of shell fragments, sands, and gravelly materials. The offshore area contains SAV that would need to be considered as part of operations and maintenance at this location.

Water Quality

Bloody Brook is located in Class B water, which NYSDEC has deemed suitable for public swimming. Long-term measurements of water quality (fecal coliform bacteria and Secchi Disk Transparency) performed by the County under the AMP have consistently shown that the water quality has been acceptable for swimming for the last 10+ years. (See [Figures 11, 12](#) for Onondaga Lake Monitoring Program, AMP Water Quality Results)

Sediment Quality

Sediment throughout the northern basin of the lake was extensively sampled as part of the NYSDEC approved RI for the lake. Using those data, the NYSDEC completed a (HHRA) in 2002 (HHRA 2002) and determined that there were no unacceptable risks to people potentially exposed to sediment via wading, which is a scenario comparable to what would be experienced at a swimming beach. For any potential location along Onondaga Lake, the development would cover existing sediment with sand to create a substrate suitable for a swimming beach that meets NYSDOH requirements and overlays the existing sediments.

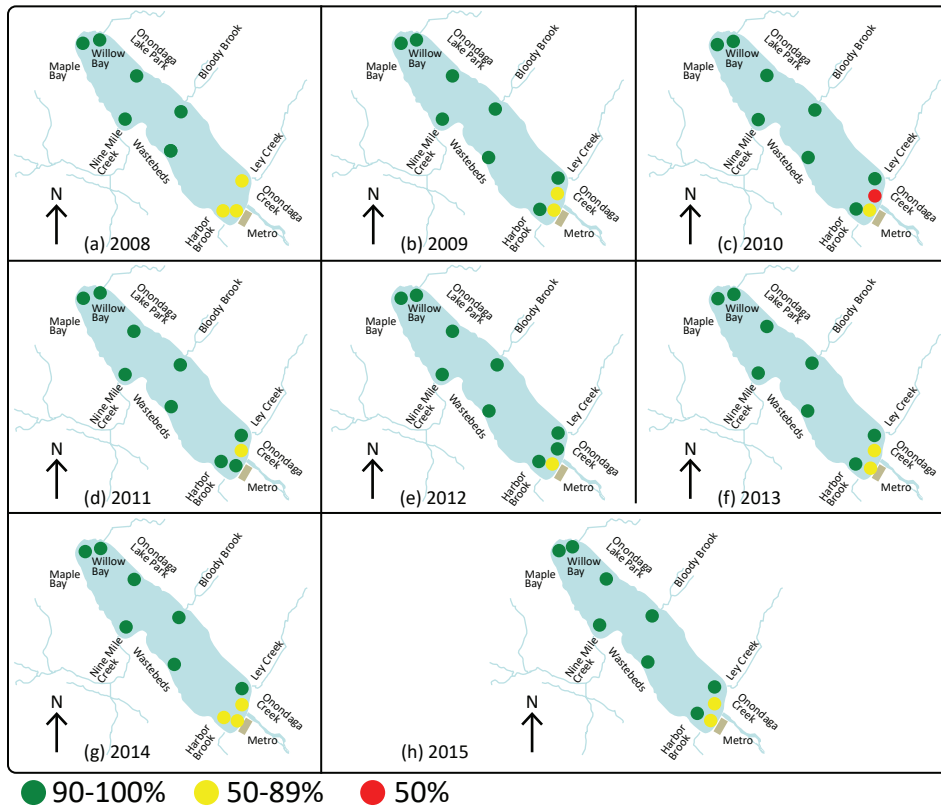
Bloody Brook - Site 2

Land & Water Use

Site Access / Vehicular Circulation

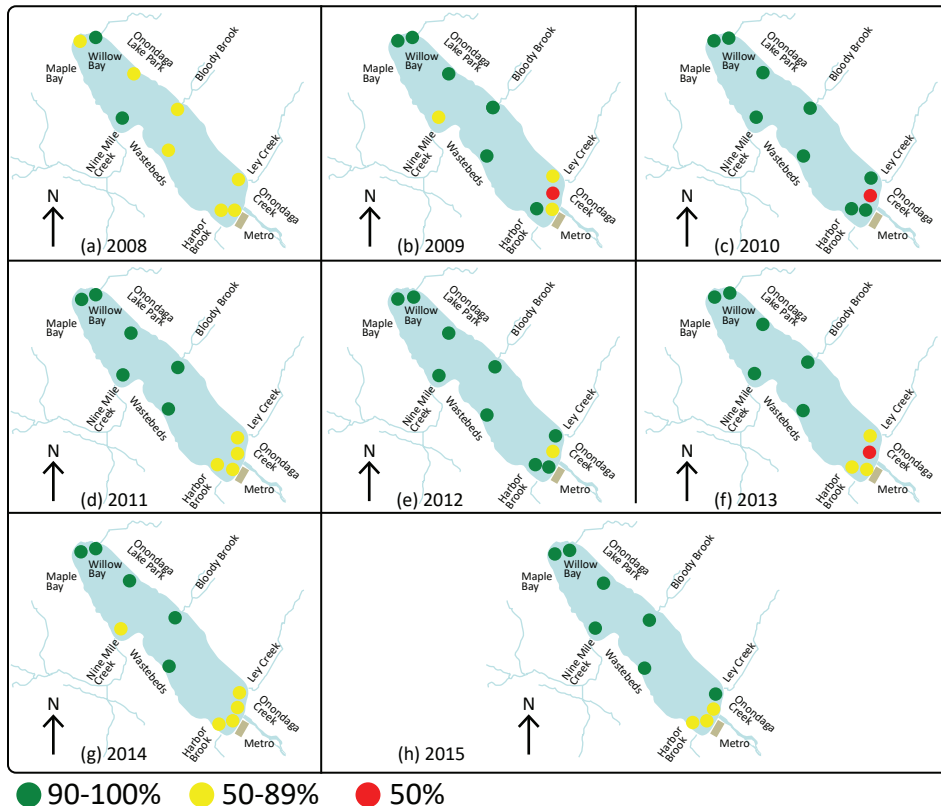
Bloody Brook - Site 2 can be easily accessed by the Onondaga Lake Parkway. Several large parking lots are located around this park area to accommodate for the existing special events and program elements that occur here. These existing parking areas will require minimal improvements based on this proposed development. There are also existing trails and footpaths within the park, including the Loop the Lake Trail, which the Shoreline Walking Trail that run along the waterfront and towards either end of the park.

FIGURE 11: AMP WATER QUALITY RESULTS: FECAL COLIFORM BACTERIA



The percentage of months in compliance with the water quality standard for fecal coliform bacteria for nearshore stations in Onondaga Lake, April through October: (a) 2008, (b) 2009, (c) 2010, (d) 2011, (e) 2012, (f) 2013, (g) 2014, and (h) 2015.

FIGURE 12: AMP WATER QUALITY RESULTS: SECCHI DISK TRANSPARENCY



Percentage of nearshore Secchi disk transparency measurements greater than 1.2 meters (4 feet) during June through September: (a) 2008, (b) 2009, (c) 2010, (d) 2011, (e) 2012, (f) 2013, (g) 2014, and (h) 2015.

Utilities & Infrastructure

Electric service currently extends to various facilities within the park, including restrooms, the Griffin Visitor Center, and the Salt Museum. Water service is also available for many of the facilities as well. There is sewer access, as well as, storm water services within the park to accommodate restrooms, and site drainage.

Structures

Several structures are located within this portion of the Bloody Brook area, including the Griffin Visitor Center, the Salt Museum, and several other buildings.



The Griffin Visitor Center



The Salt Museum

Recreation Facilities + Water Activities

Play spaces and other recreational facilities located within the Bloody Brook area include the following: a large playground, trails, a marina and boat launch, a walking and fishing dock, an observation area, athletic fields and courts, a skatepark, and a large open green space. (See [Figure 13](#) for a Land Use & Amenities Map of Bloody Brook).



Wegmans Landing Playground

FIGURE 13: LAND USE & AMENITIES MAP
Bloody Brook Area



LEGEND

	POTENTIAL PROJECT SIT		ONONDAGA LAKE PARKWAY		BIKE TRAILS		FOOD
	ONONDAGA LAKE PARK		TRAILS / FOOTPATHS		BOATING / KAYAKING		PICNIC AREAS
	ROADS		ATHLETIC FIELDS		BOAT LAUNCH / MARINA		PLAYGROUND
	RAILROAD		PARKING		HISTORIC SITES		BOCCE
							ARCHERY

FIGURE 14: EXISTING INVENTORY & FUTURE OPPORTUNITIES MAP
Bloody Brook Area

2 BEACH AREA

Existing: Waterfront area closest to pier.

Proposed: Multi-use beach space and ADA accessible walkway along waterfront designed to accommodate activities including: picnicking, wading, swimming, etc.

Approx. Size: 1.05 acres

GATEWAY

Existing: Entrance from parking lot to trail.

Proposed: Define and enhance main entrance, install signage, and provide planting and seating area.

MULTI-USE TRAIL SYSTEM

Existing: East Shore Recreation Trail and pathways within Onondaga Park.

Proposed: Provide new paths throughout park to link existing and new program elements.

PEDESTRIAN NODES

Existing: Picnic areas.

Proposed: Provide gathering areas adjacent to program elements and provide new site furnishings and interpretive signage elements.

NEW BATHHOUSE + PROMENADE

Proposed: Provide bathhouse to accommodate new program elements and park visitors, including M/W restrooms, concessions, and storage space near the proposed beach location. Create adjacent promenade from Bathhouse along beach with ADA accessible pathway and gathering nodes.





SITE EVALUATION MATRIX

● Favorable (2 points) ● Moderately Favorable (1 point) ● Not Favorable (0 points)

Land Use & Amenities	Willow Bay Site 1A	Willow Bay Site 1B	Bloody Brook Site 2
Adequate space to build a sand beach	●	●	●
Playgrounds nearby	●	●	●
New land based recreation opportunities (spray park, concessions, volleyball court, etc.)	●	●	●
Adjacent green areas or passive recreation space	●	●	●
Water based recreation opportunities (kayak rentals, canoeing, paddle board, etc.)			
	10	8	7
Connectivity & Access	Willow Bay Site 1A	Willow Bay Site 1B	Bloody Brook Site 2
Accessible to vehicles	●	●	●
Sufficient parking for potential users	●	●	●
Parking in close proximity to beach area	●	●	●
Parking area conveniently accessible from outside of park	●	●	●
Parking area conveniently accessible from a major highway	●	●	●
Transit stops nearby	●	●	●
Pedestrian & bicycle connectivity	●	●	●
Walkable to nearby destinations (food, bathrooms, etc.)	●	●	●
Connections to County's Loop the Lake Trail system			
	16	15	14
Utilities & Support Facilities	Willow Bay Site 1A	Willow Bay Site 1B	Bloody Brook Site 2
Public water supply available	●	●	●
Sanitary sewer supply available	●	●	●
Solid waste disposal available	●	●	●
Proximity to existing restrooms	●	●	●
Picnic and shelter structures present	●	●	●
Proximity to existing shelters	●	●	●
Development of future infrastructure, i.e. changing rooms, etc.			
	12	11	7
Upland Site Conditions	Willow Bay Site 1A	Willow Bay Site 1B	Bloody Brook Site 2
Well drained site	●	●	●
Favorable wind conditions	●	●	●
Site free of constraints by wetlands or floodplains	●	●	●
Site free of constraints by historic & cultural resources	●	●	●
Site free of constraints by endangered species & habitats			
	8	8	6
In-Water Site Conditions	Willow Bay Site 1A	Willow Bay Site 1B	Bloody Brook Site 2
Water quality	●	●	●
Bathymetry and water depth	●	●	●
Wave energy	●	●	●
Shoreline transition	●	●	●
Boat accessibility	●	●	●
Submerged plants / macrophytes			
	10	7	4
Total	56	49	38

SUMMARY OF MATRIX

An acceptable potential beach site could be envisioned as generally level with some topographic interest nearest the water's edge, having complete utilities, stable, well drained soils, high quality road and pedestrian access, protection from excessive weather patterns, with ample space for passive recreational amenities and playgrounds.

The siting of a public beach is also a key public policy decision. In the County's case, land availability, land use, public sentiment and other community issues and programs can have dramatic influence on site selection. In any site selection process, local involvement and judgments regarding the relative significance of selection criteria are important.

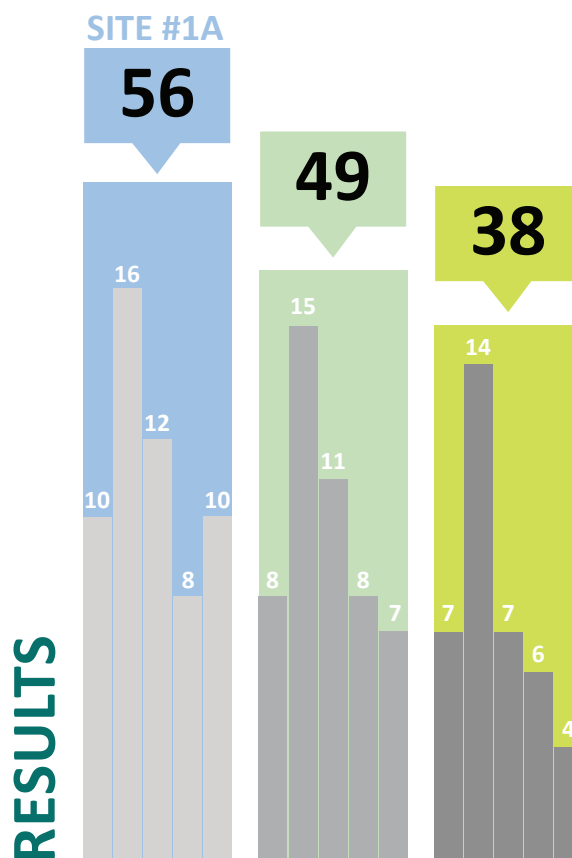
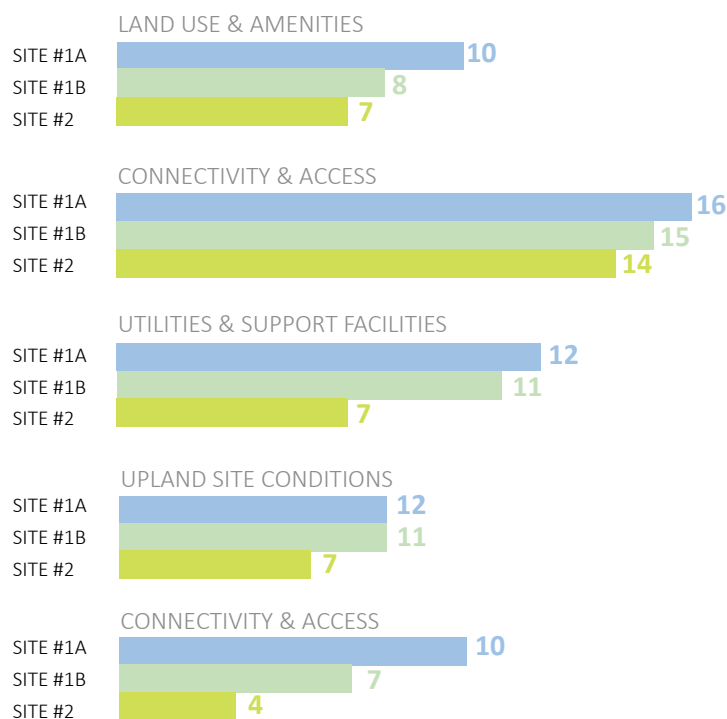
Each of the three sites considered 1) met designated best uses based on the NYSDEC recommendations, 2) met water quality standards to support a public bathing beach, and 3) lake bottom sediments were determined to not pose a threat to human health based on the NYSDEC and USEPA approved HHRA . As previously discussed, the Study evaluated three sites along the eastern shore of Onondaga Lake. Each site was given a numerical ranking based on being:

- Favorable (2 points)
- Moderately Favorable (1 points)
- Not Favorable (0 points)

Specific criteria identified during the Study related specifically to upland and in-water site conditions that were determined to be critical infrastructure to support a public beach facility. Thirty-two key attributes that were ranked fell within five core criteria areas, including the following:

- Land Use and Amenities
- Connectivity and Access
- Utilities and Support Facilities
- Upland Site Conditions
- In-Water Site Conditions

Each of the 32 key attributes were evaluated and given a numerical ranking to help determine the optimum site for the beach and support facilities. Based upon this analysis should a beach be built, it was determined that the Willow Bay - Site 1A location was most suitable to support the project.



PUBLIC INPUT

Above all else, the intent of this study has been to establish if there is interest by the public to have a beach on Onondaga Lake. A key element of this process was an online survey which received over 2000 responses. In addition, all information that has been gathered has been presented to the public with the comments and questions being published online as soon as they were available. All public comments are incorporated into this feasibility study to ensure that the final documents accurately reflect the public response to the concept of a beach on Onondaga Lake. Finally, in an effort to ensure transparency in the final feasibility study documents, the draft feasibility study has been made public before the third public meeting and the County will take in comments until April 1st so the public has an opportunity to review all that is being presented.

Public Meeting #1

Agenda + Format

The first public meeting was held January 29, 2019 at the Skydeck meeting space at Destiny USA, which is adjacent to Onondaga Lake. The objective of this first meeting was to kick off the public survey, introduce the beach FS project, and explain the process for gathering public input and data. The project team opened the meeting with a brief presentation describing why the County



Formal presentation

has embarked on the project and outlining the major factors that will influence the feasibility of a beach. These factors include public interest in a beach, regulatory classification of the waters, public health and safety considerations, maintenance requirements, land use restrictions, transportation services and parking, and infrastructure needs and utility access.



Topic tables discussion

The overview presentation was followed by opportunities for one-on-one and small group discussions with representatives of the project team and agency experts. The discussion session was organized around three main topics: (1) public opinion survey and market analysis, (2) swimming safety, (3) and beach location and amenities. Each of the three topic areas was supported by visual displays on large poster boards and relevant documents. In addition to the subject matter experts stationed at each display area, project team members served as scribes to document conversations and encourage attendees to fill out comment cards.

Major Comments

Besides site specific comments, there were various comments which noted public safety concerns regarding the cleanup of Onondaga Lake, meeting structure, and a perceived lack of seeking public input within the FS process. These comments were

accepted in writing and at the tables where small group discussions were facilitated. Each question and comment was responded or acknowledged and is included in the FS as well as published for public review.

Additional comments included the need for more parking, opportunities for public transit to a beach location, the availability of lifeguards, restrooms and showers, desires for amenities such as pavilions, picnic areas, concessions, and a boardwalk, and whether athletic fields and other forms of entertainment were anticipated at the selected site.

The project team and experts fielded questions reflecting community concerns related to seasonal flooding in the Willow Bay area, pollution, swimming safety, water and sediment quality, the costs of beach construction and maintenance, economic impacts on the Village of Liverpool, traffic considerations, potential impact on visits to other beaches, and more. Issues raised during the community conversations during the January 2019 meeting were included in the scope of the FS and Design Project.

Responses to Comments

All questions and comments were documented; responses were prepared by subject matter experts and posted on the project web site:

http://www.ongov.net/environment/documents/FSPublicMeeting1ResponsivenessSummary_FINAL.pdf (See [Appendix 1](#))

In addition, printed copies of questions and comments raised throughout the project and responses were available at the second and third project meetings.

Public Meeting #2

Agenda + Format

The second public meeting was held on June 26, 2019 at St. Joseph's Health Amphitheater at Lakeview, a shoreline venue with views across

Onondaga Lake. An interactive exercise was designed for the registration table; attendees received 10 'beach bucks' to distribute among three pails labeled with different elements of a potential beach. The goal was to encourage feedback on elements to help inform the design team.



Formal presentation

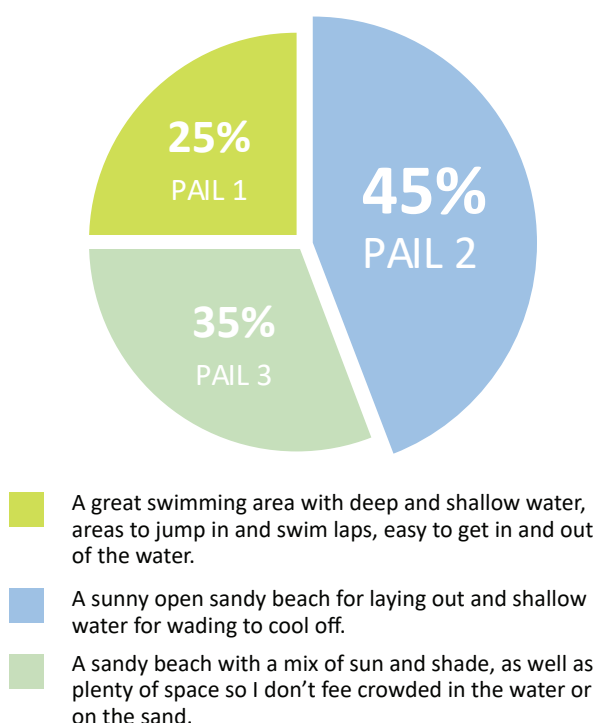


Attendants writing on comment cards at the site selection & design station

Members of the project team made brief presentations on their progress with the Beach FS and Design Project tasks. Presentations focused on two key components: (1) results of a public opinion survey designed to assess community interest in a beach on Onondaga Lake; and (2) the outcome of the site screening process and announcement of Willow Bay as the recommended site for a potential beach. The presentations were followed by an opportunity to review displays and findings with the project team and engage in discussion.

Comments were captured on index cards submitted by attendees and documented by members of the project team stationed throughout the venue. Four topic tables were staffed by members of the project team and technical experts from state and county resource management agencies. The tables included visual displays and information related to: (1) findings of the public opinion survey; (2) swimming safety and water quality considerations; (3) park operations and maintenance implications; and (4) site selection and design elements.

'Beach Buck' Results



Major Comments

A great deal of the comments from the second meeting were directed at the safety of Onondaga Lake as it pertains to the industrial cleanup, not the County's water quality improvements. Attendees expressed skepticism in the effectiveness and reliability of the lake bottom cap and questioned if there was analysis being performed to address those concerns (please note that a lake remediation

evaluation was beyond the scope of work defined in the LWRP). Due to the technical nature of these comments they were addressed in writing and have been included in this study (See [Appendix 2](#)). However, unfortunately the answers provided were not likely satisfactory for those that attended as they were references to prior studies associated with the Onondaga Lake Superfund cleanup which have long been publicly available. The FS team acknowledges these concerns and while additional sampling and studies are not within the scope of the FS, efforts have been made to ensure that these concerns are a part of the FS so that any future consideration of a beach will include sediment sampling as required.

The potential risk posed by contamination of lake bottom sediments was discussed along with concerns related to in-lake transport of contaminants that could reach Willow Bay. Subject matter experts responded to these comments during one-on-one and small group discussions at the June 2019 meeting. The project website references risk assessments completed and approved by state and federal agencies and provides links to related data and information. The northern basin of Onondaga Lake has met all environmental and public health-related criteria for swimming for more than a decade.

Meeting attendees also expressed concerns regarding long-term monitoring and financial commitments to ensure that the Honeywell remediation projects will remain effective. Onondaga Lake remedial measures are overseen by state and federal environmental agencies. Because some regulated contaminants remained after dredging and capping the lake bottom, federal Superfund law (the 1980 Comprehensive Environmental Response, Compensation and Liability Act, CERCLA) requires that the site be reviewed at least once every five years. The five-year review will formally evaluate results of required monitoring to evaluate whether the remedy remains protective of human health and the environment. Other commentators questioned why a potential

beach was being evaluated, citing the abundance of alternatives, the potential cost, and the public opinion survey documenting that a plurality of respondents would choose not to swim in Onondaga Lake. As discussed earlier, the beach FS and Design Project was initiated in response to extensive public input regarding the significance, both practical and symbolic, of restoring the lake for its historical uses. The public opinion survey and market analysis documented some interest in a beach and projected annual users at more than 31,000. This projection incorporates those who already visit Onondaga Lake Park, the count of survey respondents who understand that the lake is safe for swimming, estimates of how many local residents currently visit public beaches in the region, and how many survey respondents indicate that they would frequent a bathing beach at Onondaga Lake Park.

There were also comments on the meeting format. Some attendees stated a strong preference for a “town hall” style meeting, where everyone could hear comments and responses rather than engage in small group and individual discussions with subject matter experts from regulatory agencies and the project team. The format selected for Meetings 1 and 2 was designed to foster thoughtful and respectful communication on these relatively complex issues and encourage participation by those who may not feel comfortable asking questions in a larger group setting, when the most impassioned voices can dominate. Note that New York State Department of Transportation (NYSDOT) embraced a similar format for discussion of the future of Interstate I-81 in Syracuse. Research has shown the “town hall” format is less effective in generating meaningful discussion or responding to technical questions on complex issues.

Finally, there were comments and questions related to the beach design and infrastructure elements, including parking, traffic flow, access by public transportation, compatibility with current uses of Onondaga Lake Park, and costs. Some comments were critical of the venue’s location and

accessibility. While the project team’s intent was to gather on the lake shoreline with views to the candidate beach sites, public transportation to the Lakeview Amphitheater is regrettably limited. The project team pledged to hold the third and final public meeting at a location better served by public transportation. The project team continued to work on these design elements following the June 2019 public meeting; details are presented elsewhere in this FS and Design Project.

Responses to Comments

All questions and comments were documented; responses were prepared by subject matter experts and posted on the project web site http://www.ongov.net/environment/documents/BeachFSResponsesHg_1.3.20.pdf. (See [Appendix 2](#)) In addition, printed copies of questions and comments raised throughout the project and responses were available at the third and final project meeting.

Public Meeting #3

Agenda and Format

The third public meeting was held February 29, 2020 at the Town of Salina town hall, which is adjacent to Onondaga Lake. The premise of this meeting was to give an overview of the beach FS and design project and to discuss the public’s interest in reconnecting with a restored Onondaga Lake. In lieu of a formal presentation, participants were welcomed and encouraged to visit a series of topic areas. Each topic area included visual and printed materials and was staffed with subject matter experts including representatives of regulatory agencies as appropriate. Comments and discussion at each topic area were captured on large newsprint pads.

The four topic tables were Water Quality (questions/issues related to effluent, runoff and CSO’s that have historically impacted water quality), Public Health (questions/issues related to public health, remediation sites and impact to people), Design (project design questions/comments) and Operations & Maintenance (how this project could

impact Parks operations). In addition to the topic tables, an open “comments” table was set up where people wrote their concerns/questions/comments on large sheets of paper taped to the wall for all meeting attendees to see. Finally, the meeting concluded with each table scribe presenting the dialog from each table to the entire group. The goal of the Beach Feasibility Study team’s third meeting format was to address comments from prior meeting and major questions and themes were reported back to the entire group once everyone visited tables of interest. A panel then addressed the factual questions so that all concerns and information could be shared among all attendees.

Major Comments

Throughout the meeting, there were various comments which noted public safety concerns regarding the cleanup of Onondaga Lake, the potential future uses of the lake, the beach’s impact to traffic and accessibility within Onondaga Park, the disruption of wildlife/ fish habitat, the meeting structure, and the probable construction, operation, and maintenance costs. Some attendees expressed skepticism in the safety and reliability of the lake bottom cap and questioned if there were thorough investigations being performed. Others voiced their concerns about the potential risk of contaminants exposure that could occur from attending the beach and wading into the water. The County responded to their concerns about exposure with: “The Human Health Risk Assessment (HHRA) which was approved by New York State Department of Environmental Conservation (NYSDEC) and the New York State Department of Health (NYSDOH) considered both short-term and long-term exposures to sediment and water. The HHRA found that the northern basin of the lake does not exhibit unacceptable risk to adults or children exposed to sediment by walking or wading into the lake or lake water exposure from swimming in both short-term and long-term exposures. The options for places to locate a swimming beach on Onondaga Lake were only

within areas which were deemed safe for human contact with water and sediment and did not require capping.”

A great deal of the comments from the third meeting were also directed at the implied safety of Onondaga Lake in its entirety if a beach were built. Would the construction of a beach in Willow Bay give the public a false sense of security that there is improved water quality in other locations along the lake’s shoreline? Subject matter experts responded to these comments during one-on-one and small group discussions at the various topic tables. The project team also encouraged the public to e-mail their comments, concerns, and questions to Onondaga County directly. Due to the technical nature of many of these comments they were addressed in writing and have been included in this study (See [Appendix 3](#)).

Responses to Comments

All questions and comments were documented; responses were prepared by subject matter experts and posted on the project web site http://www.ongov.net/environment/documents/BeachFSResponsesHg_1.3.20.pdf. (See [Appendix 3](#)).



DESIGN

OPERATIONS & MAINTENANCE

Beach Operations and Maintenance

Similar to the other public bathing beaches that Onondaga County operates, it is anticipated that there will be annual, seasonal, and daily operational and maintenance activities that will be performed by Onondaga County Parks staff and in some cases may be performed by outside vendors.

On an annual basis, prior to the start of the swimming season, beaches within Onondaga County Parks are inspected to determine if beach sand had been lost due to waves and ice over the winter. It is anticipated that a beach would be nourished (additional sand brought in and added to beach) if required. The loss and nourishment cycles are common at other County beach sites such as Oneida Shores. The same sand type used for the beach construction will be used for the beach nourishment.

On a seasonal basis, a beach would be monitored to determine if submerged aquatic vegetation (SAV) is growing in the swimming area. Similar to many lakes in Central New York, the nearshore areas of Onondaga Lake contain SAV. The placement of sand at the beginning of the swimming season will help control the growth and establishment of SAV in the beach location. In the event that SAV does grow back during the swimming season over the summer, the SAV may be removed if necessary, from the designated swimming/wading area only. SAV removal will be performed in a similar manner to current Onondaga Lake maintenance where mechanical removal including hand removal is used.

On daily basis, a beach would be inspected by Onondaga County staff to dispose of any debris that has accumulated overnight and raked to provide to provide a clean and enjoyable beach. These responsibilities will be covered by current titles within Parks operations which exist at Onondaga Lake Park.

Lifeguard and Water Quality Staff

Onondaga County Parks will provide lifeguards for swimming safety and will adhere to protocols current used at other Onondaga County Parks beach sites. It is anticipated that five (5) lifeguards would be necessary at all times during swimming hours. In addition, a beach would be patrolled by an Onondaga County Park Ranger for public safety. Onondaga County Parks staff will conduct the annual, seasonal, and daily monitoring and maintenance activities. Any required reporting or oversight associated with the approved site management plan (SMP) associated with this project will be overseen by the Onondaga County Office of Environment and reported directly to the NYSDEC.

Water quality sampling will be performed by the Onondaga County Department of Health as is the case with all other beaches within Onondaga County (except Green Lakes State Park which is overseen by NYSDOH directly). Typically, a pre-season water quality sample is collected 7 to 14 days prior to the first day of beach operations. During the swimming season, samples are collected every 14 to 21 days. Samples are submitted for Escherichia Coli (E. coli) analysis using EPA Method 1603. Since this would be a new beach, Onondaga County Department of Health would sample the beach water quality more frequently initially to establish a baseline water quality for monitoring.

In addition, any sampling associated with the SMP will be performed at a frequency prescribed by the NYSDEC and NYSDOH.

CONCEPTUAL PLAN OVERVIEW

The beach design for Willow Bay aims to reconnect the lake with its surrounding community, to provide a new, exciting program feature in Onondaga Lake Park, and to educate the public about the revitalization of the lake as a vital natural resource. The design draws upon input from the public and surrounding physical characteristics of the Willow Bay area, including land use and amenities, connectivity and access, utilities and support facilities, upland site conditions and in-water site conditions.



*Conceptual rendering - view of beach looking northeast**



*Conceptual rendering - view of beach looking towards pier**

ENHANCEMENTS & AMENITIES

The goal of the design is to maximize the beach area along the shoreline and integrate other amenities, including a new bathhouse, picnic areas, and a redesigned play area with nature play elements. A large beach area allows for a variety of experiences by those using the space. The new path and promenade along the beach serves as an important connection between the old and new park amenities and the Loop the Lake Trail, an existing multi-use pathway. The new bathhouse located along the promenade will act as an indoor-outdoor pavilion that houses restrooms and concessions. It will act as a gathering space and main gateway into the beach area. The existing boat and kayak rentals will be relocated along this promenade for better access by the public and will allow boaters easy access to their boats from the shallow waters of the beach.



*Conceptual rendering - view of beach looking northeast**

Any potential beach amenity could draw many new people to the Willow Bay area. To accommodate this influx of park and beach users the existing parking lots would be restriped to maximize the amount of available parking. Overflow parking for large events could also be located to the north of the site on two lawn areas on either side of the Onondaga Lake Parkway. A proposed sidewalk would be located along this route to connect Long Branch Park, the overflow parking area, and the existing parking lots within Onondaga Lake Park for safe travel between these areas.



*Conceptual rendering - view of beach looking northeast**

Other key elements of this design include the resurfacing of the existing play area and the incorporation of new nature play elements, the introduction of a new pathway loop connecting the existing parking lots to the beach and other site amenities. This new pathway loop would run along the waterfront connecting to the Loop the Lake Trail by the east end of the site and may also connect to the future pier pathway project, adjacent to the lake outlet to the Seneca River.

Interpretive signage could be placed along the paths, teaching the public about the site's ecological and industrial history, and clean-up /restoration processes. It may provide an amenity for local schools and lake users. The proposed theme of this potential beach design strengthens the community's interaction with the Onondaga Lake waterfront and accentuates the beach as a destination feature for park users, Village of Liverpool residents, and tourists.

* See Figure 15 for conceptual plan and conceptual rendering locations within the site

FIGURE 15
CONCEPTUAL PLAN





LEGEND

- 1 PROPOSED BEACH
- 2 PATHWAYS (10'-12' WIDTH)
- 3 PROPOSED BEACH PROMENADE
- 4 PROPOSED BATHHOUSE
- 5 PROPOSED RENTAL SHEDS
- 6 NATURAL PLAY AREA
- 7 GATEWAY / DROP-OFF LOOP
- 8 PARKING LOT 1 (90 SPACES)
- 9 PARKING LOT 2 (170 SPACES)
- 10 OVERFLOW PARKING AREA
- 11 POTENTIAL FOOD TRUCK LOOP

VIEWS

- A VIEW OF BEACH LOOKING N.E.
- B VIEW OF BEACH TOWARDS PIER
- C VIEW OF BEACH TOWARDS LAKE
- D VIEW LOOKING TOWARDS BRIDGE

RE TRAIL

EXISTING
PAVILION

EXISTING
PLAYGROUND

ONONDAGA LAKE



NORTH

ARCHITECTURAL OVERVIEW

Design Strategy

The beach facility included in this design is constructed to provide shelter and amenities for visitors to the beach, lifeguards, and Onondaga Lake Parks Department staff. The orientation of the site and shape of the building make a direct gesture toward the new beach, opening into to an expansive view through an opening in the trees and across the lake. Situated behind the proposed beach and elevated above the flood plain, the lifeguard office and the adjacent covered area allow staff to survey the entire beach from within and patrons from just outside of it.

Rainscreen panel cladding protects the building against harsh weather while providing a modern look expressed in warm, wood patterned materials that reflect the material palate of the nearby park pavilions constructed earlier. The roof plane reflects the same opening movement towards the lake as the rest of the structure, rising as it approaches the beach and creates a large canopy over the front. This extension of the roof at the front of the building created a shaded seating area and provides a shelter from sudden rainfall.

Public Facilities

Public facilities in the design include a men's and women's changing room and restroom, each with five water closets (or urinals), four lavatories, two enclosed changing rooms, and 16 feet of open changing benches. Additionally, a single occupant family restroom is included with its own water closet, lavatory, bench seating, and a baby changing station.

The men's and women's restrooms each have two entrances, one at the north end of the building towards the parking lots, and ones farther south. This allows visitors to flow through the restrooms and use changing facilities along the route from the parking lot to the beach, and likewise while returning to their vehicles.

Staff Facilities

The life guard office provides 400 square feet of space for life guards not on station at the beach. The large windows facing southwest allow the staff to see across the beach from inside the office. It includes a first aid station, a kitchenette for employee use, and a dedicated lifeguard bathroom.

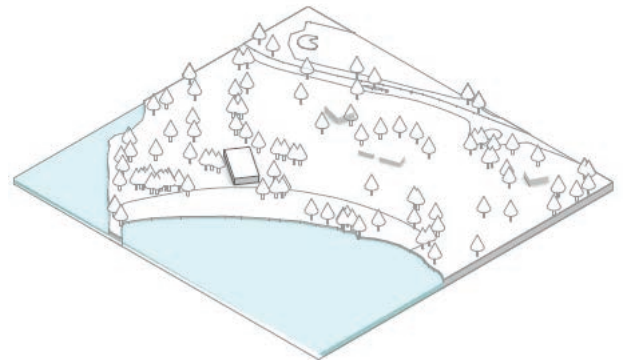


View of proposed beach & parks facility, looking west across Willow Bay

A 100 square foot lifeguard storage room is also provided to store staff equipment, and can be accessed from the exterior of the facility as well as from within the lifeguard office.

General storage is provided for the Parks Department's maintenance teams in a 275 square foot storage room. An overhead door and gravel site paths allow the Parks Department's maintenance tractor to be safely kept inside the storage room when not in use, with additional equipment storage space for other equipment and supplies. Interior and exterior hose bids are also provided for maintenance use

A smaller second office for employee use is also provided creating another 120 square foot room with exterior entry and windows facing the beach. This general office also would have direct access to both the lifeguard office and the general storage room, making it a flexible space that can be easily be adapted for use by lifeguard teams or Parks maintenance teams as needed by the County.



Building perpendicular to beach minimized obstruction of views



Overhang roof plane and shed roof slope opens building to views across the lake



View of proposed beach & parks facility with light & dark wood veneer rainscreen system, looking west across Willow Bay

INTERSTATE 90

FIGURE 16
FINAL SITE LAYOUT



SENECA RIVER
OUTLET

WILLOW BAY

FUTURE PIER
PATHWAY



EAST SHORE TRAIL

EXISTING
RESTROOMS

EXISTING
PAVILION

EXISTING
PLAYGROUND

ONONDAGA LAKE

LEGEND

- 1 PROPOSED BEACH
- 2 10' ASPHALT MAINTENANCE ACCESS & SHARED PATH
- 3 5' ASPHALT PATH CONNECTION
- 4 PROPOSED BEACH & PARKS FACILITY
- 5 MAINTENANCE STORAGE
- 6 85' RAMP



NORTH

FINAL CONCEPT RENDERINGS





FINAL DESIGN OVERVIEW

The final site design for the potential beach facility is based upon several key considerations – access, circulation, orientation and views, infrastructure, and public safety.

Access and Circulation

Vehicular and pedestrian access is critical to ensure safe and efficient movement of cars and people entering and exiting a beach and adjacent parking areas. The site design and layout must take into account the existing trail network, particularly the east shore trail when coordinating the movement of vehicles and people to and from the beach area adjacent to the shoreline. Parking would be located at the existing lot just east of the Thruway that can be accessed from Long Branch Road. From there, beach users would utilize the existing trail system to access the bath house and beach proper.

The East Shore Trail is the primary pathway used for park users of the entire Onondaga Lake Park. Ensuring safe and efficient crossing of the East Shore Trail is paramount to the health and safety of the beach users.

Infrastructure

All requisite utilities and infrastructure needed to support a public beach and bath house are in proximity to the proposed building and beach location such that connections and capacity could be provided rather easily. Water and sanitary connections, drainage infrastructure, and electrical connections are all part of the ability to adequately provide a safe and enjoyable public bathing location within Onondaga Lake Park. Details of the infrastructure design can be seen in the Willow Bay Beach Project Contract Drawings ([Appendix 7](#)).

Shoreline and Beach Areas

The proposed location of the beach area improves access and desirability of the existing naturally occurring graveling sand beach along the shorelines and adjacent to the stone jetty. Existing features such as the kayak rentals can be reasonably

relocated to provide better transitions between it and the new beach area and its users, and access to and from the bath house can be accommodated. Additionally, the potential for a new play area and playground is also built into the design of the Willow Bay improvements.

The beach itself estimates a foot of clean new sand fill on top of the existing lake bottom far enough out in to the water to create a swimming depth of 6 feet. Sand would be mechanically placed on top of the existing lake bottom without disturbance. The slope of the beach and underwater sand would largely be what it is today. Annual maintenance would require new sand to be brought in as needed. The amount of new sand retained after one season would be used as a measurement of the intensity of wave action and erosion, along with data used during the design phase.



Maintenance vehicle access to the beach would be accommodated on a new trail along the west side of Willow Bay adjacent to the existing rock jetty, which is being placed as an access road currently to upgrade the jetty wall into a pedestrian promenade feature, which would complement the beach area.

BUILDING CONSTRUCTION

Each waterfront enhancement contributes to a cohesive waterfront experience. However, the advantage of this scheme is that due to geotechnical conditions on the Willow Bay site, and for any site around Onondaga Lake, site enhancements can be made in advance of the building construction. Subsurface conditions in Willow Bay are not favorable for the proposed building foundation construction. The Marl present at this site is highly compressible and is present from below Topsoil surfacing to about 50 feet depth. The soft Silt and Clay soils present below the Marl stratum is also compressible. The Marl stratum and the underlying soft soils are highly susceptible to compression and consolidation under the weight of the new fill planned to be placed to raise grade in order to place the building above the floodplain elevation, as well as the weight of the proposed building. This will result in significant post construction settlements to the proposed building.

The design team evaluated two foundation systems - one consisting of piles and another consisting of structurally supported slab on grade. The soil profile at this site to 100 feet depth does not exhibit a competent/dense stratum to utilize end bearing piles. Further, friction piles may not be feasible or desirable at this site due to significant downdrag loads on piles, which will result from negative skin friction. Negative skin friction occurs when soils in contact with the pile settles, which drags the pile down as settlement of subsurface soils occur under the weight of the new Structural Fill. Therefore, supporting the proposed building utilizing piles and structural slab is not a favorable/feasible option for this project, with site grades planned to be raised in order to have the building floor above the floodplain elevation. It should be noted that a foundation system consisting of piles and structural slab may be considered if site grades are not raised and a crawl space is utilized under the building.

To mitigate this issue, a Subgrade improvement via a Surcharge Program may be considered to mitigate the settlement concerns discussed earlier, and to be able to utilize a shallow footing foundation and slab-on-grade system to support the proposed building. Under this approach, the permanent Structural Fill will be installed to proposed finish floor elevation of the building, and then a temporary surcharge load above it. The temporary surcharge load will remain for a period until the rate of settlement has approached zero. The temporary surcharge will then be removed, and the building pad will be released for general construction. A conventional shallow footing foundation and slab-on-grade may then be utilized to support the proposed building. Some post construction settlement will still occur long term, at a relatively slower rate.

Please refer to the geotechnical report provided in [Appendix 6](#).



PRELIMINARY ESTIMATE

The proposed beach and building improvements at Willow Bay have been designed to accommodate the needs of the County and the general public with a public bathing facility. The following is a summary of anticipated costs based on final design construction documents completed as part of this study (See [Appendix 7](#)). Please note that this cost includes the surcharge program need to support the shallow slab on grade foundation design which is anticipated to be a separate contract and necessary for settlement for approximately 12 months in advance of any building construction. The costs below also include the overflow parking lot across the Thruway underpass adjacent to the archery field off Long Branch Road.

Figure 17

Onondaga County Public Beach - Willow Bay				Project:
Cost Estimate				Date:
Description	Units	Est. Qty	Unit Cost	Total Cost
Demolition / Site Preparation				
				\$130,250.00
Site Construction				
				\$1,900,400.00
Architectural				
				\$1,308,310.00
Overflow Parking & Connections				
				\$206,000.00
Utilities				
				\$50,000.00
SUBTOTAL (CONSTRUCTION)				\$3,594,960.00
Misc.				
Mobilization (4%)	LS	1	\$143,798.40	\$143,798.40
Permitting (5%)	LS	1	\$179,748.00	\$179,748.00
Survey Operations (2%)	LS	1	\$71,899.20	\$71,899.20
Field Change Payment (5%)	LS	1	\$179,748.00	\$179,748.00
			Subtotal	\$4,170,153.60
			10% Contingency	\$417,015.36
PROBABLE CONSTRUCTION COST				\$4,587,168.96
Construction Management, Administration & Oversight (12%)				\$550,460.28
OVERALL PROJECT COSTS				\$5,137,629.24



PERMITTING & CONSTRUCTION

FIGURE 18: PERMITTING
The following permits are anticipated to be required prior to construction of any of the proposed beach improvements.

LIST OF APPLICABLE PERMITS						
Name of Permit	Regulatory Agency Contact Information	Applicable To	Public Notice Required (Yes / No)	Application Fee	Approximate Review Period	Public Meetings Required
US Army Corps of Engineers, Section 404 Permit Federal Water Pollution Control Act (1972), as amended by the Clean Water Act (1977 & 1987), 33 U.S.C. 1251-1376 Restore and maintain chemical, physical, and biological integrity of the Nation’s waters through prevention, reduction, and elimination of pollution.	United States Army Corps of Engineers, Buffalo District 1776 Niagara Street, Buffalo, NY 14207 (716) 879-4330	<ul style="list-style-type: none"> Shoreline edge treatment for the beach 	No	No	14 to 60 Days	No
US Army Corps of Engineers, Section 10 Permit Rivers and Harbors Act of 1899: 33 U.S.C. 40. Must obtain approval for plans for construction, dumping, and dredging permits.	United States Army Corps of Engineers 1776 Niagara Street, Buffalo, NY 14207 (716) 879-4330	<ul style="list-style-type: none"> Shoreline edge treatment for the beach 	No	No	14 to 60 Days	No
US Army Corps of Engineers Nationwide Permit 3, Maintenance & Repair	United States Army Corps of Engineers 1776 Niagara Street, Buffalo, NY 14207 (716) 879-4330	<ul style="list-style-type: none"> Shoreline edge treatment 	No	No	14 to 60 Days	No
Section 401 Water Quality Certification - Protection of Waters Permit	New York State Department of Environmental Conservation (NYS DEC) Region 8 6274 East Avon-Lima Rd. Avon, NY 14414-9519 (585) 226-2466	<ul style="list-style-type: none"> Beach 	No	No	14 to 60 Days	No
Notice of Intent - General Permit (GP-0-10-001) Permission to Inspect Property Notice of Intent (NOI) SEQR_Short Form	New York State Department of Environmental Conservation (NYS DEC) Region 7 615 Erie Boulevard Syracuse, NY 13204 (315) 426-2400		No	No	14 to 60 Days	No
Coastal Zone Consistency Determination Coastal Zone Management Act of 1972: 16 U.S.C. 145. Preserve, protect, develop, and restore and enhance resources of the coastal zone.	New York State Department of State (NYS DOS) John Wimbush (518) 486-3108 John.Wimbush@dos.state.ny.us Office of Coastal, Local Government and Community Sustainability 1 Commerce Plaza 99 Washington Avenue, Suite 1010 Albany, New York 12231-0001	<ul style="list-style-type: none"> Shoreline edge treatment for the beach 	DOS will provide Public Notice (15 day Public Notice)	No	14 days- Review completeness of Assessment 60 days- Department review period 15 day max.- Department review extension if required	No
SHPO Project Review	New York State Office of Parks, Recreation, and Historic Preservation (NYS SHPO) Robert Engiert, Conservation Planner (518) 237-8643 ext. 3268	<ul style="list-style-type: none"> Beach 	No	No	30 days- Dependent on approval of information provided	No
Endangered Species Act	US Fish and Wildlife Service (FWS) Robyn Niver (or Noelle Raymond) 3817 Luker Road Cortland, NY 13045 (607) 753-9334	<ul style="list-style-type: none"> Shoreline edge treatment Tree Clearing 	N/A	\$100	90 days- Dependent on approval of information provided	No
Local Building Permit	Town of Salina	<ul style="list-style-type: none"> Bathhouse 	No	\$100	30 days	No
Change of Use Permit	Division of Environmental Remediation (DER) Tracy Alan Smith Tracy.Smith@dec.ny.gov (518) 402-9796 625 Broadway Albany, NY 12233-7011	<ul style="list-style-type: none"> Site development 	N/A	N/A	30 Days	No

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APPENDIX

APPENDIX 1

Public Meeting #1 Documents

APPENDIX 2

Public Meeting #2 Documents

APPENDIX 3

Public Meeting #3 Documents

APPENDIX 4

Onondaga County Health Department: Environmental Health Policy & Procedure Manual, Bathing Beach Bacteriological Water Quality Monitoring

APPENDIX 5

Market Survey Questionnaire
Market Analysis & Public Survey Results

APPENDIX 6

Geotechnical Report

APPENDIX 7

Construction Documents

APPENDIX 1

Appendix- Onondaga Lake Beach
Public Meeting:
Meeting #1

Tuesday, January 29, 2019, 5–7pm
Destiny USA SkyDeck (6th floor), 9090 Destiny USA Dr., Syracuse, NY
13204

Public Meeting #1:
Announcement

Public Meeting Notice:
Onondaga Lake Beach Feasibility Study and Design Project

When: Tuesday, January 29, 2019; 5–7pm

Where: Skydeck, Destiny USA, 9090 Destiny USA Dr., Syracuse, NY 13204

The Onondaga County Office of the Environment will hold a public meeting to discuss the Onondaga Lake Beach Feasibility Study and Design project on Tuesday, January 29, 2019, 5–7pm, at the Destiny USA Skydeck. The purpose of this project is to identify the best location for a possible beach at Onondaga Lake Park and to develop a design, including amenities, that would make the beach a success for the community.

This event will include a project overview presentation at 5:30 followed by a poster session during which attendees can speak with scientists and agency representatives and provide input on beach location and amenities. It will be the first of three public meetings held as part of this project. In addition, an online public opinion survey seeking input on an Onondaga Lake beach remains available until February 1, 2019.

<http://www.onondagacountyparks.com/parks/onondaga-lake-park/>

The project is funded through a Title 11 Environmental Protection Fund matching grant from the New York State Department of State to Onondaga County. The County's consulting team includes Barton & Loguidice, Anchor QEA, EcoLogic, and Economic Development Strategies. Work on this project began in December 2018 and will continue through November 2019. When the project is complete, the Onondaga County Legislature will decide whether to move forward with plans for constructing a beach.

Directions to Skydeck (6th floor) at Destiny USA:

From ground floor, elevator in front of Burlington Coat Factory

From first floor, elevator in front of Victoria's Secret

From second floor, elevator in front of Kay Jewelers

Contact: Onondaga County Office of the Environment, 315-435-8497

Public Meeting #1:
Agenda

Onondaga Lake Beach Feasibility Study and Design

Public Meeting #1

Agenda

DATE & TIME

- January 29, 2019, 5–7pm. Formal presentation begins at 5:30 pm.

LOCATION & MEETING SPACE

- Destiny USA SkyDeck (6th floor)
 - Seating for presentation~60 chairs; 3 tables and surrounding area for posters; registration table
 - Projector and screen

AGENDA/FORMAT

Presentation (40 minutes)

- **Goals and Purpose** — Overview of scope and schedule of this feasibility study; goal of meeting (e.g., seeking public input regarding beach location, amenities, etc.)
- **Vision for Onondaga Lake Beach** — Previous public input summarized (e.g., "FOCUS on Onondaga Lake," 2012)
- **Site Selection** — Criteria, priorities, potential sites
- **Relevant Lake Cleanup Topics** — Briefly summarize human health risk information related to water quality and sediments (e.g., results of Onondaga Lake Human Health Risk Assessment, NYSDEC 2002; AMP data related to Water Quality Standards for swimming)

Topic tables — Each has (1) a poster and (2) a small table to hold fact sheets, comment cards/boxes, and any other reference material that might be relevant (e.g., brochures, AMP progress report)

Topic	Representatives	Poster content	Reference material	Comment/question
Beach location and amenities	B&L Anchor QEA	LARGE map showing proposed locations, aerals of lake Historical images of lake resorts; examples of beach amenities in Onondaga County	Project fact sheet	Where would you like to see a beach on Onondaga Lake? What amenities would you enjoy at a beach on Onondaga Lake?
Swimming safety	NYSDOH County Health Dept. AnchorQEA WEP/EcoLogic	Summary of swimming in Onondaga Lake over time (when allowed, when it ceased) Current water quality information	Project fact sheet AMP report T. Johnson slides	What are your questions or concerns about swimming in Onondaga Lake?

Topic	Representatives	Poster content	Reference material	Comment/question
Economic considerations	Ken Danter County Parks County Office of the Environment	County map displaying existing public beaches	Project fact sheet Printed surveys	Refer to user surveys

GATHERING FEEDBACK

- Comment cards (4 x 6") — one box per question, placed at each topic table
- Colored dots on map and/or Post-Its for leaving questions/feedback on posters

MATERIALS NEEDED

- ✓ Fact sheet
- Sign-in sheet
- Easels for posters
- Comment cards
- Boxes for submitting comment cards

PUBLICITY

- ✓ Develop an event announcement to be shared with stakeholders/partners via
 - Email blast
 - Press release
 - Social media (Facebook event)

Public Meeting #1:
Presentation



Onondaga Lake Beach Feasibility Study and Design

First Public Meeting
January 29, 2019



Department
of State



J. Ryan McMahon II
County Executive



Meeting Plan

Part 1: Brief presentation to address six basic questions:

1. What is the Onondaga Lake Beach Feasibility Study and Design project?
2. Why consider a beach on Onondaga Lake?
3. Where could a beach be located?
4. How do we know it's safe to swim in the lake?
5. What amenities are desirable for a public beach?
6. How will the decision be made?

Part 2: Individual Q&A and discussion with project team and other experts

1. About the Beach Feasibility Study and Design Project



Project Objectives

1. Assess current interest and utility of a beach on Onondaga Lake
2. Identify the best location for a beach on Onondaga Lake
3. Develop a shovel-ready design, including amenities, that would make the beach a success for the community

Sponsor and Team

FUNDING

This project is funded through a Title 11 Environmental Protection Fund matching grant from the New York State Department of State's Local Waterfront Revitalization Program to Onondaga County

PROJECT MANAGER

Holly Granat, Onondaga County Office of the Environment

CONSULTING TEAM

Barton & Loguidice, Anchor QEA, EcoLogic, Economic Development Strategies



Opportunities for Community Input

January 2019: Survey and Public Meeting #1

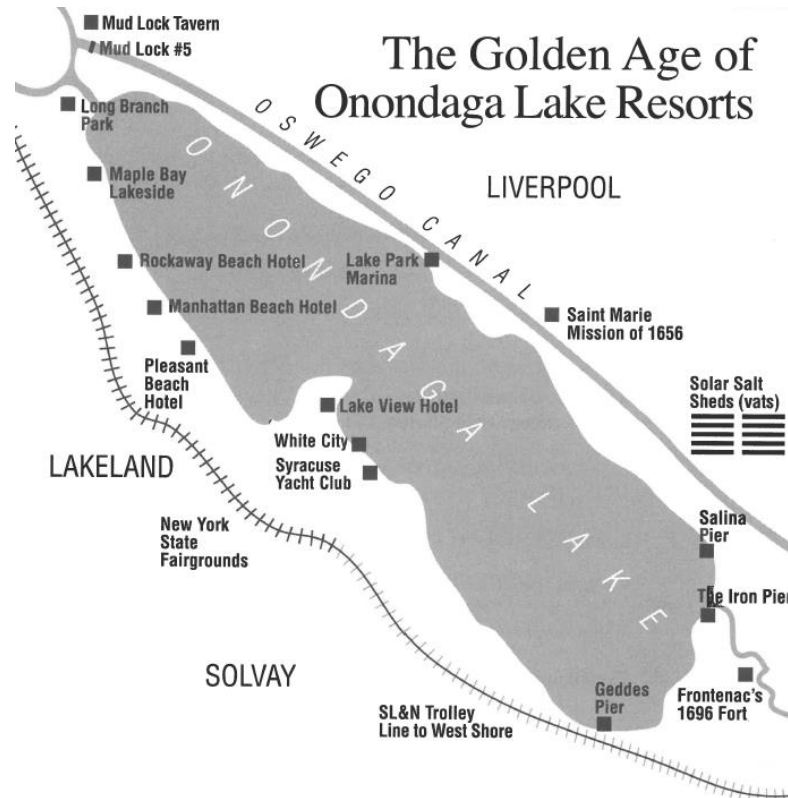
March-April 2019: Site alternatives analysis

June 2019: Public Meeting #2- Proposed site

July-October 2019: Site design development

November 2019: Public Meeting #3- Final design

2. Why a Beach on Onondaga Lake?



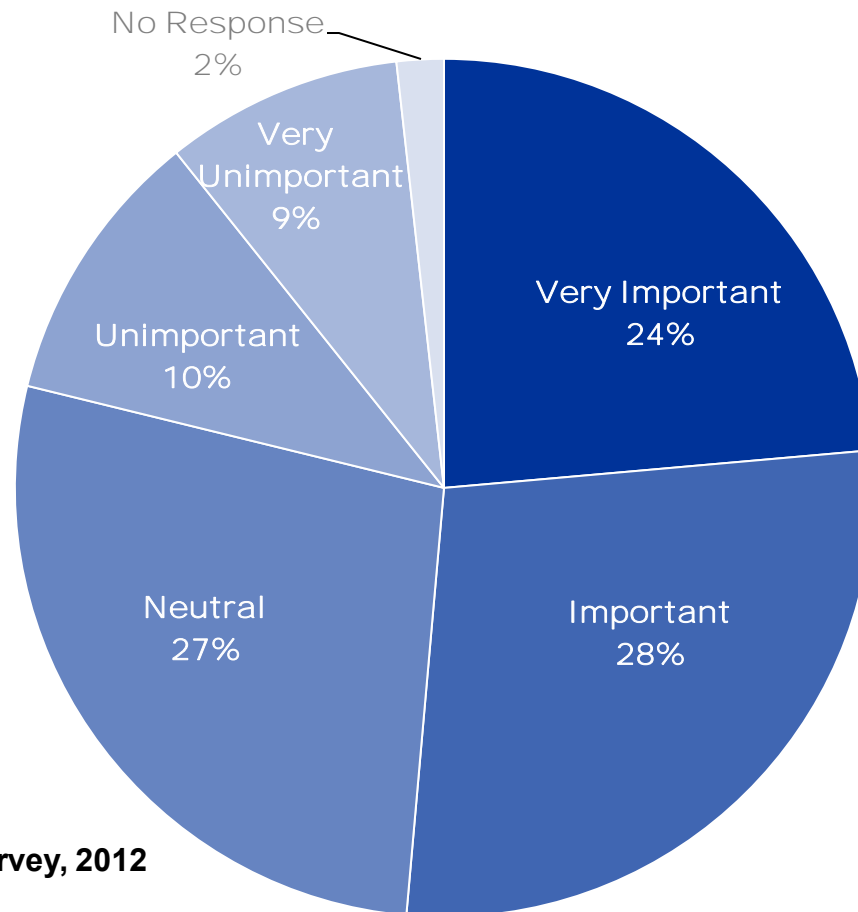
Reasons to Consider a Beach Now

- Water quality has improved dramatically
- The northern half of the lake consistently meets State swimming standards
- Public interest in a beach has been expressed in 54 surveys and reports spanning 84 years
- Community conversation on this topic is important

Expressed Public Desire to Reconnect with a Restored Onondaga Lake

- FOCUS on Onondaga Lake, 2012
 - Key concepts identified from 54 past reports (1928–2012)
 - 1,100 people surveyed, 100 key stakeholders interviewed
- Two overarching themes
 - Use and enjoy Onondaga Lake
 - Keep the shoreline in public domain
- Swimming was important to a majority of respondents

Q: How would you rank having a public swimming area on Onondaga Lake?



FOCUS Greater Syracuse Survey, 2012
1,100 respondents

3. Where Could a Beach be Located?



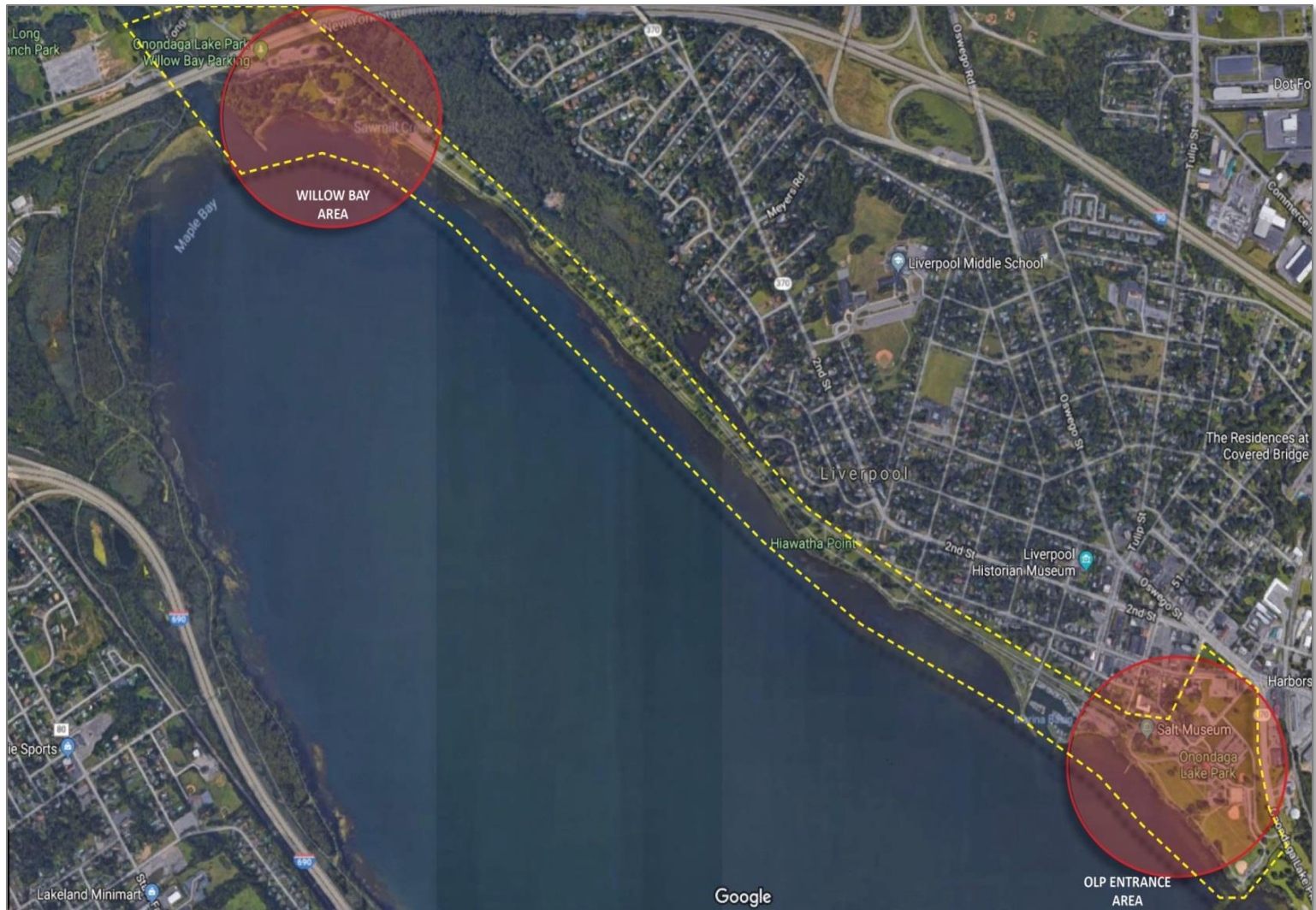
Factors to Consider

- Public health and safety
- Maintenance requirements
- Land use restrictions
- Transportation services and parking
- Infrastructure needs / Utility access
- Regulatory considerations

NYSDEC Regulatory Classification: B and C Waters



Study Area: Northeastern Shoreline



4. Swimming Safety



Onondaga Co. Parks, Office of Museums

Involved Agencies

NYS Department of Environmental Conservation (DEC)

- Water classifications and use attainment – does water quality support contact recreation?
- Lead agency regarding change in use, with other federal, state and local partners (due to lake's history)

US Environmental Protection Agency (EPA)

- Background on lake cleanup program
- Regulatory authority on future uses of the lake

NYS and County Departments of Health (DOH)

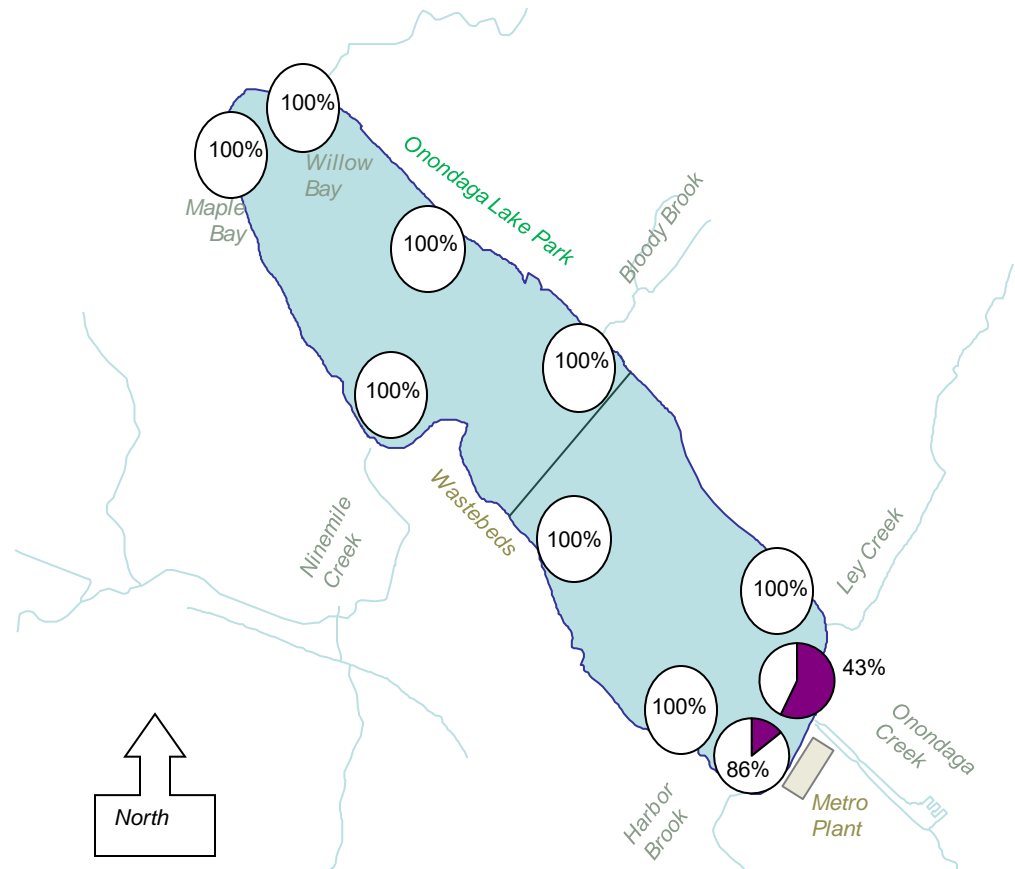
- Regulations and standards to establish a new beach
- Monitor existing beaches for compliance with standards

Data and Information Sources

- Onondaga Lake Ambient Monitoring Program, 1998-2018
- NYSDEC completed a Human Health Risk Assessment based on USEPA protocols in 2002 as part of remediation program
- Independent research and monitoring oversight of lake remediation and wastewater/stormwater projects
- Data and reports have been reviewed by independent experts as well as by local, state, and federal agencies

Regulatory Assessment

- Northern segment of Onondaga Lake fully supports public bathing (NYSDEC)
- Onondaga Lake is subject to a lake-wide fish consumption advisory (NYSDOH)



Source: Onondaga County Ambient Monitoring Program

NYSDOH Criteria to Site a Beach

Bacteriological Quality: Counts under defined thresholds

Chemical Quality: “The water shall be free of chemical substances capable of creating toxic reactions, skin or membrane irritations to the general public.”

Physical Quality: “Physical inspection shall verify that the water is free of deposits, growths, oils, greases or other substances in the water capable of creating a health or safety hazard.” (*turbidity and Secchi disk indicate clarity*)

Biological Quality: “Algae and aquatic vegetation shall be controlled so that no hazard to bathers result.”

Human Health Risk Assessment, 2002

Lake water: Risks related to exposure to water in the north basin were below levels of concern

Lake bottom sediments:
The same is true for sediments. No remediation was required in the northern section of the lake to address swimming/wading exposure.



5. Amenities and Design Elements



What Would Make a Beach Successful?

- Access and parking
- Bike racks
- Mooring for boats
- Changing areas
- Showers
- Concession stand
- Shade (large trees)
- Clean sand
- Other ideas...?

6. Decision Process



What's Next?

After the Feasibility Study and Design are complete:

- Location for beach will be selected
- Shovel-ready design and contract documents will be prepared
- Costs to develop a beach with amenities will be known
- Change of use determination (NYSDEC, NYSDOH, EPA, Army Corps) will proceed
- If there is public support, County may seek funding

Part 2: Q&A with Experts

Topic Tables:

Beach location and amenities

Swimming safety

Economic considerations

Joint Statement by NYSDEC, NYSDOH, Onondaga County

The Onondaga Lake Beach Feasibility Study and Design project offers an opportunity for the Central New York community and involved regulatory agencies to consider a new public swimming beach on the northern shore of Onondaga Lake. A beach on Onondaga Lake is now a real possibility, thanks to the significant improvements in lake water quality evident for more than a decade, and the recent completion of the Onondaga Lake remediation.

The Feasibility Study and Design project is an inclusive County project that will involve NYS Department of Environmental Conservation, NYS and Onondaga County Health Departments, and the US Environmental Protection Agency throughout the process. This project is funded through an Article 11 Environmental Protection Fund Local Waterfront Revitalization Plan Grant. The agencies have agreed to participate in this community conversation. The final decision to move forward with constructing a beach rests with the Onondaga County Executive and Legislature.

This project is consistent with the goal of returning the lake to the community and the revitalization of Onondaga Lake as a vital natural resource.

Public Meeting #1:
Sign In Sheets

SIGN-IN SHEET

Onondaga Lake Beach Feasibility Study and Design — PUBLIC MEETING #1 — Jan. 29, 2019

NAME	ORGANIZATION / AFFILIATION	EMAIL	ZIP CODE
Sam Carter	Syracuse Univ	stcarter@syr.edu	13210
Kath Davis	Liverpool Res		13090
Sarah Liddell	SUNY ESF	sliddell@syr.edu	
JEFF TILL	OCHO	jtill@ongov.net	13203
Frank Moses	FOCUS	fmoses@syr.gov.net	13215
Bill Lansley	Onondaga County Parks	William.Lansley@ongov.net	13215
Guy Hulbert	NYS Park	guy.hulbert@parks.state.ny.gov	13104
Jan+Joe Hansen	RT	hansenjans@gmail	13088
Judy Tassone	County		
Joe Detor	Liverpool Resident	1jdetor@gmail.com	13088
J. SURYADEVARA	OEWEA	janala.suryadevara@ongov.net	13204
Duke Abbott - Kenn	County Legis	ccckenan@gmail.com	13152
Jessica Haightaly	Spectruminers	younewsandnews.com	13214
J.D. TALUCCI	CITIZEN	JDTALUCCI@gmail.com	13206
Ron Gowin	TEAMSTERS 317	R.Gowin@gmail.com	13207
Ben Yans	County	Benjamin.yans@ongov.net	13051

SIGN-IN SHEET

Onondaga Lake Beach Feasibility Study and Design — PUBLIC MEETING #1 — Jan. 29, 2019

NAME	ORGANIZATION / AFFILIATION	EMAIL	ZIP CODE
WARREN L. DARBY	Onondaga Lake Assoc	ldarbyny@aol.com	13209
Don Jordan	SOLCA	don.jordan@compuserve.com	13627
MISSIE ROSS		mar13207@yahoo.com	13207
Tammy Honeywell		Taurusgemini7@gmail.com	13215
BRANDON SHAW	—	b.martin.shaw@gmail.com	13206
Stephen Gasparini	—	SJGasparini@gmail.com	
Joe Ostuni	Village of L'Abode	jostuni1@verizon.net	13088
Dan Pich	Bill Magarelli office	daniel.pich@state.com	13631
Diane Knowlton	Onondaga Yacht Club	knowlton@sunyocc.edu	13207
Paul Miller	Self	—	—
Carrie Palmer	SUNY ESF/OEI	—	13210
Jane VanVessum	SUNY ESF	—	13206
Michaela Kenward	ESF	—	13208
MADISON QUINN	NYWEA	madiannquinn@gmail.com	13204
Nicole Cleary	B&L	ncleary@bartonandlogsdon.com	
Keith Ewald	B&L	kewald@bartonandlogsdon.com	

SIGN-IN SHEET

Onondaga Lake Beach Feasibility Study and Design — PUBLIC MEETING #1 — Jan. 29, 2019

NAME	ORGANIZATION / AFFILIATION	EMAIL	ZIP CODE
CHRISTIAN ⁰⁵⁰⁵⁰	DIY/Am myself	christian1270@yahoo	13206
Jon Zells	onondaga Historical Association	jon.zells@nyhistory.org	13202
Mark Sergott	NYSDOH Project Manager	mark.sergott@health.ny.gov	
David Coburn	Retired	dcoburnpool@gmail.com	13090
Richelle Brown	Law Office of Joe Heath	richellebrown@gmail.com	13202
KATHLEEN BERTUCH	CNY RPDB	BERTUCH@CNYRPDB.ORG	13202
JIM KEIT	Focus	janakeit@aol.com	13090
BOB BRANT		brant01@gmail.com	13088
MARY O'NEIL		meoneil58@yahoo.com	13088
TOM O'NEIL	CITIZEN	oneilteo@hotmail.com	13088
Neil Ring	ESF	neilring@est.edu	13027
Peggy Chase	onondaga County	mchase15@nyc.org	
Nick Pan		nicholas.r.pan@gmail.com	13088
Mike Plochocki	Onon Ony	mikeplochocki@hotmail.com	13108
Elizabeth Myers	Ecologic	emyers@ecologic.com	13214
Emma Lisell	Ecologic	emma.avelina@gmail.com	

SIGN-IN SHEET

Onondaga Lake Beach Feasibility Study and Design — PUBLIC MEETING #1 — Jan. 29, 2019

[illegible]

Public Meeting #1: Summary and FAQs

Onondaga Lake Beach Feasibility Study and Design

Summary: Public Meeting #1

DATE & LOCATION

Tuesday, January 29, 2019, 5–7pm

Destiny USA SkyDeck (6th floor), 9090 Destiny USA Dr., Syracuse, NY 13204

ATTENDANCE

- 54 attendees (scanned sign-in sheets attached)
- ~35 people in audience for presentation (not counting staff/presenters)

AGENDA & FORMAT

5:30-6pm: Formal presentation (see separate PowerPoint presentation file)

5-5:30pm and 6-7pm: Informal Q+A sessions with project team and agency experts at 3 topic tables:

(1) Beach location and amenities, (2) Swimming safety, and (3) Economic considerations.

PUBLIC COMMENTS & QUESTIONS

Public input was gathered via comment cards submitted at each topic table (responding to questions posed below) as well as a general comment box, and also captured by note takers at each table. This information, presented below, is in addition to the online public opinion survey.

General comment

- Quality of local residents life? Should be significantly increased. However, careful what you wish for.

Beach Location and Amenities: *Where would you like to see a beach on Onondaga Lake? What amenities would you enjoy at a beach on Onondaga Lake?*

Location comment cards (bold = multiple comments):

- **Willow Bay** (x4) -- specific comments: "preferred"; "would be a great place for the beach!"; "Natural and obvious. But concerned Thruway noise would disturb peace."
- How about a splash pad instead of a beach? Near the Wegmans playground.
- I don't feel a beach on Onondaga Lake in any location is a good idea.

Amenities comment cards:

- Noise buffer from I-90?
- **Parking** (x2)
- **Public transport** (x3) – specific comments: "Bus route"; "Trolleys, shuttle"
- Lifeguards
- **Restrooms and showers** (x2) – specific comments: "Outdoor showers"; "Restrooms , bath house, showers a must"

- Like old-fashioned shelters and modern amenities blended
- Picnic, mandatory with grills and tables
- **Food for sale** (x2) – specific comments: “Food trucks”; “Refreshments (e.g., beverage stands)”; “Shops privately owned.”
- **Boardwalk** (x2) – specific comments: “seasonal festivals”; “e.g., Ocean City, MD; San Juan, PR”
- Small education center
- Beach Volleyball
- Rentals (sports, athletic, water)
- Amusements, entertainment
- Fireworks
- Historical value
- Better existing facilities.
- “From shame to proud”
- Question: What is the infrastructure plan for each beach location?
- We need any reason possible for young people to stay in Syracuse

Notes from discussion at table:

- General questions about if noise would be an issue due to proximity to the I-90 Thruway.
- How would flooding be handled after heavy rain events? Willow Bay area typically is under water after heavy rains during summer.

Swimming Safety: *What questions or concerns do you have about swimming in Onondaga Lake?*

Comment cards:

- How will we end the stigma that the lake is too polluted? Future generations need to be informed in ways that are more exciting.
- Swimming — since the 1950s every 10 years swimming was promised. This is the 21st century, not for me any longer. But anxious to see options available. (kaydee2013@verizon.net)

Notes from discussion at table:

- Concerned about the impact of the beach on the lake in terms of litter, sunscreen, etc. Signage might help to avoid issues.
- Why is the EPA involved, and why is “change of use” part of this decision?
- Will the survey and public comment results be available for others to see? (Table reps answered: yes, there will be a responsiveness summary. Also considering FAQ on web page.)
- There is a stigma about the lake being too polluted, but maybe a younger generation will not have this.
- Should promote fishing as well as swimming (in general on Onondaga Lake, e.g., fishing derby).

- Beach in the Class B waters might cause people to misunderstand and think that they can also swim in the Class C portion of the lake.
- Concerned about whether there is adequate testing in tributaries near the proposed beach areas. Commented "There are superfund sites all around the lake." Asked about Sawmill Creek, specifically.

Economic considerations: *Have you completed the online survey? (Printed QR code linked visitors to survey site.) Do you have anything else to add regarding economic considerations?*

Comment cards:

- How many full-time jobs? Part-time? Seasonal? Build per private? Housing developments bid?
- Total cost of recreation? E.g., Sylvan Beach is free admission with \$10 parking.
- Keep in mind who's giving (local residents) vs. who's receiving. Hopefully also local residents and local bus, tourism, etc. Hope for the best.
- What is the economic impact of each beach location on the Village of Liverpool?

Notes from discussion at table:

- The greens on the pie charts are too similar – we need contrasting greens to help distinguish
- People are asking if the results are available from the survey yet
- How many people have taken the survey so far?
- Have you taken potential increases in traffic into consideration? If the beach is a success, how will that impact traffic?
- There would be the potential for on street parking with a beach on Onondaga Lake. Would the beach disrupt normal on street parking availability? This may not be conducive to the way that parking is set up right now.
- Would there be a fee to visit the beach?
- Have the Village resident spoken up at all? About the beach?
- Is there any chance that the parkway would be closed to traffic? Would the parkway be part of the park? Instead of a traffic cut through?
- Has the County done any economic impact studies? What is the larger impact of bringing more folks into the area?
- When will the decision be made? (Travis Glazier response: We are bringing information together in this study – not advocating for one decision over another. Trying to get information about whether people want beach and what the potential impacts could be)
- Were people asking about restaurants and potential impacts on businesses?
- How long will the survey be up?
- Sue Fassler idea: Make an FAQ after each meeting and post on the OE website

Onondaga Lake Beach Feasibility Study and Design

Public Meeting #1: Summary and Responses to Frequently Asked Questions

MEETING DETAILS

Date and Location

Tuesday, January 29, 2019, 5–7pm

Destiny USA SkyDeck (6th floor), 9090 Destiny USA Dr., Syracuse, NY 13204

Attendance

- 54 attendees (scanned sign-in sheets attached)
- ~35 people in audience for presentation (not counting staff/presenters)

Agenda & Format

5:30-6pm: Formal presentation (see separate PowerPoint presentation file)

5-5:30 and 6-7pm: Informal Q+A sessions with project team and agency experts at 3 topic tables: (1) Beach location and amenities, (2) Swimming safety, and (3) Economic considerations.

PUBLIC QUESTIONS/COMMENTS AND RESPONSES

Public input was gathered via comment cards submitted at each topic table (responding to questions posed below) as well as a general comment box, and also captured by note takers at each table. This information, presented below, is in addition to the online public opinion survey conducted as part of the Economic/Market Analysis.

<i>Topic: General Questions or Comments</i>	
Comment/Question	Response
How will you maintain the quality of life for local residents? A beach should significantly increase quality of life, but may be complicated by an influx of tourists.	The Feasibility Study (FS) will recommend a “best fit” option for the current Parks layout and adjacent communities. Public opinion will be considered, including options from the communities that a potential beach would serve. The Economic/Market Analysis will help us better understand what percentage of the public currently travels to a public bathing beach facility, where the public travels for a beach, and how likely they are to use a public bathing beach on Onondaga Lake. We anticipate quality of life considerations and desire, which have been included in the Economic/Market Analysis to be folded into the FS.
<i>Topic: Beach Location and Amenities</i>	
Comment/Question	Response
Three comments indicated that Willow Bay is a preferred location for a beach.	The Willow Bay area will be assessed in the FS and included as a potential alternative.
I don't feel a beach on Onondaga Lake in any location is a good idea.	Multiple studies, including the FOCUS on Onondaga Lake 2012 Report and the Onondaga Lake Partnership Reconnecting with Onondaga Lake 2007 Report, have cited public interest in a swimming beach on the shores of Onondaga Lake. Improved water quality, swimming, walking trails, weed control and consumable fish were the most desired conditions among people who have visited Onondaga Lake or the Park. During the FS process, we will listen to the public on what they truly want from this lake and help people understand where the lake stands today in terms of water quality and swimmability. The FS will focus on whether a beach is possible, not whether it will be constructed.

How about a splash pad instead of a beach? Near the Wegmans playground.	The beach is under consideration because it was included in the Onondaga County Parks Capital Improvement Plan in 2016. Depending on the outcome of the study, other options could be considered.
Will there be a buffer from I-90?	Potential noise issues will be assessed and addressed in the FS. The general areas of the park being evaluated for a beach are already open to other recreational use. It is not anticipated that any noise from the Thruway would have a significant impact on the citing or operation of the beach on the eastern portion of Onondaga. Noise from the Thruway is currently buffered by tree cover, and it may be recommended that this buffer is maintained or enhanced within the FS design.
What changes to parking will be made?	Parking considerations will be considered in the FS design study, as will operations and maintenance considerations relevant to the Onondaga County Parks Department.
What changes in public transportation will be made? More bus route stops? Trolleys, shuttles?	We are considering enhanced transportation options to and from Onondaga Lake Park to provide City residents with an easier route to these recreational locations. When the Loop the Lake trail is completed, we hope to see the trail used to connect people via pedestrian and bicycle traffic.
Will there be lifeguards?	Yes.
What amenities will be included? Outdoor showers, restrooms, bath house, etc.?	These amenities will be considered in the FS along with cost estimates of each of the amenities.
I would like to see old-fashioned shelters and modern amenities blended.	The FS will include design considerations in the final document.
Would like to see picnic areas with permanent grills and tables.	Onondaga Lake Park currently maintains grills and picnic tables, and the FS will include any necessary additions.
There should be food for sale, food trucks, drink stands, and privately owned shops.	These considerations may be included in the FS, or considered if future construction is undertaken.
Other specific amenities mentioned: Boardwalk (x2); seasonal festivals; “e.g., Ocean City, MD; San Juan, PR”; small education center; beach volleyball; rentals (sports, athletic, water); amusements/entertainment; fireworks; historical value; and better existing facilities.	These considerations largely rely on whether a beach is approved for construction.
How would flooding be handled after heavy rain events? Willow Bay area typically is under water after heavy rains during summer.	Flooding concerns currently present in Onondaga Lake Park will be considered during the FS.
What is the infrastructure plan for each beach location?	The FS and final design for the recommended beach option will address infrastructure.
Topic: Swimming Safety & Public Health	
Comment/Question	Response
How will we end the stigma that the lake is too polluted? Future generations need to be informed in ways that are more exciting.	We agree. This process may inform us that a larger public outreach campaign is necessary to end the stigma of Onondaga Lake.

Swimming — since the 1950s every 10 years swimming was promised. This is the 21st century, not for me any longer. But anxious to see options available.	Dramatic improvements in water quality due to Metro Wastewater Treatment Plant upgrades and remediation by Honeywell have allowed Onondaga Lake to be designated as safe for swimming by NYS Department of Environmental Conservation.
I am concerned about the impact of the beach on the lake in terms of litter, sunscreen, etc. Signage might help to avoid issues.	The Project Team is working with Onondaga County Parks to address issues of operations and maintenance, including litter and goose waste.
Why is the EPA involved, and why is “change of use” part of this decision?	<p>The EPA is involved because Onondaga Lake is a Superfund site. EPA and NYSDEC guidelines and approvals have been necessary throughout the cleanup process to record water quality data and to guide the standards used for the Lake Bottom cleanup.</p> <p>‘Change of use’ is necessary by New York State regulations based on the intended use of the water body. This change of use will redesignate the selected shoreline area to align with the proposed use as a public beach and recreational area.</p>
Will the survey and public comment results be available for others to see?	Yes, responsiveness summary, an FAQ about the lake on the website . Survey results will likely be presented at the next public meeting in June.
Beach in the Class B waters might cause people to misunderstand and think that they can also swim in the Class C portion of the lake.	The vast majority of Class C waters at the south end of the lake lack shoreline access. However, if someone were to jump off a boat in this area, the water quality would be appropriate for swimming. Public swimming is currently restricted from shore because of the lack of a public swimming beach.
Concerned about whether there is adequate testing in tributaries near the proposed beach areas. Commented “There are superfund sites all around the lake.” Asked about Sawmill Creek, specifically.	For all Superfund subsites around the lake, there has been testing and reporting on water quality and sediment data. Each of these tributaries was evaluated to determine if they were a source of contamination to the lake. More information is available here https://www.dec.ny.gov/chemical/8668.html and here http://www.dec.ny.gov/chemical/37558.html
Topic: Economic Considerations	
Comment/Question	Response
How many full-time jobs? Part-time? Seasonal? Build per private? Housing developments bid?	These comments will be addressed as part of the FS. We anticipate seasonal lifeguard positions and some additional Onondaga County Parks positions to cover operations and maintenance. No housing developments will be considered within Onondaga County Parks boundaries.
Total cost of recreation? E.g., Sylvan Beach is free admission with \$10 parking.	There will not be a fee for using the beach.
Keep in mind who’s giving (local residents) vs. who’s receiving. Hopefully also local residents and local bus, tourism, etc. Hope for the best.	We consider local residents to include the City of Syracuse. Following the completion of the Loop the Lake trail, city residents will have access to any potential future beach through the multi-use trail.
What is the economic impact of each beach location on the Village of Liverpool?	We will understand this better after the Economic/Market Analysis is completed.
The greens on the pie charts are too similar – we need contrasting greens to help distinguish.	This has been noted and will be addressed as part of future presentations.

Are results from the survey available yet?	Survey results will likely be released at the June meeting.
How many people have taken the survey?	~2,060
Have you taken potential increases in traffic into consideration? If the beach is a success, how will that impact traffic?	Potential traffic impacts will be evaluated in the FS. However, we do not anticipate traffic to be much heavier than it is currently. Most of the populations not served by a local beach will have access via the pedestrian access and bus routes.
Would the beach disrupt normal on-street parking availability? This may not be conducive to the way that parking is set up right now.	Parking will be addressed as part of the FS.
Have the Village residents spoken up at all? About the beach?	Yes. Residents in the Village of Liverpool have completed the online survey as have many others within the area. In addition, the Project Advisory Committee includes Village of Liverpool representatives.
Is there any chance that the parkway would be closed to traffic? Would the parkway be part of the park? Instead of a traffic cut through?	Onondaga Lake Parkway is a State Highway (Route 370) and any decisions regarding the future of this road would be subject to public review and traffic study. Currently, NYSDOT is considering safety improvements to the highway to address the high rate of vehicle accidents and fatalities on the road. Additional information on this project can be located by contacting the NYSDOT regional office.
Has the County done any economic impact studies? What is the larger impact of bringing more folks into the area?	As part of this project, we are completing an Economic/Market Analysis to understand the economic impacts of a beach. The FS will also evaluate potential impacts of increased traffic.
When will the decision be made?	We are bringing information together in this study – not advocating for one decision over another. The intention of the FS is to gather information about whether people want beach and what the potential impacts could be. We will have all the information necessary for the lawmakers to decide on whether a beach will be constructed. All of the information needed to move ahead with construction will be compiled as part of the FS and design, but the exact timing of any decision is yet to be determined.
Are people asking about restaurants and potential impacts on businesses?	Yes. The Economic/Market Analysis will evaluate the potential impacts on businesses.
How long will the survey be up?	It was available between January 15 and January 31.

In addition to questions and responses noted above, the following comments were submitted:

- We are taking this lake from a shame to something to be proud of.
- We need any reason possible for young people to stay in Syracuse.
- There is a stigma about the lake being too polluted, but maybe a younger generation will not have this.
- Should promote fishing as well as swimming (in general on Onondaga Lake, e.g., fishing derby).

APPENDIX 2

Appendix- Onondaga Lake Beach Public Meeting: Meeting #2

June 26, 2019, 5:00–7:00 p.m.
Clubhouse, St. Joseph's Health Amphitheater at Lakeview

Public Meeting #2: Agenda

Onondaga Lake Beach Feasibility Study and Design

Public Meeting #2 — Working Agenda

DATE & TIME: June 26, 2019, 5:00–7:00 p.m. (presentation 5:30–6:00)

LOCATION & MEETING SPACE: Clubhouse, St. Joseph’s Health Amphitheater at Lakeview

- One presentation (seating for ~60 participants)
- Multiple information stations (~6 tables and surrounding area for posters)
- Registration table

PURPOSE

- Convey the process by which we arrived at most feasible site.
- Seek public input on amenities and design features.
- Provide opportunities to learn more about lake cleanup and water quality (at topic tables).

AGENDA/FORMAT

Arrival/Sign-In (5:00-5:30) — Visitors receive “beach bucks” as they sign in to so they can weigh in on preferred design features at topic tables.

Presentation (5:30-6:00)

TIME	TOPIC*	SPEAKER
5:30-5:35	Introduction (review scope and schedule of feasibility study)	Travis Glazier
5:35-5:45	Economic and market analysis survey	Ken Danter
5:45-5:55	Site selection and design concepts	Keith Ewald
5:55-6:00	Next steps	Travis Glazier

Topic tables (5:00-5:30 and 6:00-7:00)

TOPIC	WHO	POSTER CONTENT	MATERIALS / PUBLIC INPUT OPPORTUNITIES
Site Selection & Design (2-3 tables, including one for beach bucks)	B&L Anchor QEA	Matrix Large map of site location Photos of current conditions Plan view Renderings of proposed site	Beach pails with questions (see below) Ask visitors: Did we miss anything in matrix?
Swimming Safety	Honeywell, DEC, WEP reps, Betsy Henry	Lake cleanup timeline Current water quality information	Repeat of material presented on this topic at the first public meeting (e.g., AMP report)
Parks/Operations	County Parks reps		Brochures, etc.
Survey and Analysis	Ken Danter		Economic Analysis report

BEACH BUCKS PAILS (attendees receive 10 bucks to distribute as they wish across pails)

If there were a beach on Onondaga Lake, I would like:

- PAIL 1: A great swimming area with deep and shallow water, areas to jump in and swim laps, easy to get in and out of the water.
- PAIL 2: sunny open sandy beach for laying out and shallow water for wading to cool off.
- PAIL 3: A sandy beach with a mix of sun and shade, as well as plenty of space so I don't feel crowded, in the water or on the sand.

MATERIALS NEEDED

- Fact sheet
- Sign-in sheet
- Easels for posters
- Sand pails with labels, beach bucks

PUBLICITY

- Develop an event announcement to be shared with stakeholders/partners via
 - Email blast
 - Press release
 - Social media (Facebook event)

Public Meeting #2: Presentation



Onondaga Lake Beach Feasibility Study and Design

Second Public Meeting
June 26, 2019



Department
of State



J. Ryan McMahon II
County Executive



DANTER /
Economic Development
Strategies

Meeting Plan

1. Overview of the Project

Travis Glazier

2. Economic and Market Analysis

Ken Danter

3. Site Selection and Design Concepts

Keith Ewald

4. Next Steps

Travis Glazier

1. Overview of the Beach Feasibility Study and Design Project



Project Objectives

- 1. Assess current interest and utility of a beach on Onondaga Lake**
- 2. Identify the best location for a beach on Onondaga Lake**
- 3. Develop a shovel-ready design, including amenities, that would make the beach a success for the community**

Sponsor and Team

FUNDING

This project is funded through a Title 11 Environmental Protection Fund matching grant from the New York State Department of State's Local Waterfront Revitalization Program to Onondaga County

PROJECT MANAGERS

Travis Glazier, Director, Onondaga County Office of Environment

Shannon Fabiani, Environmental Policy Analyst, Onondaga County Office of Environment

CONSULTING TEAM

Barton & Loguidice, Anchor QEA, EcoLogic, Economic Development Strategies



Involved Agencies

NYS Department of Environmental Conservation (DEC)

- Water classifications and use attainment – does water quality support contact recreation?
- Lead agency regarding change in use, with other federal, state and local partners (due to lake's history)

US Environmental Protection Agency (EPA)

- Background on lake cleanup program
- Regulatory authority on future uses of the lake

NYS and County Departments of Health (DOH)

- Regulations and standards to establish a new beach
- Monitor existing beaches for compliance with standards

Opportunities for Community Input

January 2019: Survey and Public Meeting #1

March-April 2019: Site alternatives analysis

June 2019: Public Meeting #2 – Site selection and design concepts

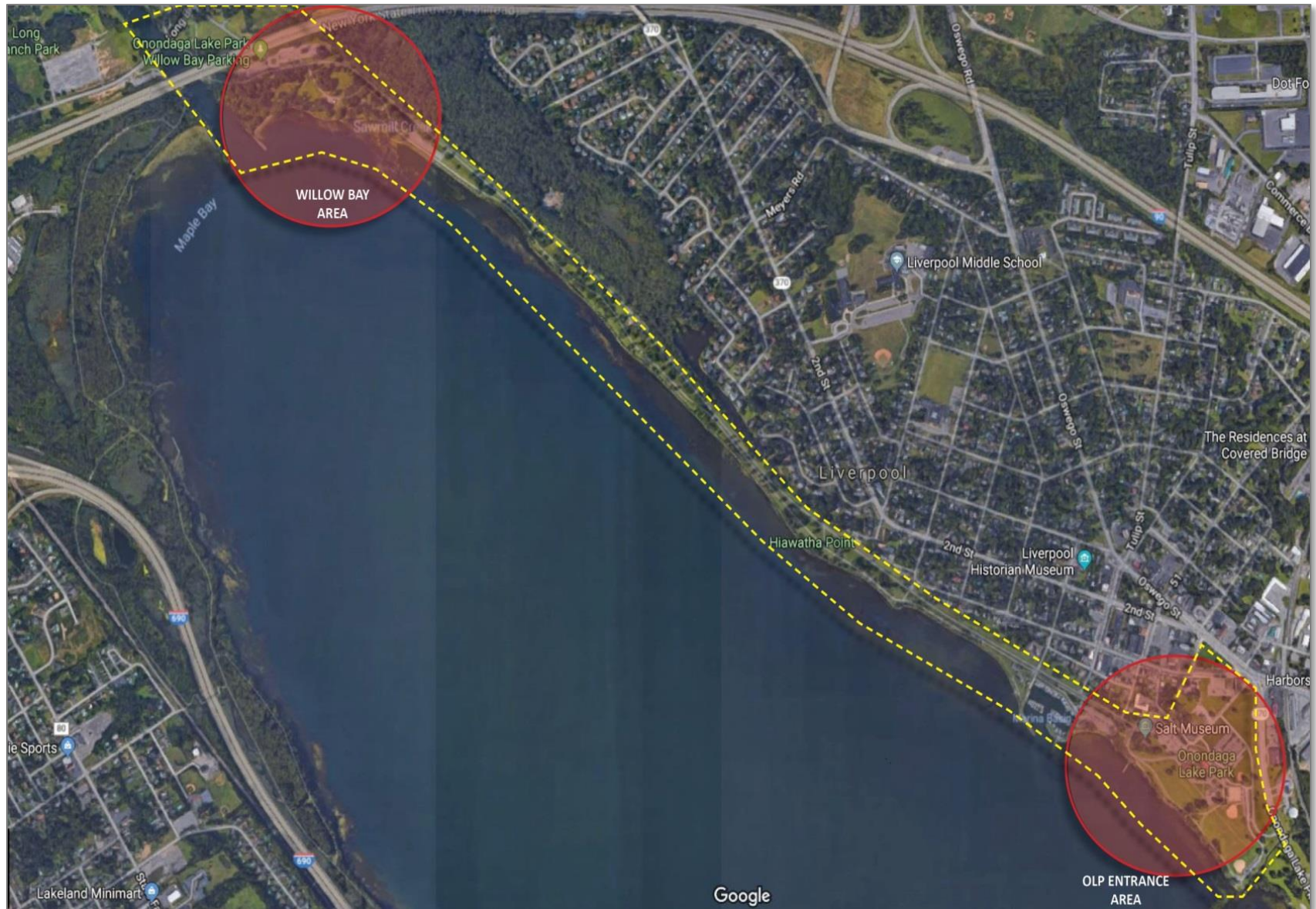
July-October 2019: Site design development

November 2019: Public Meeting #3 – Final design

Past Public Input on Reconnecting with a Restored Onondaga Lake

- Public interest in a beach has been expressed in 54 surveys and reports spanning 84 years (FOCUS on Onondaga Lake, 2012)
- Overarching themes
 - Use and enjoy Onondaga Lake
 - Keep the shoreline in public domain
- Swimming was important to a majority of respondents
- Community conversation on this topic is important

Study Area: Northeastern Shoreline



2. Economic and Market Analysis



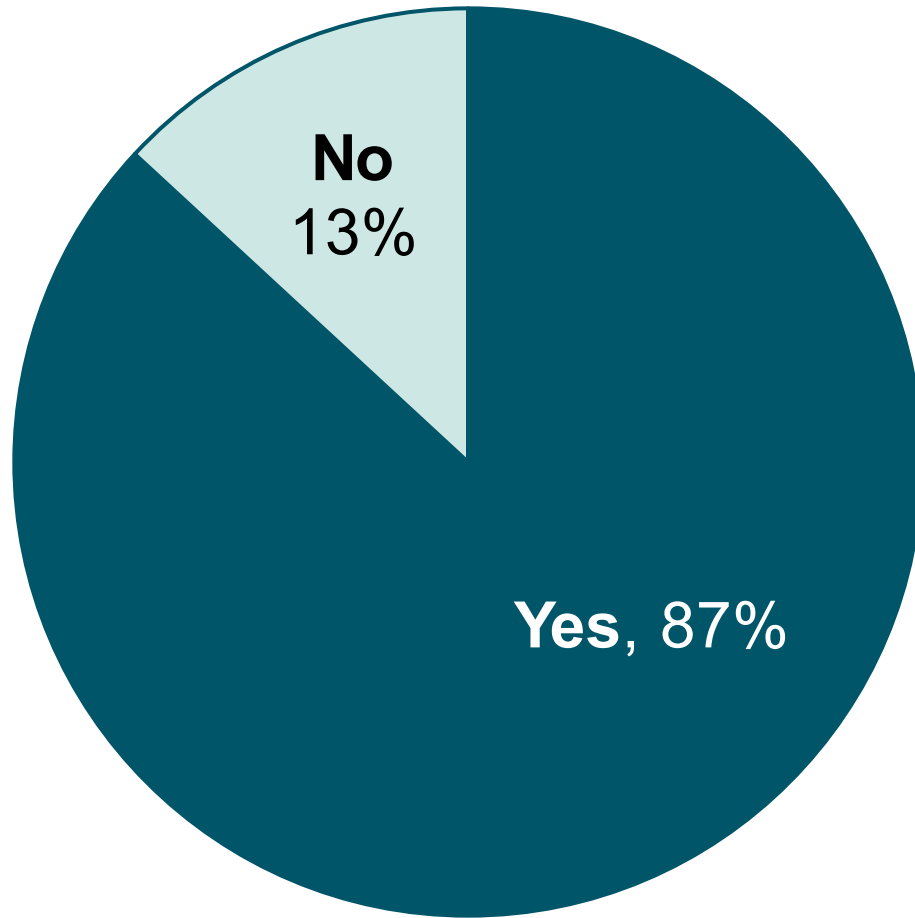
Market Research Components

- Internet survey
- Beach attendance model and projections
- Economic impact of new beach development

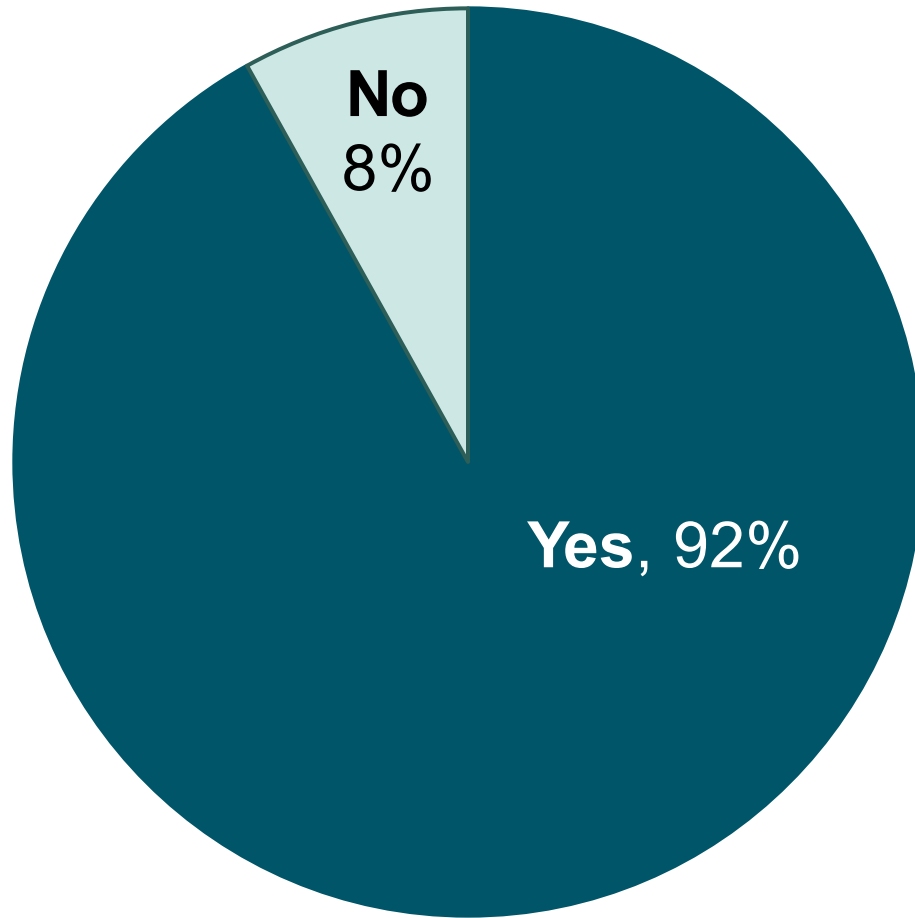
Internet Survey Summary

- Total Responses 2,119
- Average Completion Rate 91%
- Average Time to Complete 4m:2s
- Dates of Survey 1/14/19 – 1/31/19

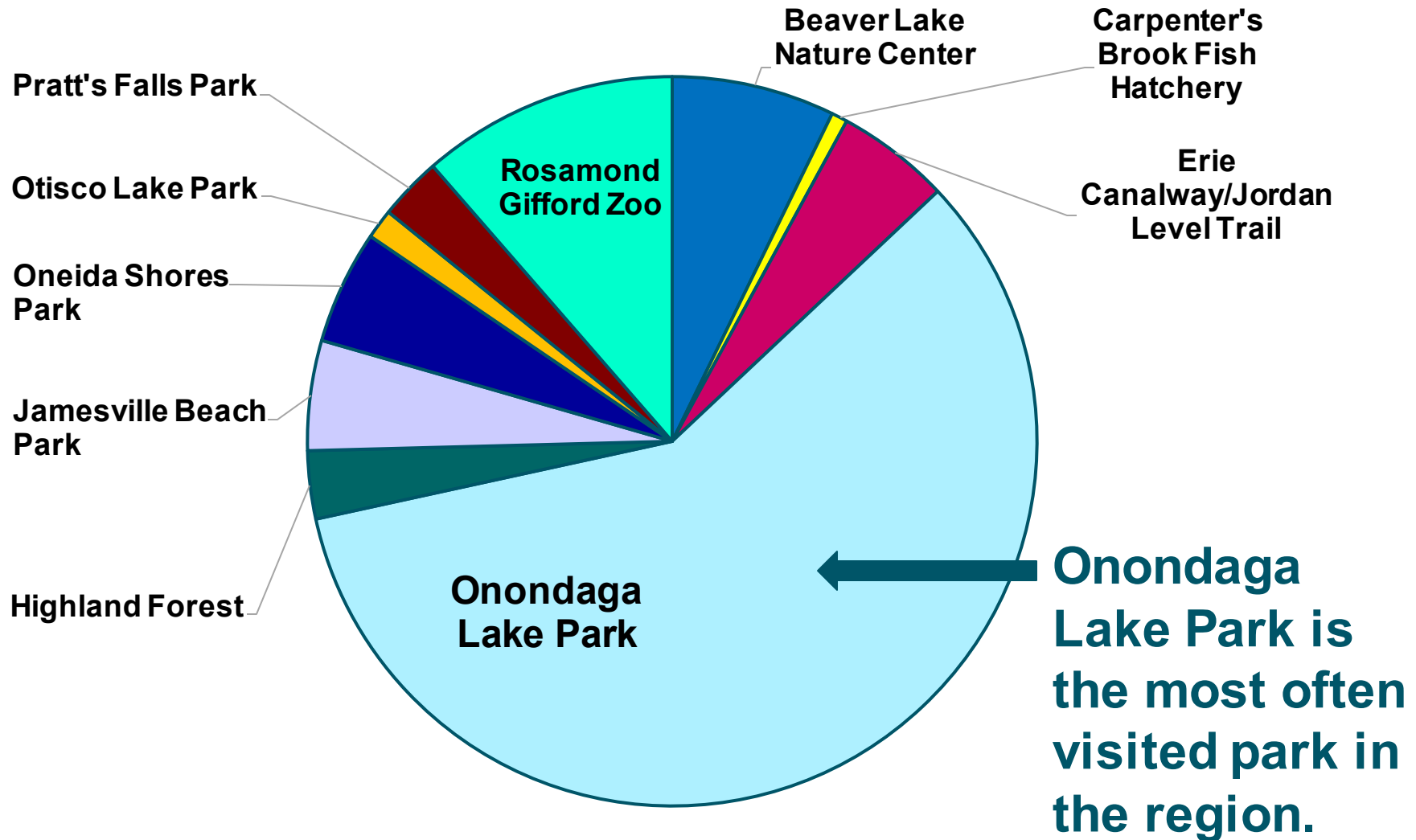
Q1: Do you live in Onondaga County?



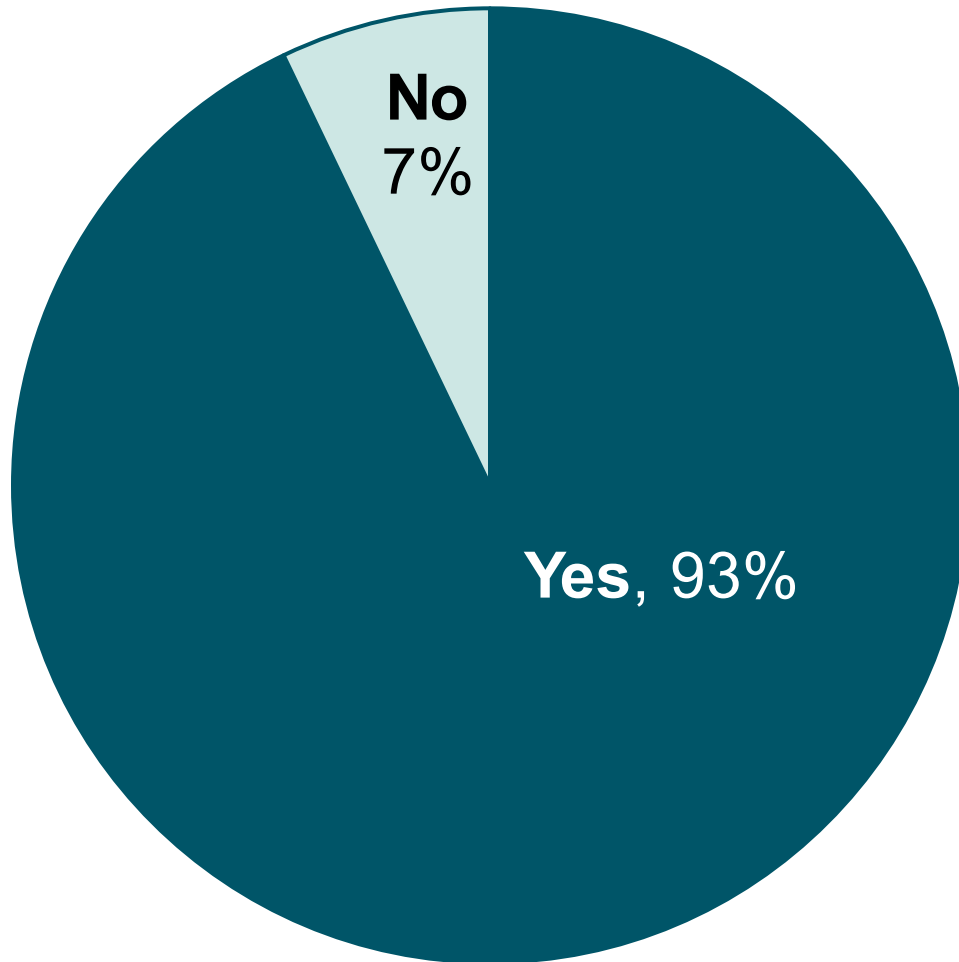
Q4: Have you visited an Onondaga County park in the past 12 months?



Q7: Which Onondaga County park do you visit most often?



Q10: Have you visited Onondaga Lake Park in the past 12 months?



Little difference by

- **gender**
- **household size**
- **age**
- **income**

Q11: How often do you visit Onondaga Lake Park?



Median: 6.2 times / year

Visiting more often:

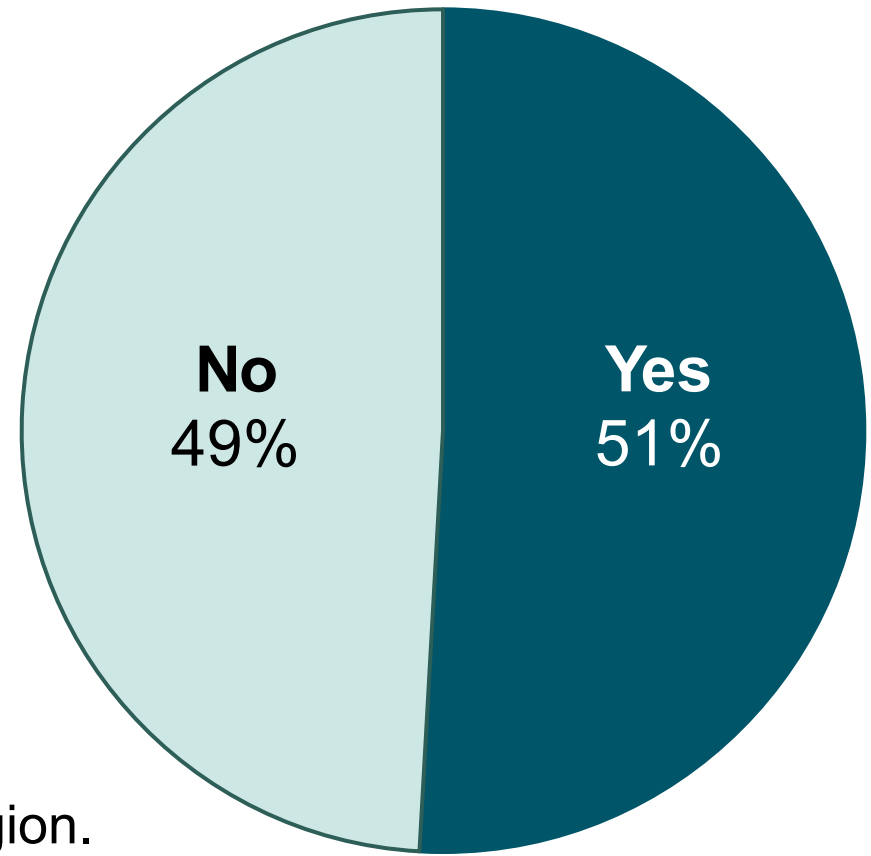
- **ages 25-74**
- **1-3 person households**
- **income under \$35,000**

Q15: Do you think there are enough beaches available for residents in Onondaga County?

Who thinks there are *not* enough beaches?

- 57% of people *under age 35*
- 52% of *females*
- 53% of people in *4-5 person households*
- 61% of visitors to Onondaga Lake Park
- Little difference by income

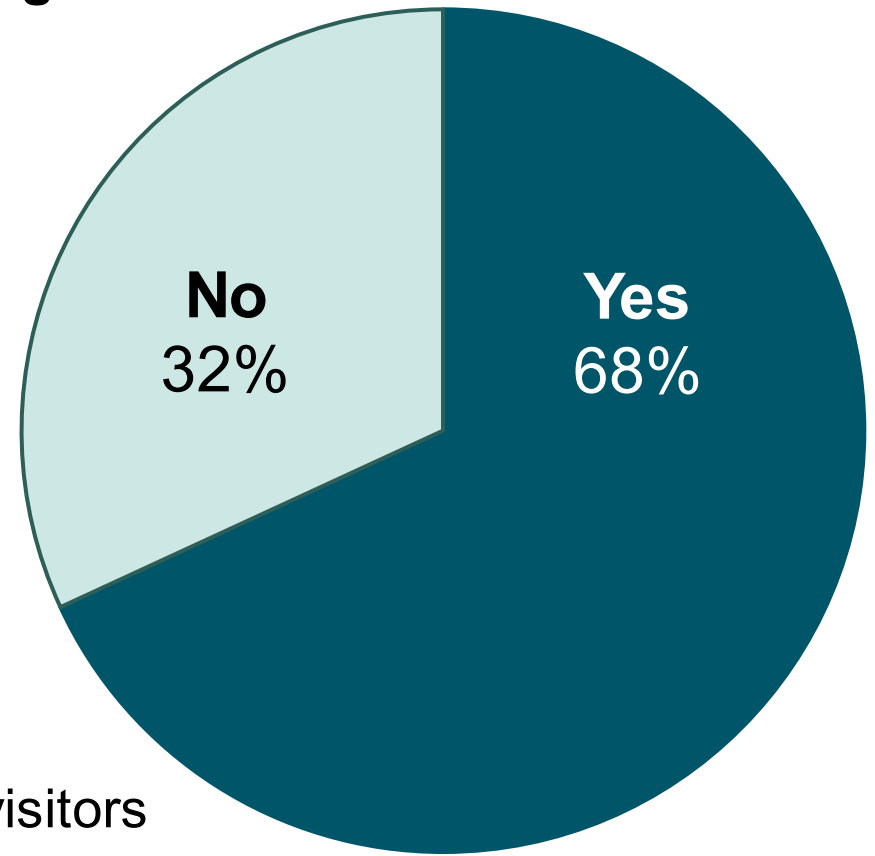
Note: 6 of 10 visit beaches in the region.



Q16: Do you visit any public beaches in the region?

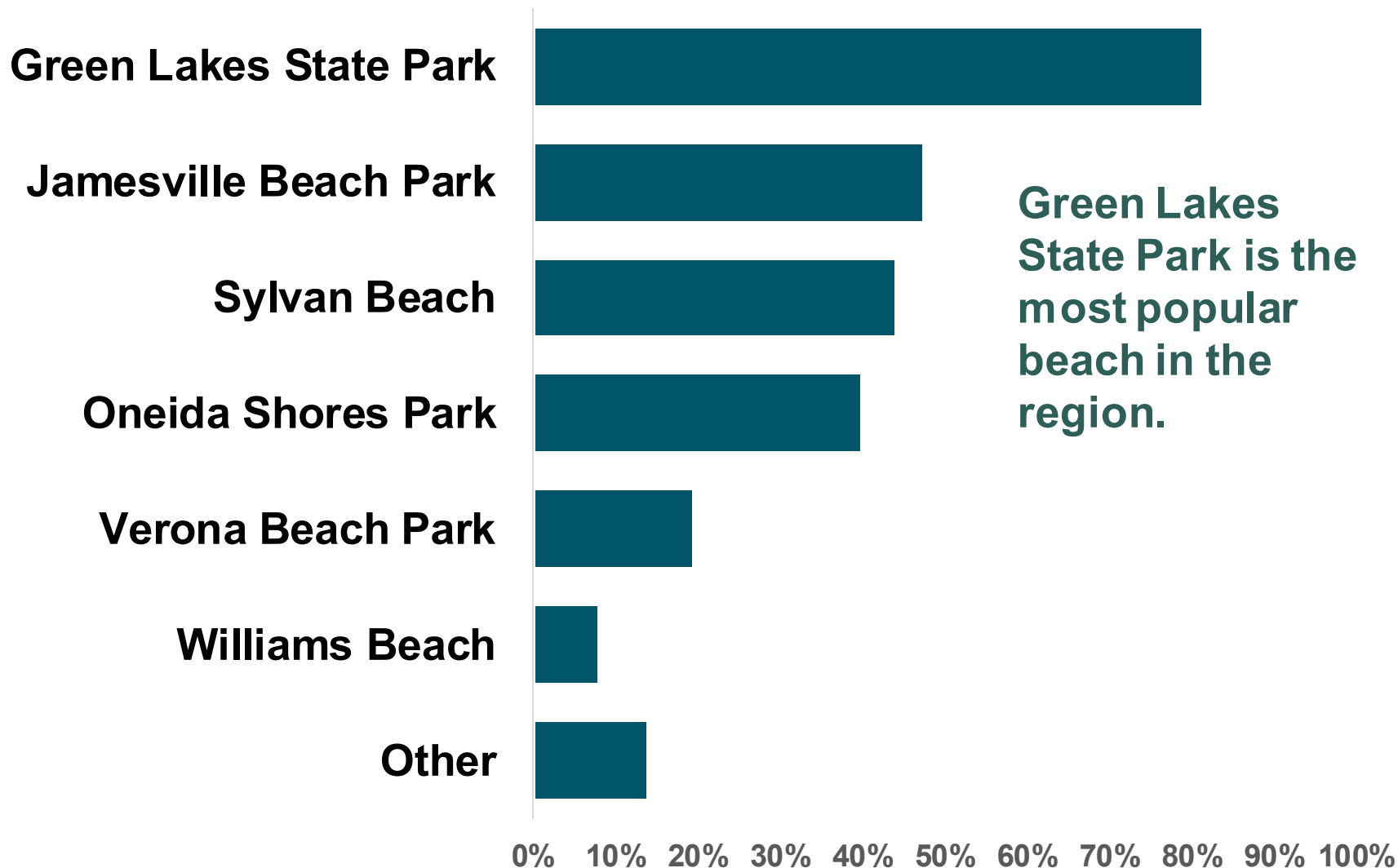
Who visits public beaches in the region?

- 76% of respondents *age 25-44*
- 73% of *females*
- 72% of respondents in *3+ person households*
- 76% of respondents with *income of \$25,000-\$34,000*



Note: 7 of 10 Onondaga Lake Park visitors also visit public beaches in the region.

Q17: Which public beaches do you visit?

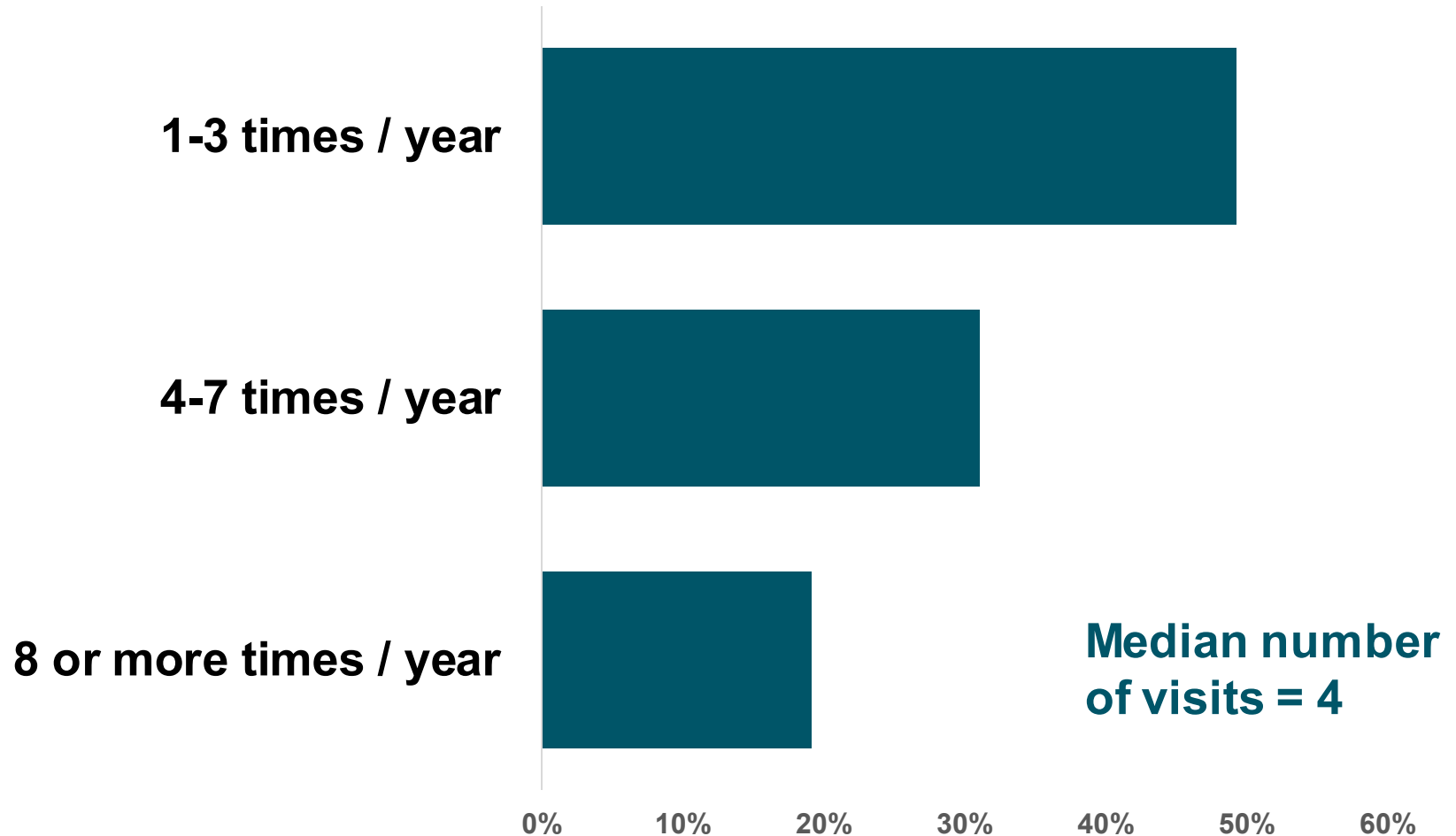


Regional Beach Comparisons

Beach	Frontage	Size (acres)	Parking
Jamesville Beach	610	1.4	400
Oneida Shores Beach	1,050	1.8	479
Sylvan Beach	4,900*	6.1	348+
Verona Beach	457	1.04	817
Williams Beach	286	0.33	70
Green Lakes Beach	996	2.5	1,108

* 125 feet supervised

Q18: How often do you visit a beach in the region?



Q19: When you visit a local beach, what do you use it for?

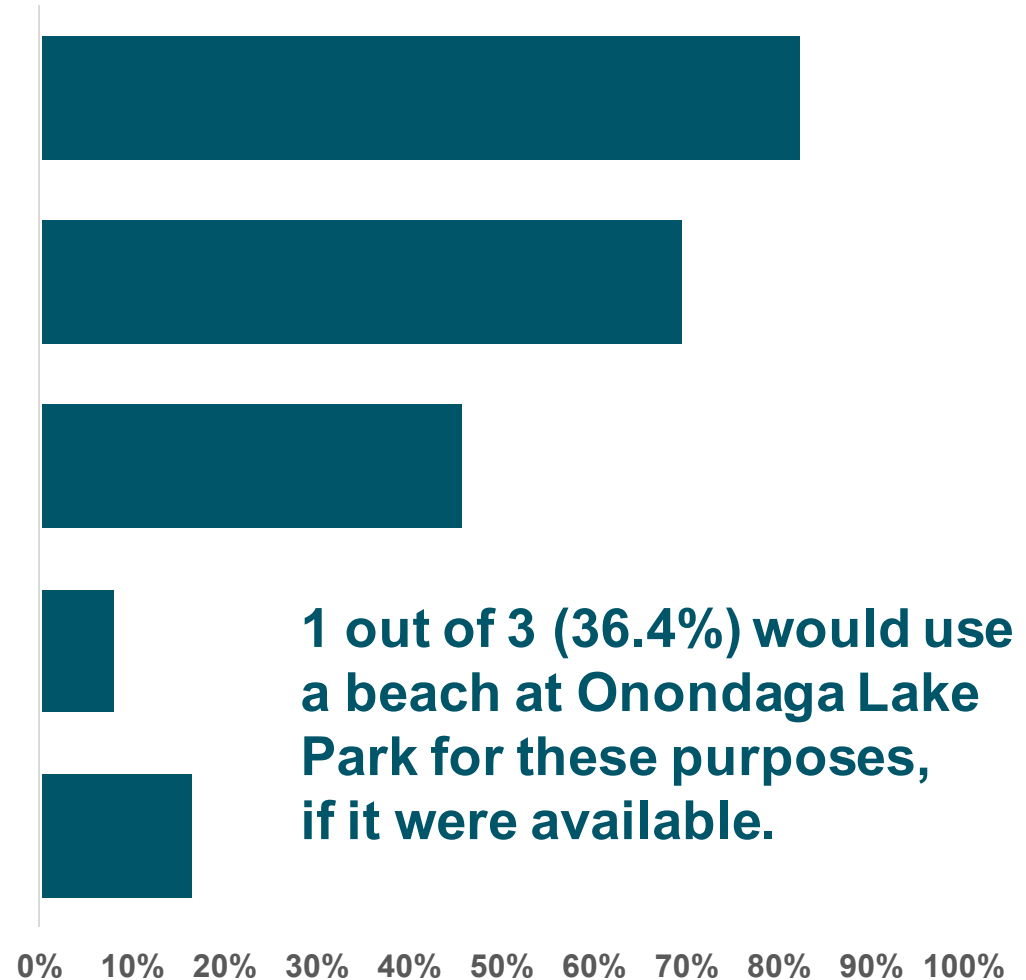
Hanging out on the beach to read, picnic, etc.

Swimming

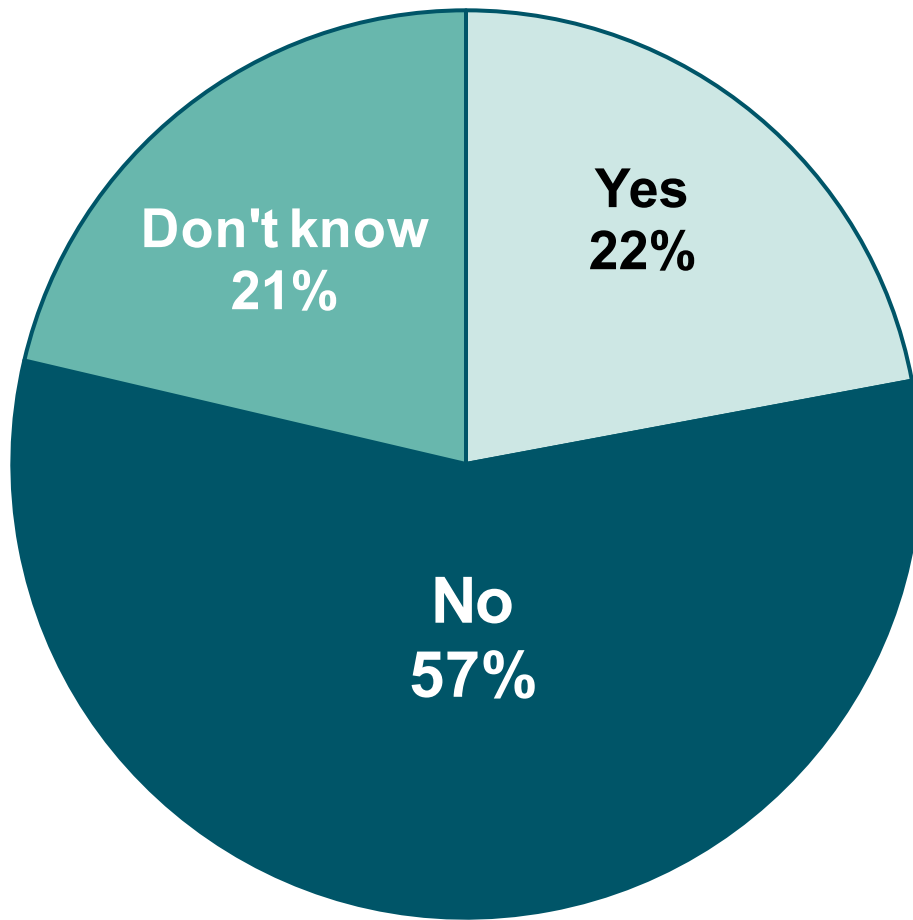
Wading

Paddle boarding

Other



Q21: Do you agree that Onondaga Lake is safe for swimming?



Who said “yes”?

- males, 28%
- age 45+, 25%
- 1 and 2 person households, 24%
- income \$75,000+, 27%

**Onondaga Lake Park visitors
also visiting public beaches in the region
who would use a beach at Onondaga Lake:**

31,800

- These represent “first time visitors.”
- Onondaga Lake Park visitors also visit beaches in the area an average of 4.3 times annually. The remaining 3.3 visits would be contingent upon providing a positive experience on the first visit.

**25% of beach visitors only use a beach
for “hanging out” or wading.**

~

**Among visitors using the beach
for “hanging out” or wading,
35% agree the lake is safe for swimming.**

~

**Among all visitors,
22% agree the lake is safe for swimming.**

3. Site Selection and Design Concepts



Table Topics: Q&A with Experts

Topic Tables:

Site Selection & Design

Parks / Operations

Swimming Safety

Market Survey Analysis



Factors Considered

- **Public health and safety**
- **Maintenance requirements**
- **Land use restrictions**
- **Transportation services and parking**
- **Infrastructure needs / Utility access**
- **Regulatory considerations**

What Would Make a Beach Successful?

- **Access and parking**
- **Bike racks**
- **Mooring for boats**
- **Changing areas**
- **Showers**
- **Concession stand**
- **Shade (large trees)**
- **Clean sand**
- **Other ideas...?**

Site Features: Existing and Proposed

1A BEACH AREA

Existing: Waterfront area closest to pier.
Proposed: Multi-use beach space and ADA accessible walkway along waterfront designed to accommodate activities including: picnicking, wading, swimming, etc.
Approx. Size: .66 acres

1B BEACH AREA

Existing: Waterfront area closest to bay view tent.
Proposed: Multi-use beach space and ADA accessible walkway along waterfront designed to accommodate activities including: picnicking, wading, swimming, etc.
Approx. Size: .56 acres

P PARKING LOTS

Existing: 2 large parking lots, P1 with 86 total parking stalls including 6 ADA stalls, P2 with 147 total parking stalls including 5 ADA stalls.
Proposed: Maintain, resurface, and restripe existing asphalt lots, provide planted areas / shade trees at either side.

GATEWAY

Existing: Drop-off loop with multiple trails.
Proposed: Define and enhance main entrance, install signage, and provide planting and seating area.

MULTI-USE TRAIL SYSTEM

Existing: East Shore Recreation Trail within Onondaga Park.
Proposed: Provide new paths throughout park to link existing and new program elements.



PEDESTRIAN NODES

Existing: Picnic areas.
Proposed: Provide gathering areas adjacent to program elements and provide new site furnishings and interpretive signage elements.

ACCESS LOOP

Existing: Access loop driveway near Beach Location 1B.
Proposed: Restore / repair existing access road as needed. Resurface and stripe existing asphalt parking lot to accommodate handicap accessible spaces for Beach Location 1B.

NEW BATHHOUSE + PROMENADE

Proposed: Provide bathhouse to accommodate new program elements and park visitors, including M/W restrooms, concessions, and storage space at Beach 1A Location. Create adjacent promenade from Bathhouse along beach with ADA accessible pathway and gathering nodes.

BAY VIEW PAVILION + PROMENADE

Existing: Picnic pavilion
Proposed: Expand existing pavilion to accommodate additional facilities for Beach 1B Location, including M/W restrooms and concessions, and waterfront promenade.

PLAYGROUND IMPROVEMENTS

Existing: Playgrounds
Proposed: Maintain existing playground equipment (repair and clean as required). Provide new natural play elements and new safety surface.

Site Features: Existing and Proposed

2 BEACH AREA

Existing: Waterfront area closest to pier.

Proposed: Multi-use beach space and ADA accessible walkway along waterfront designed to accommodate activities including: picnicking, wading, swimming, etc.

Approx. Size: 1.05 acres

GATEWAY

Existing: Entrance from parking lot to trail.

Proposed: Define and enhance main entrance, install signage, and provide planting and seating area.

MULTI-USE TRAIL SYSTEM

Existing: East Shore Recreation Trail and pathways within Onondaga Park.

Proposed: Provide new paths throughout park to link existing and new program elements.

PEDESTRIAN NODES

Existing: Picnic areas.

Proposed: Provide gathering areas adjacent to program elements and provide new site furnishings and interpretive signage elements.

NEW BATHHOUSE + PROMENADE

Proposed: Provide bathhouse to accommodate new program elements and park visitors, including M/W restrooms, concessions, and storage space near the proposed beach location. Create adjacent promenade from Bathhouse along beach with ADA accessible pathway and gathering nodes.



Evaluation Matrix of Site Options

Land Use and Amenities	Willow Bay Site 1A	Willow Bay Site 1B	Bloody Brook Site 2
Adequate space to build a sand beach	●	●	●
Playgrounds nearby	●	●	●
New land based recreation opportunities (spray park, concessions, volleyball court, etc.)	●	●	●
Adjacent green areas or passive recreation space	●	●	●
Water based recreation opportunities (kayak rentals, canoeing, paddle board, etc.)	●	●	●
	10	8	7

Legend: ● = Favorable (2) ● = Moderately Favorable (1) ● = Not Favorable (0)

Evaluation Matrix of Site Options

Connectivity and Access	Willow Bay Site 1A	Willow Bay Site 1B	Bloody Brook Site 2
Accessible to vehicles	●	●	●
Sufficient parking for potential users	●	●	●
Parking in close proximity to beach area	●	●	●
Parking area conveniently accessible from outside of park	●	●	●
Parking area conveniently accessible from a major highway	●	●	●
Transit stops nearby	●	●	●
Pedestrian and bicycle connectivity	●	●	●
Walkable to nearby destinations (food, bathrooms, etc.)	●	●	●
Connection to County's loop the lake trail system	●	●	●
	16	15	14
Utilities & Support Facilities	Willow Bay Site 1A	Willow Bay Site 1B	Bloody Brook Site 2
Public water supply available	●	●	●
Sanitary sewer supply available	●	●	●
Solid waste disposal available	●	●	●
Proximity to existing restrooms	●	●	●
Picnic and shelter structures present	●	●	●
Proximity to existing shelters	●	●	●
Development of future infrastructure (i.e., changing rooms, etc.)	●	●	●
	12	11	7

Evaluation Matrix of Site Options

Upland Site Conditions	Willow Bay Site 1A	Willow Bay Site 1B	Bloody Brook Site 2
Well drained site	●	●	●
Favorable wind conditions	●	●	●
Site free of constraints by wetlands or floodplains	●	●	●
Site free of constraints by historic and cultural resources	●	●	●
Site free of constraints by endangered species and habitats	●	●	●
	8	8	6
In-Water Site Conditions	Willow Bay Site 1A	Willow Bay Site 1B	Bloody Brook Site 2
Water quality	●	●	●
Bathymetry and water depth	●	●	●
Wave energy	●	●	●
Shoreline transition	●	●	●
Boat accessibility	●	●	●
Submerged Plants / Macrophytes	●	●	●
	10	7	4
TOTAL	56	49	38



PROVIDE PUBLIC ART
ELEMENT OR SIGNAGE

REDESIGN / RESTRIPE
EXISTING PARKING LOT

REDESIGN / RESTRIPE
EXISTING PARKING LOT

CREATE
GATEWAY

EXISTING
RESTROOMS

EXISTING
PAVILION

PICNIC
AREA

OPEN GREEN SPACE
POTENTIAL INFORMAL
MULTI-SPORT AREA

NEW PLAYGROUND
W/ NATURE PLAY
ELEMENTS

EXISTING
PAVILION

EXISTING
PLAYGROUND

FOOD-TRUCK
PARKING & LOOP

OPEN WATERFRONT
PICNIC SPACE &
OUTLOOK

PROVIDE INTERPRETIVE
SIGNAGE

BATHHOUSE

POTENTIAL BEACH
LOCATION (~1 ACRE)

GREEN SPACE
& PICNIC LOOP

EXISTING
PLAYGROUND

PROVIDE INTERPRETIVE
SIGNAGE

MULTI-USE
GREEN SPACE
FOR LARGE EVENTS

PROVIDE INTERPRETIVE
SIGNAGE

Concept Plan

BEACH FEASIBILITY STUDY CONCEPT PLAN RENDERING



Concept Rendering

ONONDAGA  LAKE

BEACH FEASIBILITY STUDY
CONCEPT RENDERING A



Concept Rendering

ONONDAGA  LAKE

BEACH FEASIBILITY STUDY
CONCEPT RENDERING B



Concept Rendering

ONONDAGA  LAKE

BEACH FEASIBILITY STUDY



What's Next?

- **Draft feasibility report will be released – Summer 2019**
- **Shovel-ready design and contract documents will be prepared**
- **Costs to develop a beach with amenities will be known**
- **Third public meeting (late 2019) will unveil final designs**
- **Change of use determination (NYSDEC, NYSDOH, EPA, Army Corps) will proceed**
- **If there is public support, County may seek funding**

Table Topics: Q&A with Experts

Topic Tables:

Site Selection & Design

Parks / Operations

Swimming Safety

Market Survey Analysis

Public Meeting #2:
Sign In Sheets

SIGN-IN SHEET

Onondaga Lake Beach Feasibility Study and Design | PUBLIC MEETING #2 | June 26, 2019 | St. Joseph's Health Amphitheater

NAME	ORGANIZATION / AFFILIATION	EMAIL	ZIP CODE
Holly Granat	Citizen	holly.granat@gmail.com	13088
GARRY KLINK	CITIZEN	GARRY0YC@gmail.com	13080
Rence Kittleman	Onondaga Audubon	rence.kittleman@gmail.com	13208
Dori Joiner	Onondaga Audubon	doripj@msn.com	13215
Joe Detor	Liverpool Village Resident	detorjoe@gmail.com	13088
Janaki Suryodevara	Onondaga County w/	janaki.suryodevara@	13204
Bill LANSLEY	ONONDAGA Cty PARKS	bill.lansley@ongov.net	13215
Joe Walsh	Onondaga County	jedwalsh@ongov.net	13021
Kathleen BERTUCH	CHYRPDB	BERTUCH@CHYRPDB.ORG	13202
DEE KLEES	FOCUS	dklees@sur.gov.net	13205
MARY RUHN	CITIZEN	MTRUHN@GMAIL	13204
Elaine Denton	citizen	denton@elainehenickel.com	13104
Nathan Antonacci	Citizen	Nathanjohn48@gmail.com	13204
Richelle Brown	Resident	richellebrown@gmail.com	13027
Irene Workman	CITIZEN	iworkman@twyny.com	13078
Janeene Schwenke	Citizen	Schneiene@gmail	13090

SIGN-IN SHEET

Onondaga Lake Beach Feasibility Study and Design | PUBLIC MEETING #2 | June 26, 2019 | St. Joseph's Health Amphitheater

NAME	ORGANIZATION / AFFILIATION	EMAIL	ZIP CODE
Marianna Kaufman	Resident, Syr peace council, CNY Solidarity Co	marianna.kaufman@gmail.com	13224
Lindsay Speer	Resident - Creating Change Consulting	lindsayspeer@gmail.com	13210
David Coburn	Resident	dcoburnpool@gmail.com	13090
Nodesia Hernandez	Resident	mnodesia@gmail.com	13090
Melanie Vilardi	Resident	mvilardi@twcny.rr.com	13063
Peggy Chase	county leg	PeggyChase2013@twcny.rr.com	13206
Melissa Kohan	Anchor QEA	mkohan@anchorqea.com	13078
Uymana	Ecologic		
Liz Myers	Ecologic	emyers@ecologicllc.com	13244

Public Meeting #2:
Summary, Comments,
and FAQs

Onondaga Lake Beach Feasibility Study and Design

Public Meeting #2: Responsiveness Summary to Public Comments/Questions

MEETING DETAILS

Date and Location

Wednesday, June 26, 2019, 5–7 pm
St. Joseph’s Health Amphitheater at Lakeview (“Clubhouse”)
490 Restoration Way, Syracuse, NY 13209

Attendance

- Total: 48 attendees (scanned sign-in sheets attached)
- General Public:34
- Project Team and Subject Experts:14

Agenda and Format

5:30–6 pm: Formal presentation (see separate PowerPoint presentation file)

5–5:30 and 6–7 pm: Informal Q+A sessions with project team and agency experts at four topic tables:

1. Site Selection & Design
2. Swimming Safety & Water Quality
3. Parks/Operations
4. Survey & Analysis

Gathering Public Input

Public input was gathered in the following ways during this meeting:

- **Comment cards**—Accepted at each topic table, at the sign-in table, and by staff circulating the room
- **Scribed notes**—Staff captured conversations throughout the event, including those taken at topic tables and by staff circulating the room
- **Beach Use Poll**—Used to inform the beach Feasibility Study and design by obtaining additional public opinion on preferred uses. Response rates to three general descriptions are included below:
 1. “A great swimming area with deep and shallow water, areas to jump in and swim laps, easy to get in and out of the water.” 25%
 2. “A sandy beach with a mix of sun and shade, as well as plenty of space so I don’t feel crowded in the water or on the sand.” 30%
 3. “A sunny, open sandy beach for laying out and shallow water for wading to cool off.” 45%

Comments and questions are in presented in the following table, along with responses (with references in-text and in footnotes). This document will be posted to the study’s website at ongov.net/environment.

Comment/Question	Response
<i>Topic: General Questions or Comments</i>	
<p>“Why spend resources to study a beach?”</p>	<p>The purpose of this study is to determine the feasibility of a beach on Onondaga Lake given fiscal impacts, suitability of the study area for public bathing and swimming¹, and public input through market analysis and public engagement.</p> <p>The study is paid for by a grant from the New York State Department of State (NYSDOS). On December 13, 2017, Onondaga County (County) was competitively awarded an Environmental Protection Fund (EPF) Local Waterfront Revitalization Program (LWRP) grant from the New York State Department of State (NYSDOS) to conduct a Feasibility Study for a swimming beach on Onondaga Lake’s northeastern shoreline and complete associated design work for the most feasible beach location. The NYSDOS LWRP funding was applied for because the Onondaga County Capital Improvement Plan 2017-2022 includes \$300,000 for Beach Development at Onondaga Lake Park. This grant supplemented the proposed local expenditure. The Feasibility Study is intended to provide the County Legislature, the State, and the general public with the ecological, financial, health and safety, and public opinion information necessary to make a decision on whether and where to create a public swimming beach on Onondaga Lake.</p>
<p>“Doesn’t seem much different than what is already there, why spend taxpayer money on something we don’t need?”</p>	<p>There is currently no public swimming beach on Onondaga Lake nor is there funding to build a beach. However, this would be a significant recreational enhancement for Onondaga Lake Park that would also have a cost which needs to be considered in addition to an assessment of the usefulness of a beach Onondaga Lake. If results were to support a beach and the County decided to build one, the intent would be to create a swimming area that is little-changed from the existing condition. The addition of park amenities that improve public safety and comfort for visitors while enjoying the waterfront would be the focus of any investment made.</p> <p>The potential to have a beach on Onondaga Lake is the result of the successful work that was performed under the Amended Consent Judgment (ACJ) with NYSDEC. It was the State’s goal and intent that remediation efforts bring Onondaga Lake and its tributaries into compliance with water quality standards and criteria associated with a Class B Waterbody. The study area and all potential locations considered are within these class “B” waters on Onondaga Lake so this study process comports with the NYSDEC’s intent of the remedial work.</p> <p>Per the NYSDEC’s publicly available Fact Sheet on Onondaga Lake:</p> <p>“Long considered one of the most polluted lakes in nation, Onondaga Lake water quality has greatly improved over the past 10 years and now supports most uses. Northern Onondaga Lake is a Class B waterbody, suitable for use as a public bathing beach, general recreation and support of aquatic life, but not as a water supply. Public bathing and other recreation use are fully supported although currently there are no designated public beaches on the lake. Previous assessments had indicated these uses to be impaired; however, data for the period from 2002-2012 show pathogen (coliform) standards for protection of contact recreation to be consistently met.”¹</p>

¹ https://www.dec.ny.gov/docs/water_pdf/wioswegoonondaga.pdf

Comment/Question	Response
<p>“The public doesn’t want a beach, why study it?”</p>	<p>The public has expressed interest in an Onondaga Lake swimming beach consistently over time. Since the 1930s,² the County has explored a recreational goal of adding a bathing beach on the northern end of the lake. The 1975 Onondaga County Environmental Plan incorporated future bathing beach plans for Onondaga Lake stating that, “Without question the water resource with the greatest potential for future recreational development is Onondaga Lake.”³ The Onondaga Lake Partnership Reconnecting with Onondaga Lake 2007 Report⁴ cited public interest in a swimming beach on the shores on Onondaga Lake, emphasizing the importance of maintaining the shoreline for public recreational use. A FOCUS on Onondaga Lake 2012 Report⁵ reviewed 54 past public surveys and visioning sessions which date back to 1928 regarding the future of Onondaga Lake and undertook a more recent public opinion study with diverse local stakeholders which was comprised of over 1,100 respondents. The 2012 report concluded that a majority of the respondents indicated that having a public beach on Onondaga Lake would be important or very important to them.</p> <p>One goal of the Feasibility Study is to further examine public interest in new beach amenities and swimming access for Onondaga Lake. Results of the 2019 online survey,⁶ which collected the opinions of over 2,000 respondents, support that it is reasonable to assume there would be at least 31,600 potential first-time beach visitors in a season. This calculation is based on those who are already using Onondaga Lake Park, believe the lake is safe for swimming, are currently visiting other beaches in the region, and indicated they would use a beach at the park if it were developed.⁷</p> <p>The County’s Feasibility Study has examined public interest in a beach and performed a detailed analysis of what building a beach might entail. Each step in the ongoing process has included public comments and full disclosure of report material which is available on the Office of Environment website for Onondaga County. The County has followed project guidance provided by the NYSDOS LWRP regarding the study process and format of meetings. The County has brought together a team of consultants with the necessary expertise in the science, engineering, public health, and policy aspects of a creating a public beach that can help further community utilization of Onondaga Lake.</p>
Topic: Market Analysis/Public Survey Report	
<p>“Please hire an actual polling company to do an independent sample.”</p>	<p>We did. A major component of the Feasibility Study was focused on gathering public input and feedback. This was captured in a comprehensive market analysis survey, which was conducted by Danter Economic Development Strategies. Danter is a national independent research and consulting firm specializing in market research, demographic information, and developing site-specific market feasibility studies. The company has completed over 17,000 feasibility studies over 30 years, including numerous projects that apply their public polling strategies to recreational project development. This expertise in survey methodology, professionalism, and scope of services are why the</p>

² “West Shore Park, Onondaga Lake” (1945) *Sargent, Webster, Grenshaw & Foley, Architects*. The Post-War Report, Syracuse-Onondaga Post-War Planning Council, City of Syracuse.

³ “Onondaga County Environmental Plan” (1975), *Onondaga County Environmental Management Council*.

⁴ <https://pdfs.semanticscholar.org/1adb/4a65b0f709c00c29a4fb17c167d5befe1d26.pdf>

⁵ <http://www.focussyracuse.org/wp-content/uploads/2018/02/F.O.C.U.S.-on-Onondaga-Lake-Report2.pdf>

⁶ http://www.ongov.net/environment/documents/MarketAnalysisSurveyResultsFullReport_BeachStudy.pdf

⁷ <http://www.ongov.net/environment/documents/BeachAttendanceProjection.pdf>

Comment/Question	Response
	County selected Danter to design, interpret, and synthesize the electronic public survey. ⁸ The data and results presented at the second public meeting and in the report reflect the responses submitted and cross-tabulated in the survey. ⁹
“The public has not been sufficiently educated about this lake project. Online surveys are completely inadequate.”	<p>The survey, which was conducted as part of the Feasibility Study, was not designed as a tool to educate the public about the beach study, nor does it claim to do so. The survey was designed to gather public input regarding Onondaga Lake and the potential of a beach on its shores. The survey was released and publicized prior to the first public meeting with the intent that interested residents would attend the public meetings to learn more about the project. The purpose of the survey was to gauge public opinion in the context of conducting the Feasibility Study and not intended to supplant any other public outreach regarding Onondaga Lake. All information presented at meetings is available online.¹⁰</p> <p>The Feasibility Study process involves four public education events (3 public meetings and 1 public outreach event) where information is presented and public comments are received. All material related to the study is available online at the Office of Environment website and has been since the start of the study in January of 2019. In addition, there has been extensive media coverage of meetings and study findings.</p>
“57% of people who participated in the internet survey responded they do not consider Onondaga Lake to be safe for swimming, what does this indicate?”	The survey provides vital insight into a generalized understanding of the Lake’s water quality and the need for further public education and outreach on the differing regions of the lake and their respective water quality assessments. In the survey, 57% of respondents said they believed the lake is not safe for swimming. Nonetheless, the majority of the lake, the northern three quarters, is a Class B waterbody, as declared by NYSDEC and has maintained New York State swimming standards according to the New York State Department of Health, for over 10 consecutive years. The need to provide further education and outreach opportunities for the public regarding the appropriateness of the lake for swimming will be incorporated into the Feasibility Study.
Topic: Public Participation and County Responsiveness	
“Public dialogue is needed.”	This Feasibility Study is structured to include public input throughout the process using various means of communication. In January 2019, a brief electronic survey ¹¹ was sent by email to a target audience (County residents) of over 20,000 people. Addresses were gathered through various County, NYSDEC, Cornell Cooperative Extension, and other local partners’ list-serves, ¹² along with being publicized in major local news sources ¹³ and social media platforms. ¹⁴ The survey was made available for 1 month. The County received 2,000 responses that were synthesized into a market analysis report and made available online. ¹⁵ Two of the three planned public meetings have been held to communicate updates about the study while gathering additional public feedback. The

⁸ <http://www.danter.com/method/default.htm>

⁹ http://www.ongov.net/environment/documents/MarketAnalysisSurveyResultsFullReport_BeachStudy.pdf

¹⁰ <http://www.ongov.net/environment/BeachStudyDocuments.html>

¹¹ <http://www.ongov.net/environment/documents/FinalQuestionnaire.pdf>

¹² <https://www.dec.ny.gov/public/65855.html>

¹³ <https://www.syracuse.com/news/2019/01/survey-asks-would-you-swim-at-an-onondaga-lake-beach.html>

¹⁴ <https://twitter.com/OCEnvironment>

¹⁵ http://www.ongov.net/environment/documents/MarketAnalysisSurveyResultsFullReport_BeachStudy.pdf

Comment/Question	Response
	County publicized both meetings through sending press releases ¹⁶ to local news sources ¹⁷ and posting to websites and social media. ¹⁸ Both public meetings were open to the press and received coverage by various news sources. ^{19 20} The public notifications for both meetings were sent at least 2 weeks prior to the event, and all meeting summaries and information presented have been made public. ²¹
“Would prefer more accessible public meeting location, such as the Southwest Community Center or the Bishop Harrison Center.”	We appreciate the comments noting that the Amphitheater is not directly accessible by public transportation and thank those who provided suggestions for more accessible meeting locations. The first meeting was held at Destiny USA, a location selected based on its proximity to the study sites, space availability, and public transportation access. The second meeting was held at the Clubhouse at St. Joseph’s Health at Lakeview Amphitheater, selected for its view of the study sites, visible from outside and inside the meeting location, and space availability. We will review the accessibility of multiple locations for our third public meeting and pledge that the selected venue be accessible with public transportation.
“Would prefer town hall meeting format, where questions are publicly aired and heard.”	In developing the plan for the Feasibility Study, several meeting formats were considered, including a “town hall” format; however, formats of both public meetings to date follow research-based facilitation guidelines for engaging individuals in productive conversation to gather feedback and insight regarding complex issues. ²² This style consists of small-groups, facilitated Q&A discussions with topic tables and accompanying “subject experts” to allow questions to be answered by the most appropriate and knowledgeable person in the most comprehensive way practical. This is a time-efficient format that also encourages participation by those who may not feel comfortable asking questions in a larger group setting. ²³ This format of the public meetings is consistent with the strategy of engagement currently used by our leading state agencies on similar, complex projects and addresses concerns about the shortcomings of an “open mic” format, which is less effective in generating discussion or answering questions with the responsiveness they deserve. ²⁴ These public meetings should not to be confused with public hearings, which are held by a governing body prior to the adoption or amendment of local laws, nor are they subject to the associated stipulations.
“We need more public meetings on this topic with open questions and answers so everyone can hear.”	The Office of Environment added an education and outreach event on the Feasibility Study during the Onondaga County Save the Rain Clean Water Fair on September 7, 2019. The event was free and open to the public, and the Office of the Environment was present to answer questions and receive feedback from attendees on beach concepts. A third public meeting is currently scheduled for late 2019. We will take this comment under advisement should the project progress to design development.

¹⁶ http://www.ongov.net/environment/documents/PublicMtg_2_Announcement_OnondagaBeach_STHLA.pdf

¹⁷ <https://www.waer.org/post/public-swimming-onondaga-lake-beach-how-feasible-how-desirable-it>

¹⁸ <http://www.ongov.net/environment/OnondagaLakeBeachStudy.html>

¹⁹ <https://www.syracuse.com/news/2019/04/onondaga-lake-beach-could-see-thousands-of-swimmers-despite-lakes-reputation.html>

²⁰ <https://spectrumlocalnews.com/nys/central-ny/news/2019/06/27/onondaga-lake-beach-survey-results>

²¹ <http://www.ongov.net/environment/OnondagaLakeBeachStudy.html>

²² <https://www.epa.gov/international-cooperation/public-participation-guide-process-planning>

²³ <http://mrsc.org/Home/Explore-Topics/Governance/Citizen-Participation-and-Engagement/Communication-and-Citizen-Participation-Techniques.aspx>

²⁴ <https://www.dot.ny.gov/i81opportunities/community-meetings>

Comment/Question	Response
<p>“Why is there not a ‘no beach’ option in the Beach Bucks Poll?”</p>	<p>The Beach Bucks Poll was a follow-up exercise from the Public Survey to gather further public opinion to inform elements for the design phase of the Feasibility Study. The poll measured the participating public’s opinions on their preferred beach uses captured in three potential design concepts (see page 1 of this document). The design concepts are not mutually exclusive, nor was the poll a formal or final vote on beach amenities or design. The poll was available at the second public meeting and the Clean Water Fair outreach event.</p> <p>The “no beach” option was not included as an option in the Beach Bucks Poll visioning exercise because the intent of the poll was to inform design of a potential beach that best reflects the public opinion. A “no beach” option is already being represented by the current use of the space and thus would not fit in a design visioning exercise. At the second public meeting, those who rejected this activity and requested a “no beach” option were encouraged to submit their opinions as public comments at our various topic tables. Staff from the project team also circulated the room, scribing comments from those attendees who declined to provide written comments so that these sentiments were recorded and responded to. There was no opposition to the poll exercise at the Clean Water Fair. Results of the polls from both events can be found on page 1 of this document.</p>
<p>“County is tightly controlling discussion and not listening.”</p>	<p>The format for the public meetings is purposely structured as described above to allow for interaction between members of the public and the people involved in conducting the study. We are listening. The County acknowledges, records, and responds to each comment submitted verbally and by index card at each public event, as well as the comments submitted electronically on our website submission form and sent through email. These comments and responses will all be included in the final Feasibility Study and design that will be submitted to NYSDOS. When practical, comments will be folded into the suggested design component of the study.</p>
<p><i>Topic: Water Quality and Sediments</i></p>	
<p>“How was it confirmed that the Lake is now swimmable?”</p>	<p>New York State water quality standards for primary and secondary contact recreation, including swimming, have been met in the northern basin of Onondaga Lake for more than 10 years.²⁵ The northern basin (or “Onondaga Lake, Northern End” [0702-0003]) segment includes the area of the lake northwest of a line from a point on the west shore 0.25 mile northwest of an unnamed tributary (5a) to a point on the east shore 0.6 miles southeast of Bloody Brook, encompassing more than half of the total lake surface area.²⁶</p> <p>Please see the following statement from NYSDEC’s publicly available Fact Sheet on Onondaga Lake:</p> <p>“Long considered one of the most polluted lakes in nation, Onondaga Lake water quality has greatly improved over the past 10 years and now supports most uses. Northern Onondaga Lake is a Class B waterbody, suitable for use as a public bathing beach, general recreation and support of aquatic life, but not as a water supply. Public bathing and other recreation use are fully supported although currently there are no designated public beaches on the lake. Previous assessments had indicated these uses to be impaired; however, data for the</p>

²⁵ http://static.ongov.net/WEP/AMP/2017_AMPREPORT/AMPReport_2017.pdf

²⁶ https://www.dec.ny.gov/docs/water_pdf/wioswegoonondaga.pdf

Comment/Question	Response
	<p>period from 2002-2012 show pathogen (coliform) standards for protection of contact recreation to be consistently met.”²⁸</p>
<p>“This is still a Superfund site. If you want to build a beach, make it NOT a Superfund site anymore.”</p>	<p>It is important to distinguish between the water quality and remedial history of the area proposed for this project in the northeastern portion of the lake and the very different history in the other areas of the lake. The remedy completed in other areas of the lake was part of a Superfund process approved by NYSDEC and the U.S. Environmental Protection Agency (USEPA) and subject to an ongoing monitoring program and 5-year reviews. The areas of the lake being assessed for a potential swimming beach have been determined by NYSDEC to be safe for swimming. The process for adding a public beach for the Onondaga Lake will require change in site use designation that will be managed by NYSDEC.</p> <p>Even prior to any remediation, the results of the Human Health Risk Assessment (HHRA) approved by the NYSDEC indicated that no areas in the northern end of the lake exhibited unacceptable risk to adults or children potentially exposed to sediment by walking or wading into the lake.</p> <p>Please see the following statement from NYSDEC’s publicly available Fact Sheet on Onondaga Lake:</p> <p>“Long considered one of the most polluted lakes in nation, Onondaga Lake water quality has greatly improved over the past 10 years and now supports most uses. Northern Onondaga Lake is a Class B waterbody, suitable for use as a public bathing beach, general recreation and support of aquatic life, but not as a water supply. Public bathing and other recreation use are fully supported although currently there are no designated public beaches on the lake. Previous assessments had indicated these uses to be impaired; however, data for the period from 2002-2012 show pathogen (coliform) standards for protection of contact recreation to be consistently met.”²⁷</p>
<p>“Also, what happens when the remedy fails? Will Honeywell still be around? Will the public remember this Superfund site?”</p>	<p>A similar comment (R-2.6) was submitted and responded to by NYSDEC in the 2006 Responsiveness Summary to the Record of Decision (ROD). The response was: “Post-remediation monitoring and maintenance of the cap and other components of the remedy will ensure that the remedy will not fail. In addition, as is noted in the ROD on page 81, because this remedy would result in contaminants remaining on site above levels that allow for unlimited use and unrestricted exposure to site media, CERCLA requires that the site be reviewed at least once every five years. The five-year review²⁸ will formally evaluate the results from monitoring programs established as part of this remedy to ensure that the remedy remains protective of human health and the environment. Based on these reviews, it is possible that NYSDEC and EPA could pursue further remedial action with Honeywell, which would be addressed through a modification of the ROD and/or the Consent Decree.”²⁹ (p. 18, Attachment 1, 2006 Responsiveness Summary³⁰)</p>

²⁷ https://www.dec.ny.gov/docs/water_pdf/wioswegoonondaga.pdf

²⁸ <https://semspub.epa.gov/work/02/372861.pdf>

²⁹ <https://www.dec.ny.gov/chemical/34998.html>

³⁰ http://www.dec.ny.gov/docs/remediation_hudson_pdf/cdrsp2.pdf

Comment/Question	Response
“What happens if/when the cap fails?”	If the cap fails, NYSDEC and USEPA could pursue further remedial action with Honeywell (see the response to the previous comment).
“Restoration goal should be to restore natural ecosystem (fish species and abundance rather than focusing on human recreational use).”	<p>There are currently projects being implemented around Onondaga Lake which are focused on ecological restoration and are being funded by Honeywell, in partnership with Onondaga County, through the Natural Resources Damages Assessment and Restoration (NRDAR) consent decree. This study is evaluating a potential project, a beach on Onondaga Lake, which would meet restoration goals for the lake that address human recreational use.³¹</p> <p>In addition, in the 2005 ROD for the site, NYSDEC noted, “Anticipated recreational uses of the lake include fishing without consumption restrictions and swimming” (p. 27, July 2005 ROD³²). Onondaga County is actively working on ecological restoration projects and recreational projects, both of which seek to restore lost uses of Onondaga Lake.</p>
“Honeywell should be required to set up a trust fund to pay for potential future impairments to barrier wall/possibility of a cap failure. Don’t want it to become a taxpayer issue to repair/remediate if cap fails.”	This comment is outside of the scope of this Feasibility Study. However, a similar comment (R-2.4) was submitted and responded to by NYSDEC in the 2006 Responsiveness Summary to the ROD produced by NYSDEC. The response was: “The requirements of Paragraphs 68-73 of the Consent Decree require Honeywell to provide the State with an annual reporting of its financial status and to provide specific financial assurance in the event the State determines that Honeywell is unable to complete the Remedial Program. It should be noted that financial assurance is not routinely required in the context of state cleanup orders, but was considered and included in this Consent Decree in response to public comment on the ROD. The State believes that the provisions of the Consent Decree provide adequate assurances for the completion of the remedial program. Further, should Honeywell fail to maintain adequate funds to complete the cleanup, the state and/or federal Superfunds may be drawn upon to complete the cleanup.” (p. 17, Attachment 1, 2006 Responsiveness Summary ³³)
“Does capping sediment keep it from being a potential issue for swimmers?”	The options for the swimming beach are only located in areas that were not required to be capped as part of the remediation program. Based on results of the HHRA approved by NYSDEC, the northern basin of the lake does not exhibit unacceptable risk to adults or children potentially exposed to sediment by walking or wading into the lake.
“There has not been adequate sediment sampling to prove the areas under consideration are safe.”	The NYSDEC- and USEPA-approved all work plans for the frequency and justification for sediment sampling used in the 2005 Lake Bottom Remedial Investigation (RI). This process included the potential of the Class B waters being considered for a public bathing beach with recreational activities that include swimming and wading. In addition, the results of the HHRA approved by NYSDEC indicated that no areas in the northern basin of Onondaga Lake exhibited unacceptable risk to children or adults potentially exposed to sediment by swimming, walking or wading in the lake.
“Could there be contaminant transfer to northern end of lake?”	Remediation has addressed contamination in the lake. This includes the south and north basin. Please see previous answers regarding the integrity of the lake bottom cap.

³¹ <https://www.fws.gov/northeast/nyfo/ec/files/onondaga/US%20FWS%20Fact%20Sheet-December%202018.pdf>

³² http://www.dec.ny.gov/docs/remediation_hudson_pdf/onondagalakerod.pdf

³³ http://www.dec.ny.gov/docs/remediation_hudson_pdf/cdrsp2.pdf

Comment/Question	Response
<p>“What happens during times of high-water flow/levels? Does contaminated sediment move towards Willow Bay?”</p>	<p>Representatives from Onondaga County will determine when it may be appropriate to close the beach during high water levels.</p> <p>Please see the prior answer regarding sediment migration.</p>
<p>“Need to discuss potential public health impacts of sediment quality, not just water quality.”</p>	<p>The results of the HHRA approved by NYSDEC indicated that no areas in the northern basin of Onondaga Lake exhibited unacceptable risk to adults or children potentially exposed to sediment by walking or wading into the lake. As a result, the sediment concentrations were not a key consideration for the selection of the beach location since each of the options are in the northern basin.</p>
<p>“What happens if the sediments are stirred up by the activity in the area, is there potential for new threats to public health?”</p>	<p>The results of the HHRA approved by NYSDEC indicated that no areas in the northern basin of Onondaga Lake exhibited unacceptable risk to adults or children potentially exposed to sediment by walking or wading into the lake. As a result, the sediment concentrations were not a key consideration for the selection of the beach location since each of the options are in the northern basin. The Remedial Investigation, which provided the data used in the exposure scenarios within the HHRA, used sediment depths of 0-3 feet for “surface sediment” so the stirring up of sediment has been addressed in the HHRA.</p>
<p>“What about the impacts from Metro Treatment Plant outflow?”</p>	<p>Under the ACJ, Onondaga County invested in improvements and upgrades to the Onondaga County Metro Wastewater Treatment Plant, the elimination and/or reduction of the impacts of the combined sewer overflows on the lake and its tributaries through programs like Save the Rail, and a lake and tributary AMP designed to evaluate the impacts of the improvement projects on the water quality of the lake and tributary streams. These improvements in water quality due to Metro Wastewater Treatment Plant upgrades, paired with remediation by Honeywell, have allowed Onondaga Lake to be designated as safe for swimming by New York State Regulations.³⁴</p> <p>As previously noted, Onondaga Lake has met water quality standards continuously, in the north basin, for the last decade. In addition, just as with any other County beach, a beach on Onondaga Lake will be subject to regular sampling as proscribed by the New York State Department of Health.</p>
<p>“The water quality data is conducive to a bathing beach. How will you separate the discussion between water quality and sediment?”</p>	<p>The results of the HHRA approved by NYSDEC indicated that no areas in the northern basin of Onondaga Lake exhibited unacceptable risk to adults or children potentially exposed to sediment by walking or wading into the lake. As a result, the sediment concentrations were not a key consideration for the selection of the beach location since each of the options are in the northern basin. Water quality has improved so much that Onondaga Lake’s north basin has met NYSDOH standards for public bathing for ten years straight. It is our hope that providing this information will help address these concerns.</p>

³⁴ http://static.ongov.net/WEP/AMP/2017_AMPREPORT/AMPReport_2017.pdf

Comment/Question	Response
<p>“I appreciate the abundance of water quality data from the many decades of research on our little lake. We don’t need more data to know the water is swimmable. Can’t wait to swim at Willow Bay.”</p>	<p>The County appreciates the acknowledgement of Ambient Monitoring Program (AMP) and hopes those who are able can help engage the community in this new reality of a swimmable portion of Onondaga Lake.</p>
<p><i>Topic: Site Selection Matrix</i></p>	
<p>“Were the categories used in the Matrix used for Site Selection weighted?”</p>	<p>Yes, the categories in the matrix were weighted using a point system for each criterion.</p>
<p>“Why is Sediment Quality not included in the Matrix used for Site Selection?”</p>	<p>The results of the HHRA approved by NYSDEC indicated that no areas in the northern basin of Onondaga Lake exhibited unacceptable risk to children or adults potentially exposed to sediment by walking or wading into the lake.³⁵ As a result, the sediment concentrations were not a key consideration for selection of the beach location since each of the options are located in the northern basin.</p> <p>In addition, the proposed sand layer will reduce any potential for direct contact with the underlying sediments that the regulatory agency already stated did not pose unacceptable risk from dermal contact. Note that this sandy material is typical for public beaches in New York State. The placement of this material is focused on creating an enjoyable beach experience; the long-term stability of the sandy substrate is not required as a health and safety measure for people using the beach. An appropriate maintenance schedule for sand replenishment will be considered during the design phase.</p>
<p>“How large would the beach be?”</p>	<p>The final footprint of proposed beach will be presented in the Site Design shared at and made public after the third public meeting. Please see the Project Boundary Map for the preliminary estimate size and location of the proposed site at Willow Bay.</p>

³⁵ https://www.dec.ny.gov/docs/remediation_hudson_pdf/onondagalakerod.pdf

Comment/Question	Response
<p>“I like the idea of a Willow Bay Beach, but have several concerns: what about the seaweed and the wake from the powerboats entering the lake?”</p>	<p>Wind and Wake Energy—Wind/wake energy were a part of the site matrix and have been considered in the site selection from the beginning of the study and will be continued to be addressed and mitigated in the final design. Willow Bay, the site selected for design, currently has rock jetties that extend out from the Seneca River Outlet that naturally help to protect Willow Bay from wind-generated waves from the prevailing wind directions (from the west and northwest). These rock jetties also protect the site from boat wakes as boats enter and leave Onondaga Lake into Seneca River. The two other potential sites, Willow Bay 1B and Bloody Brook, are both subject to wind-generated waves from prevailing westerly winds and do not have an existing protective barrier.</p> <p>Seaweed—Like most lakes in this area, nearshore areas of Onondaga Lake support growth of rooted aquatic plants (macrophytes, or weeds) referred to as submerged aquatic vegetation. Currently, the abundance of these plants is relatively low and would not interfere with recreational enjoyment. Submerged aquatic vegetation, and the maintenance of, will be addressed in the Feasibility Study part of operations and maintenance by Onondaga County Parks. Plans include the addition of a sand layer to create more enjoyable beach recreation. This additional sand substrate will reduce the habitat for weed growth. Currently, lake bottom sediments at this site consist of shell fragments, sands, and gravelly materials that extend upwards along shoreline.</p>
<p>“Proximity to I-90?”</p>	<p>Potential noise issues will be assessed and addressed in the Feasibility Study. The general areas of the park being evaluated for a beach are already open to other recreational uses (e.g., Willow Bay kayak rentals, shelters, and picnic areas³⁶). It is not anticipated that noise from the Thruway would have a significant impact on the siting or operation of the beach. Noise from the Thruway is currently buffered by tree cover, and it may be recommended that this buffer is maintained or enhanced within the Feasibility Study and design work. The County plans to maintain the trees on site, which will also continue to reduce the noise pollution in this area of the lakeshore.</p>
<p><i>Topic: Parks Maintenance and Operations</i></p>	
<p>“The park is currently free to use, and I support a beach unless there is an admission fee.”</p>	<p>It is anticipated that there will be no fee for using the beach.</p>
<p>“What will the beach cost and who will pay for it?”</p>	<p>The estimated cost of a beach will be presented as part of the third public meeting. There are no funds allocated for the construction of a beach on Onondaga Lake. This study will provide further information to facilitate community dialog about potential recreational uses of Onondaga Lake.</p>
<p>“Will it [a beach] be accessible? Will there be public transportation?”</p>	<p>Any facilities or infrastructure constructed will be fully accessible in accordance with Americans with Disabilities Act (ADA) guidelines. Public transportation options will be assessed based on demand, however, it is the goal of the County to have public assets be accessible to public transportation options.</p>

³⁶ <http://www.ongov.net/environment/images/ContextMap.jpg>

Comment/Question	Response
“Parking volume capacity?”	The Feasibility Study inventoried existing parking space and traffic patterns at the three potential sites and evaluated the need for additional parking and traffic pattern adjustments based on attendance projections. This analysis and design will ensure safe parking and traffic patterns for the projected attendance with minimal alterations to the existing infrastructure. The results will be presented in the final design for Willow Bay (Site 1A) at the third public meeting and will be posted to the project webpage.
“What will the impact of a beach have on existing park uses and users? Will existing amenities at Willow Bay be changed?”	It is the County’s goal to maintain mature trees and utilize existing infrastructure where possible. Existing amenities to remain include picnic tables and grills in the Willow Bay Area. Onondaga County Parks is the entity that currently maintains grills and picnic tables in the Willow Bay Picnic Area; these amenities and others associated with a beach would continue to be maintained by Onondaga County Parks. In addition, current trails and amenities in the area will be maintained.
“Interested in maintaining boating rental areas for current area.”	Kayak and boat rentals will continue to be available at Willow Bay so long as a vendor chooses to utilize the availability of the site. It is the County’s goal to maintain existing infrastructure as possible, including the boat and kayak rentals, if a beach is constructed in the Willow Bay Area. Public responses from the online survey also indicate a strong, continued interest for these rentals in the Willow Bay Area if the beach is approved, and the Site Design will take this into account.
“More traffic/crowding in area given projected 31,000 new visitors?”	Regarding the concerns of overcrowding based on the 31,000 projected visitors to a beach on Onondaga Lake, this number reflects the number of users throughout the summer season and does not reflect an anticipated number of users for a given day. The Feasibility Study used survey responses, existing and projected usage, and parking capacities to estimate necessary parking spots and traffic flows to accommodate more users at Willow Bay. This will be presented in the final design shared at the third public meeting. Onondaga County Parks will use the numbers presented in the Feasibility Study to ensure traffic patterns and parking spaces are designed and constructed to maximize safety and convenience.
“How will the beach swimmers share space with boaters and anglers?”	Preliminary renderings show that swimming will not extend into the lake’s outlet to the Seneca River. As with all County Parks swimming beaches, swimming areas will be clearly marked and/or roped off to prevent those swimming/wading in the lake from entering waters where watercrafts are in use or anglers are active. This visible delineation of the swimming area will also be coupled with signage to prevent anglers from casting their lines into the Willow Bay swimming/wading area. These safety features will be included and shown on the Site Design presented at third public meeting.

APPENDICES

Appendix A: Sign-In Sheets

SIGN-IN SHEET			
Onondaga Lake Beach Feasibility Study and Design PUBLIC MEETING #2 June 26, 2019 St. Joseph's Health Amphitheater			
NAME	ORGANIZATION / AFFILIATION	EMAIL	ZIP CODE
Holly Granat	Citizen		13088
GARRY KLINK	CITIZEN		13080
Renee Kitterman	Onondaga Audubon		13008
Dori Joiner	Onondaga Audubon		13215
Joe Deter	Liverpool Village Resident		13088
Janaki Suryodevara	Onondaga County		13204
Bill Langley	ONONDAGA CITY PARKS		13215
Joe Walsh	Onondaga County		13021
Kathleen Beresch	PRYARDS		13202
DEE KLEES	Tocas		13205
MARY KUTHA	CITIZEN		13204
Elaine Denton	citizen		13104
Nathan Antonacci	Citizen		13204
Richelle Brown	Resident		13027
REBE WORKMAN	CITIZEN		13070
Jane Schwenke	Citizen		13090

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SIGN-IN SHEET			
Onondaga Lake Beach Feasibility Study and Design PUBLIC MEETING #2 June 26, 2019 St. Joseph's Health Amphitheater			
NAME	ORGANIZATION / AFFILIATION	EMAIL	ZIP CODE
Marianna Kaufman	Resident, Syr peace council		13224
Lindsay Speer	Resident, Creating Change Consulting		13210
David Coburn	Resident		13090
Nodesia Hernandez	Resident President		13090
Melanie Vilardi	Resident		13063
Peggy Chase	county leg		13206
Melissa Kohan	Anchor QEA		13078
Lyman	Ecologic		
Liz Myers	Ecologic		13244

In addition to those noted on sign-in sheets above, the following project team members attended this meeting:

1. Travis Glazier, Office of Environment
2. Shannon Fabiani, Office of Environment
3. Katie O' Doyle, Onondaga County
4. Isabelle Harris, Onondaga County
5. Keith Ewald, B&L
6. Nicole Cleary, B&L
7. Olivia Mallon, B&L
8. Liz Myers, EcoLogic LLC
9. Liz Moran, EcoLogic LLC
10. Michelle McGinnis, EcoLogic LLC
11. Matt Henderson, Anchor QEA
12. Betsy Henry, Anchor QEA
13. Ken Danter, Danter/Economic Development Strategies

Appendix B: Complete List of Comments Submitted at the 6/25/2019 Public Meeting

APPENDIX 3

APPENDIX 4



ongovhealth
Onondaga County
Health Department

Onondaga County Health Department
421 Montgomery Street, Syracuse, NY 13202

ENVIRONMENTAL HEALTH POLICY & PROCEDURE MANUAL

SUBJECT: Bathing Beach Bacteriological Water Quality

POLICY: Bathing Beach Bacteriological Water Quality Monitoring

PAGE (S) 8

SUPERSEDES: Inaugural Written Policy, DATE: 6/10/19

SIGNED: *Lisa A. Litterer*
Division Director

Introduction:

Recreational water illness associated with swimming at regulated bathing beaches is a significant public health concern. Therefore, the Onondaga County Health Department Division of Environmental Health monitors bacteriological water quality at all regulated bathing beaches within Onondaga County. The purpose of this document is to outline bacteriological beach water sampling policies, procedures and guidelines and ensure a comprehensive and effective bathing beach water quality monitoring program.

Establishing water quality monitoring policies, procedures and guidelines is pertinent to protecting public health and proper implementation results in a lower potential risk of illness to bathers.

Policy Synopsis/Purpose/Overview:

The primary purpose of a beach water quality monitoring program is to minimize the potential risk associated with bathers contracting illness as a result of swimming in contaminated waters and therefore, protecting public health. The policies, procedures and guidelines that follow were established from information and guidance obtained from:

- New York State Department of Health - State Sanitary Code, Subpart 6-2, Bathing Beaches, Effective 7/6/2011
- New York State Department of Health, Central Region and Albany Offices
- United States Environmental Protection Agency National Beach Guidance Document (July 2014)
- Life Science Laboratories, Inc.

The Onondaga County Health Department, Division of Environmental Health is required to enforce standards set forth in Subpart 6-2 of the New York State Sanitary Code at all regulated bathing beaches within Onondaga County. Section 6-2.15 of Subpart 6-2 specifies bacteriological indicators such as Escherichia Coli (E. coli) can be utilized to determine whether bathing beach water quality constitutes a potential health hazard requiring beach closure. Section 6-1.25 delineates the threshold for E. coli at 235 per 100 ml for determining acceptability of bathing beach bacteriological water quality. The Division of Environmental Health shall utilize E. coli as the bacteriological indicator for monitoring water quality at all regulated beaches within Onondaga County.

Section 6-2.15 further states that no bathing beach shall be maintained or operated on any body of water when the water quality is determined by the permit-issuing official to constitute a potential hazard to health if used for bathing. Section 6-2.4 of Subpart 6-2 provides the Onondaga County Health Department with the authorization for enforcement and to institute immediate action when bathing beach water quality standards contained in Section 6-2.15 are not met. **Therefore, based on the previous information and in an effort to limit bather exposure to contaminated water, it shall be Onondaga County Health Department, Division of Environmental Health policy that any beach water bacteriological sample result equal to or exceeding 235 E.coli per 100 ml shall require immediate bathing beach closure.**

Furthermore, Section 6-1.25 of Subpart 6-2 allows the permit-issuing official to determine beach water sampling protocol. According to Section 6-1.25: *Sample collection and analysis when required for surveillance or design purposes shall be in accordance with the frequency, locations and procedures specified by the permit-issuing official. All samples collected from the bathing beaches shall be examined in laboratories possessing State Department of Health certification for water supplies.* Therefore, the Division of Environmental Health shall determine the frequency and quantity of bacteriological water sampling at each permitted beach based on:

- Existing and historical beach bacteriological water quality test results.
- Circumstances at any particular beach (e.g., poor overall waterbody quality, presence of waterfowl, storm run-off, etc.).

Regardless of the frequency and quantity of beach water sampling, there are always limitations to protecting bathers from contaminated waters. The most significant limitation of monitoring E.coli levels at any beach is the fact that sample results are not available for at least 24 hours after initial sample culturing. Therefore, by the time sample results are received the following day, water quality at the same sampling location is most likely different. Other limitations and challenges that exist with a comprehensive bacteriological water quality program include weather, laboratory, staffing and logistical considerations.

A major consideration when implementing bacteriological water quality monitoring program policies, procedures and guidelines is establishing consistency. Therefore, only adequately trained, full-time Division of Environmental Health staff shall be utilized for sampling efforts. Staff shall be responsible for following proper sampling techniques, completing all required documentation and ensuring sample delivery to the laboratory in a time-efficient manner. In order to expedite receipt of sample results, all samples shall be delivered directly to Life Science Laboratories. Life Science Laboratories possesses a current NYS Department of Health, Environmental Laboratory Approval Program (ELAP) certification. A communication protocol is established with Life Science Laboratories and bathing beach operators to ensure sample result notification consistency.

Attachments:

- New York State Department of Health - State Sanitary Code, Subpart 6-2, Bathing Beaches, Effective 7/6/2011
- United States Environmental Protection Agency National Beach Guidance Document, (July 2014)
- New York State Department of Health – Wadsworth Environmental Laboratory Approval Program Certification Manual, ITEM NO. 245
- Onondaga County Health Department - Beach Water Sample Form
- Onondaga County Health Department – Bathing Beach Bacteriological Sample Results E-mail Template
- Life Science Laboratories, Inc. NYSDOH Certification – NYS Department of Health Wadsworth Center Certificate of Approval for Laboratory Service – (E. coli Enumeration) EPA Method 1603
- Life Science Laboratories, Inc. - Chain of Custody Record

BATHING BEACH BACTERIOLOGICAL WATER QUALITY MONITORING – SPECIFIC PROCEDURES & GUIDELINES:

Subpart 6-2 of the New York State Sanitary Code allows the permit-issuing official (Onondaga County Health Department, Division of Environmental Health) to determine specific bathing beach water quality monitoring protocols. However, it is important to note the following policies, procedures and guidelines are consistent with the standards set forth in Subpart 6-2 and the United States Environmental Protection Agency National Beach Guidance Document (July 2014).

Sampling Staff:

In order to ensure sampling consistency, all bathing beach sampling shall be performed exclusively by experienced, full-time Division of Environmental Health staff in possession of an Environmental Health Technician, Sanitarian or Public Health Engineer title.

All staff collecting water samples shall possess prior sampling technique methodology field training in addition to experience conducting sanitary surveys.

Staff shall ensure sample collection and preservation requirements as outlined in ITEM NO. 245 of the Environmental Laboratory Approval Program Certification Manual are met at all times during sampling efforts.

Sampling staff shall be required to review the policies, procedures and guidelines contained in this document prior to sampling each year.

Pre-Season Samples:

A pre-season sample will be collected from each regulated bathing beach 7 to 14 days prior to the first day of beach operation (as stated on permit application).

Sample Frequency:

Sampling frequency shall be based on existing and historical bacteriological water quality test results, past closure events and specific circumstances at any particular beach. The overall potential risk to public health is also considered. Beaches with a higher risk of contaminated water (i.e. poor overall waterbody quality) and high bather population are subject to an increased sampling frequency. Additionally, environmental influences or conditions specific to any particular beach (e.g. turbidity, large rain events, presence of waterfowl, etc.) may also be taken into consideration when determining sampling frequency.

Each regulated bathing beach within Onondaga County shall have a bacteriological water sample collected and analyzed on the following schedule:

- Beaches with a history of frequent closures due to poor bacteriological water quality will be sampled approximately every **14** days throughout season.
- or**
- Beaches with a history of infrequent closures due to poor bacteriological water quality will be sampled approximately every **21** days throughout season.

Sampling schedule may vary slightly due to severe weather events (lightning), holidays and staffing needs.

Beach operators shall be notified each pre-season of the sampling schedule (approximately every 14 or 21 days). Sampling schedule will be tentative and shall be determined by the beach opening date stated on the permit application.

Sample Quantity:

The number of beach water samples collected on sampling date shall be determined by the length of beachfront. One sample shall be collected for every **300** feet of beachfront.

Other considerations that may affect sample quantity include but are not limited to:

- Collection of surveillance/re-samples
- Depth range of swim area
- Water turbidity
- Wave action
- Adjacent streams possibly influencing beach area
- Storm run-off

Sampling Days:

- Monitoring samples shall be conducted Monday through Wednesday.
- Surveillance/re-samples can be conducted Monday through Friday.

- Sampling conducted on Friday requires pre-approval from Life Science Laboratory management.
- Sampling days may vary slightly due to severe weather events (lightning), holidays and staffing needs.

Sampling Time:

Staff shall conduct sampling in the early morning to ensure sample delivery to Life Science Laboratory by 10:00AM. Thunder and lightning storms may affect daily sampling schedules. Staff shall always exercise caution and be aware of environmental hazards during sampling efforts.

On-Site Assessment:

Each sampling visit shall include an on-site assessment of the bathing beach and adjacent areas to determine if any environmental conditions are present that may influence water quality. Staff shall complete a "Beach Water Sample Form" for each sampling visit.

Bacteriological Water Quality Indicator Utilized:

The New York State Department of Health recognizes Escherichia coli (E.coli) as an effective bacteriological water quality indicator for assessing potential risk of illness to bathers. Therefore, the Onondaga County Health Department, Division of Environmental Health shall utilize E.coli as the bacteriological indicator when determining water quality acceptability. The following delineation, as stated in Subpart 6-2 of the New York State Sanitary Code, shall be utilized to determine bathing beach water quality acceptability:

- Based on any sample, the density of E.coli bacteria shall not be equal to or exceed 235 E.coli per 100 ml.

Beach Closure:

When a sample result is equal to or exceeds 235 E.coli per 100 ml the Onondaga County Health Department, Division of Environmental Health shall require the beach operator to cease operation immediately and post beach closure signage. Beach closure and the posting of signage shall remain until subsequent re-sampling is performed, acceptable results are received and the operator is notified by this department.

Sample Delivery Time Requirements and Lab Result Notification:

Life Science Laboratory shall be notified at least one business day in advance of scheduled sampling.

Sampling staff shall schedule their day accordingly in order to ensure all samples are delivered to Life Science Laboratory by 10:00AM. Samples delivered by 10:00AM will ensure results are received from Life Science Laboratory by 10:30AM the following day. Sample delivery by 10:00AM is essential for notifying beach operators of sample results prior to scheduled beach opening.

Samples can be delivered between 10:01AM and 1:00PM, however, results will not be available until 1:30PM the following day. Sample delivery after 10:00AM will require prior supervisor approval and will be an infrequent exception.

Notification of sample results from Life Science Laboratory shall be received by phone and/or e-mail.

Notifying Beach Operators of Lab Results:

All sample results shall be provided to beach operators by e-mail. (Refer to attachment "Bathing Beach Bacteriological Sample Results E-mail Template.")

If an e-mail sent regarding unacceptable sample results is not responded to by the beach operator, the operator shall be contacted by phone to verify receipt of sample results.

Re-Sampling After Closure:

Efforts to collect re-samples shall commence as soon as possible upon receipt of bacteriological sample result exceedance (235 E.coli per 100ml or higher).

All requirements regarding sampling dates, times and lab delivery apply to re-sampling efforts.

Re-Opening After Closure:

Upon receipt of acceptable re-sampling results, an e-mail shall be sent to the beach operator. (Refer to attachment "Bathing Beach Bacteriological Sample Results E-mail Template.")

Required Documentation:

Staff shall complete a Life Science Laboratories, Inc. "Chain of Custody Record" and provide to the laboratory when delivering samples. A photocopy of the chain of custody record shall be requested and returned to the Division of Environmental Health office as proof of sample submittal and billing purposes. (Chain of Custody Record form provided in Attachments)

Staff shall complete a "Beach Water Sample Form" whenever a sample is collected. (Beach Water Sample Form provided in Attachments)

Sample Collection and Preservation Requirements:

Staff shall ensure sample collection and preservation requirements are met at all times as outlined in ITEM NO. 245 of the Environmental Laboratory Approval Program Certification Manual.

- Sample Collection – All samples shall be expedited to Life Science Laboratory to allow for sample processing within 2 hours of collection.

- **Sample Preservation** – A method for cooling samples adequately to less than 50 degrees Fahrenheit during transport to Life Science Laboratory is required.

Sampling Methodology:

The following guidelines shall be utilized by staff to ensure consistent, proper sample collection techniques and accuracy of results:

Sample Bottles

Only beach water sample specific 120 ml sterile bottles provided by Life Science Laboratories shall be used to collect samples.

Sampling Location

Sampling locations are determined on the ability of a sample to accurately and adequately represent beach water quality. The sampling location (within the swim area) and the depth of the water where the sample was collected at any beach must be consistent throughout the season. Consistent sampling locations allows for the ability to accurately compare sample results and specific sampling events.

- Samples shall be collected from middle of swim boundary area.
- Samples shall be collected from knee deep water.
- Current beach conditions (e.g., wave action) may be a factor in determining sampling depth.
- Samples shall be taken **6 to 12** inches below water surface.
- One sample shall be collected for every **300** feet of beachfront.
- Additional sampling and more specific sampling areas may be based on previous sampling efforts and results.

Sampling Technique

Consistent and sterile sampling techniques are integral for ensuring accurate sample results and comparing sampling results.

- Do not un-wrap seal on sample bottle until immediately prior to collecting sample.
- Do not touch inside the cap or bottle.
- When wading, avoid stirring up sediment.
- Open sample bottle and grasp at the base with one hand and plunge the bottle mouth downward into the water to avoid collecting water surface scum.
- Sampling depth shall be **6 to 12** inches below water surface.
- Move the bottle horizontally with the direction of the bottle pointed away from the sampler. Tip the bottle slightly upward to allow air to exit and the bottle to fill.
- Remove the bottle from the water.
- Adjust sample volume in bottle to 100 ml line marked on bottle to create an adequate air gap.

- Place cap on bottle.
- Provide label on bottle.
- Store and transport sample in an adequately refrigerated cooler.

Labeling and Documentation

- A label shall be completed in indelible ink and placed on each sample bottle. Label information shall include:
 - Beach Name
 - Date
 - Time
 - Specific sample location (when more than one sample is collected at same beach)
- Sampler shall accurately complete a Life Science Laboratory *Chain of Custody Record*.
- It is integral that all information provided on the sample bottle label coincide with the sample information provided on the *Chain of Custody Record*.

Sample Test Methodology (Life Science Laboratories, Inc.):

Section 6-1.25 of Subpart 6-2 requires all bathing beach water samples be examined in a laboratory possessing New York State Department of Health certification.

Life Science Laboratories, Inc. (Lab Identification No: 10248) possesses a Certificate of Approval for Laboratory Service issued by the NY State Department of Health Wadsworth Center. The NYS Department of Health certification acknowledges Life Science Laboratories – Central (5854 Butternut Dr. East Syracuse, NY 13057) is an approved Environmental Laboratory in conformance with the National Environmental Laboratory Accreditation Conference Standards (2003) for the category of “Environmental Analyses Non Potable Water” E.coli utilizing EPA Method 1603. (Certification provided in Attachments)

Sample Result Data Management:

Results stated in official Life Science Laboratory sample analysis reports shall be entered into a computer spreadsheet. Paper copies of official laboratory sample analysis reports shall be kept on file in a centralized location in the Onondaga County Health Department, Division of Environmental Health office.

End of Policy

APPENDIX 5

Onondaga County Parks is considering the development of a new beach facility on Onondaga Lake.

Your opinion regarding this new facility is greatly appreciated. All respondents will have the opportunity to enter a drawing for one of three \$50 Amazon gift cards.

The survey should take no longer than 7 minutes of your time. All responses will be strictly confidential and presented in aggregate format. No names or addresses are collected.

ONONDAGA COUNTY PARKS

1. Do you currently live in Onondaga County?
 - ☐ Yes (Go to Q2)
 - ☐ No (Go to Q3)
2. How long have you lived in Onondaga County?
 - ☐ Less than 3 years (Go to Q3)
 - ☐ 3 to 5 Years (Go to Q3)
 - ☐ 6 to 10 Years (Go to Q3)
 - ☐ 11 to 15 Years (Go to Q3)
 - ☐ 16 to 20 Years (Go to Q3)
 - ☐ More than 20 Years (Go to Q3)
3. What is your Zip Code? _____ (Go to Q4)
4. Have you visited an Onondaga County Park in the past 12 months?
 - ☐ Yes (Go to Q5)
 - ☐ No (Go to Q15)
5. Which parks have you visited (Check all that apply)
 - ☐ Beaver Lake Nature Center (Go to Q6)
 - ☐ Carpenter's Brook Nature Center (Go to Q6)
 - ☐ Erie Canal/Jordan Level Trail (Go to Q6)
 - ☐ Highland Forest (Go to Q6)
 - ☐ Jamesville Beach Park (Go to Q6)
 - ☐ Oneida Shores Park (Go to Q6)
 - ☐ Onondaga Lake Park (Go to Q6)
 - ☐ Otisco Lake Park (Go to Q6)
 - ☐ Pratt's Falls Park (Go to Q6)
 - ☐ Rosamond Gifford Zoo (Go to Q6)
 - ☐ Other (please specify) (Go to Q6)

6. How often do you visit an Onondaga County Park?

- ☐ More than 8 times per year (Go to Q7)
- ☐ 4 to 7 times per year (Go to Q7)
- ☐ 1 to 3 times per year (Go to Q7)
- ☐ Never (Go to Q7)

7. Which Onondaga County Park do you visit most often?

- ☐ Beaver Lake Nature Center (Go to Q8)
- ☐ Carpenter's Brook Fish Hatchery (Go to Q8)
- ☐ Erie Canalway/Jordan Level Trail (Go to Q8)
- ☐ Highland Forest (Go to Q8)
- ☐ Jamesville Beach Park (Go to Q8)
- ☐ Oneida Shores Park (Go to Q8)
- ☐ Otisco Lake Park (Go to Q8)
- ☐ Pratt's Falls Park (Go to Q8)
- ☐ Rosamond Gifford Zoo (Go to Q8)

8. Why do you visit that park most often? _____ (Go to Q9)

9. Approximately how far to you travel to visit that park? (Go to Q10)

- ☐ Less than 2 miles (Go to Q10)
- ☐ 3 to 4 miles (Go to Q10)
- ☐ 5 to 6 miles (Go to Q10)
- ☐ 7 to 10 miles (Go to Q10)
- ☐ 11 to 15 miles (Go to Q10)
- ☐ 16 to 20 miles (Go to Q10)
- ☐ more than 20 miles (Go to Q10)
- ☐ Don't know (Go to Q10)

10. Have you visited Onondaga Lake Park in the past 12 months?

- ☐ Yes (Go to Q11)
- ☐ No (Go to Q15)

11. How often do you visit an Onondaga Lake Park?

- ☐ 8 or more times per year (Go to Q12)
- ☐ 4 to 7 times per year (Go to Q12)
- ☐ 1 to 3 times per year (Go to Q12)
- ☐ 1 to 4 times per year (Go to Q12)

12. Approximately how far do you travel to visit Onondaga Lake Park?

- ☐ Less than 2 miles (Go to Q13)
- ☐ 3 to 4 miles (Go to Q13)
- ☐ 5 to 6 miles (Go to Q13)
- ☐ 7 to 10 miles (Go to Q13)
- ☐ 11 to 15 miles (Go to Q13)
- ☐ 16 to 20 miles (Go to Q13)
- ☐ more than 20 miles (Go to Q13)
- ☐ Don't know (Go to Q13)

13. How do you most often travel to Onondaga Lake Park?

- ☐ Drive (Go to Q14)
- ☐ Walk (Go to Q14)
- ☐ Bike (Go to Q14)
- ☐ Skate (Go to Q14)
- ☐ Boat (Go to Q14)
- ☐ Public Transportation (Go to Q14)
- ☐ Other (Go to Q14)

14. What activities or events do you participate in at Onondaga Lake Park? (Check all that apply)

- ☐ Exercise (Go to Q15)
- ☐ Recreation (Go to Q15)
- ☐ Events (Go to Q15)
- ☐ Environment (Go to Q15)
- ☐ Sports (Go to Q15)
- ☐ Activities (Go to Q15)
- ☐ Personal/Social (Go to Q15)
- ☐ Work/Education (Go to Q15)
- ☐ Other (Go to Q15)

15. Do you think there are enough beaches available for residents in Onondaga County

- ☐ Yes (Go to Q16)
- ☐ No (Go to Q16)

16. Do you visit any public beaches in the region?

- ☐ Yes (Go to Q17)
- ☐ No (Go to Q21)

17. Which do you visit? (Check all that apply)

- ☐ Jamesville Beach Park (Go to Q18)
- ☐ Oneida Shores Park (Go to Q18)
- ☐ Sylvan Beach (Go to Q18)
- ☐ Williams Beach (Go to Q18)
- ☐ Green Lakes State Park (Go to Q18)
- ☐ Verona Beach Park (Go to Q18)
- ☐ Other (Go to Q18)

18. How often do you visit a beach in the region?

- ☐ 8 or more times per year (Go to Q19)
- ☐ 4 to 7 times per year (Go to Q19)
- ☐ 1 to 3 times per year (Go to Q19)
- ☐ Never (Go to Q19)

19. When you visit a local beach, do you use it for: Check all that apply)

Hanging out on the beach to read, picnic, etc.

- ☐ Wading (Go to Q20)
- ☐ Swimming (Go to Q20)
- ☐ Paddle boarding (Go to Q20)
- ☐ Other (Go to Q20)

20. If there were a beach on Onondaga Lake, would you use it for any of these purposes?

- ☐ Yes (Go to Q21)
- ☐ No (Go to Q21)
- ☐ Don't know (Go to Q21)

21. Following are a few questions regarding Onondaga Lake. The lake has undergone an extensive cleanup process and the restored water body has met New York State standards for swimming for several years.

Upstate Freshwater Institute and Ecologic prepares the Ambient Monitoring Program Annual Reports. The following link contains all the reports and references on the most recent data on swimmability.

<http://www.ongov.net/wep/we15html>.

Do you agree that Onondaga Lake is safe for swimming?

- ☐ Yes (Go to Q22)
- ☐ No (Go to Q22)
- ☐ Don't know (Go to Q22)

22. If you visited Onondaga Lake Park, how likely is it that you and your family would swim in Onondaga Lake?

Zero being "Not at all likely and 10 being "Absolutely likely" _____ (Go to Q23)

23. Following are a few questions for demographic purposes.

What is your age?

- ☐ Less than 25 Go to Q24)
- ☐ 25-34 Go to Q24)
- ☐ 35-44 Go to Q24)
- ☐ 45-54 Go to Q24)
- ☐ 55-64 Go to Q24)
- ☐ 65-74 Go to Q24)
- ☐ 75 and over Go to Q24)
- ☐ Prefer not to say Go to Q24)

24. How many are there in your household?

- ☐ One (Go to Q25)
- ☐ Two (Go to Q25)
- ☐ Three (Go to Q25)
- ☐ Four (Go to Q25)
- ☐ Five (Go to Q25)
- ☐ Six or more (Go to Q25)

25. How many are there in your household under age 6?

- ☐ None (Go to Q26)
- ☐ One (Go to Q26)
- ☐ Two (Go to Q26)
- ☐ Three (Go to Q26)
- ☐ More (Go to Q26)

26. How many are there in your household age 6 to 12?

- ☐ None (Go to Q27)
- ☐ One (Go to Q27)
- ☐ Two (Go to Q27)
- ☐ Three (Go to Q27)
- ☐ More (Go to Q27)

27. How many in your household are age 13 to 19?

- ☐ None (Go to Q28)
- ☐ One (Go to Q28)
- ☐ Two (Go to Q28)
- ☐ Three (Go to Q28)
- ☐ More (Go to Q28)

28. What is your gender

- ☐ Male (Go to Q29)
- ☐ Female (Go to Q29)
- ☐ Prefer not to answer (Go to Q29)

29. Do you, or any persons in your household, have challenges with mobility or special needs?

- ☐ Yes (Go to Q30)
- ☐ No (Go to Q30)
- ☐ Prefer not to say (Go to Q30)

30. What is your household's annual income?

- ☐ Under \$25000 (Go to Q31)
- ☐ Between \$25,000 and \$34,999 (Go to Q31)
- ☐ Between \$35,000 and \$49,999 (Go to Q31)
- ☐ Between \$50,000 and \$74,999 (Go to Q31)
- ☐ Between \$75,000 and \$99,999 (Go to Q31)
- ☐ Between \$100,000 and \$149,999 (Go to Q31)
- ☐ \$150,000 or more (Go to Q31)
- ☐ Prefer not to say (Go to Q31)

31. Would you like to enter our drawing for one of three \$50 Amazon gift cards?

- ☐ Yes (Go to Q32)
- ☐ No (End of survey)

32. Please enter your email address _____ (End of survey)

I. INTRODUCTION

After Decades of pollution, Onondaga Lake has undergone a massive cleanup. The lake was declared a Superfund site in 1994 and remediation construction services began in 2005 and the cleanup project was completed in 2018. The lake has now met New York State standards for swimming for several years.

Through the cleanup and habitat restoration, wildlife has also returned to the lake in both the shoreline and surrounding wetlands. These efforts have contributed to the return of 184 species to the lake and nearby areas. Water activities such as fishing, boating, and kayaking are now common on the lake.

Subsequently, Onondaga County Parks has embarked on a feasibility study to determine if a new beach on Onondaga Lake can be created and ultimately supported by local residents. The overall beach feasibility study has been undertaken by Barton and Loguidice a full service engineering firm from Liverpool, NY. Working as a subcontractor, the market feasibility has been undertaken by DANTER/Economic Development Strategies, LLC, a real estate research company in Columbus, OH.

This report includes:

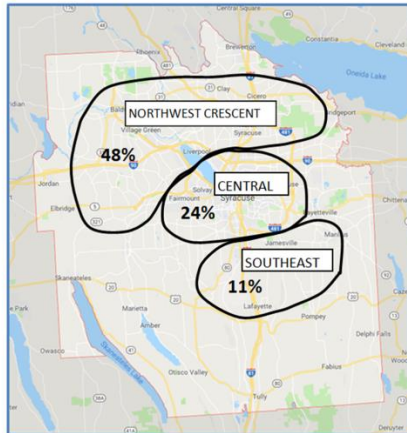
- Results from an internet survey of area residents in which 2,119 respondents were interviewed regarding Onondaga County Parks usage, use of area beaches, likelihood of using a beach on Onondaga Lake, and perceptions of safety of Onondaga Lake.
- A beach Attendance Model was developed using the internet survey estimated potential attendance of a new beach on Onondaga Lake.
- An executive summary of the Beach Attendance Model and the Internet Survey.

II. EXECUTIVE SUMMARY

A. INTERNET SURVEY

- A total of 2,119 respondents completed the online survey. Of these, 87% resided in Onondaga County.

- There were three primary submarkets, Northwest Crescent, Central, Southeast accounting for 48%, 24% and 11%, respectively.



- A noteworthy 92% of respondents have visited an Onondaga County Park within the past 12 months with 40% visiting more than 8 times per year. Onondaga Lake Park was the park visited most often, by 59% of the respondents.
- A total of 93% of all respondents have visited Onondaga Lake Park within the past 12 months and 34% of those visit 8 times per year or more.
- 49% of respondents believe there are not enough beaches available for residents of Onondaga County. A disproportionate share of these were:
 - Males – 52%
 - Under age 45 – 55%
 - 4 TO 5 person households- 53%
- 68% of all respondents visit public beaches in the region. A disproportionate share were:
 - Female – 73%
 - Under age 45 – 76%
 - 3 or more person households – 77%

Of those visiting Onondaga Lake Park within the past 12 months, 70% visit public beaches in the region.

- Most visitors to public beaches use it for just hanging out, reading, picnics, etc., accounting for 83% of the respondents using public beaches.

- Green Lakes State Park is by far the most popular beach in the region, visited by 81% of those visiting public beaches in the region
- Of those visiting public beaches in the region, 36% said they would use a beach on Onondaga Lake. These were mostly:
 - Male – 47%
 - 1 or 2 person households - 41%
 - With incomes of \$75,000 or higher – 42%
- Respondents were told that Lake Onondaga has met New York State standards for swimming then asked if they agree that the lake is safe for swimming.
 - Yes – 22%
 - No – 57%
 - Don't Know – 21%

Those responding “yes” were:

- Age 45 or older – 25%
- Male – 28%
- 1 or 2 person households – 24%
- Have incomes \$75,000 or higher – 27%
- Have visited Onondaga Lake Park in the past 12 months – 24%

B. BEACH ATTENDANCE PROJECTIONS

Four criteria were used for projecting future use of a beach on Onondaga Lake.

1. Being familiar with Onondaga Lake Park

A total of 93% of respondents indicated that they have visited Onondaga Lake Park within the past 12 Months.

2. Already visit beaches in the region.

A total of 68% already visit public beaches in the region and among those having visited Onondaga Lake Park within the past as months, 70% visit public beaches in the region.

3. Would use a beach on Onondaga Lake if it were available.

Among respondents visiting public beaches in the region, 39% would use Onondaga Lake for beach activities if a beach were available.

4. Believe the lake is safe for swimming.

22% of all respondents believe Onondaga Lake is safe for swimming. Of those visiting Onondaga Lake Park within the past 12 months, 24% believe the lake is safe for swimmin.

- There were 2,037,792 visitors to Onondaga Lake Park in 2018. Based on the internet survey, visitors to Onondaga Lake Park average 5.3 visits annually. This results in 384,489 unduplicated visitors annually. A total of 60% of all visitors use the park from June through September.
- Interviews with park officials and a review of attendance figures for Jamesville Beach Park and Oneida Shores Park indicate that very little beach activity occurs until Mid-June or after Mid-September. Based on these interviews, it is estimated that only 70% of the June and September Onondaga Lake Park attendance occurs after Mid-June or before Mid-September. A total of 53% of the total Onondaga Lake Park visits occur during this period.
- There are an estimated 203,544 unduplicated visitors using Onondaga Lake Park from Mid-June through min-September.

	TOTAL VISITORS	UNDUPLICATED VISITORS
Total attendance at Onondaga Lake Park (2018)	2,037,792	384,489*
Estimated total attendance at Onondaga Lake Park Mid-June through Mid-September	1,078,781	203,544

*Visitors average 5.3 visits annually.

- Based on the internet survey, among those already visiting Onondaga Lake Park within the past 12 months, 70% also visit public beaches in the region. Applying this to the Mid-June through Mid-September attendance of 203,544 yields 142,684 Onondaga Lake Park visitors also visiting beaches in the region.

Q10-Have you visited Onondaga Lake Park in the past 12 months? Q16—Do you visit any public beaches in the region?			
Q10-Have you visited Onondaga Lake Park in the past 12 months?		Q16—Do you visit any public beaches in the region?	
	TOTAL	YES	NO
Q10: Yes	92.9%	70.1%	29.9%
	1,695	1,154	493
Q10: No	7.1%	58.1%	41.9%
	130	75	54
Total Respondents	1,825	1,229	547

- Among those visiting Onondaga Lake Park within the past 12 months, 39% indicate they would use a beach at Onondaga Lake Park for their typical beach activities if one were available. This would total 78,568 visitors.

Q10-Have you visited Onondaga Lake Park in the past 12 months? Q20—If there were a beach on Onondaga Lake, would you use it hanging out,				
Q10-Have you visited Onondaga		Q20—If there were a beach on Onondaga		
	TOTAL	YES	NO	DON'T KNOW
Q10: Yes	92.9%	38.6%	50.0%	11.3%
	1,695	436	565	128

- **According to the internet survey, 24% of those visiting Onondaga Lake Park within the past 12 months believe the lake is safe for swimming.** This would total 48,647 of the 203,544 unduplicated visitors from Mid-June through Mid-September.

Q10 - Have you visited Onondaga Lake Park in the past 12 months?				
Q21 - Do you agree that Onondaga Lake is safe for swimming?				
	Q21			
Q10	Yes	No	Don't Know	Total
Yes	384	881	348	1613
	96.2%	90.9%	93.5%	92.7%
	23.8%	54.6%	21.6%	100.0%
No	15	88	24	127
	3.8%	9.1%	6.5%	7.3%
	11.8%	69.3%	18.9%	100.0%
Total	399	969	372	1740
	100.0%	100.0%	100.0%	100.0%
	22.9%	55.7%	21.4%	100.0%
Tabulated only those responding to both questions				

At total of 16% of all respondents meet all of the above criteria. This would be a total of 31,800 visitors who:

**Already use Onondaga Lake Park
Use public beaches in the region
Would use a beach at Onondaga Lake Park, if available
Believe the lake is safe for swimming.**

Onondaga Lake Park visitors also visit beaches in the area an average of 4.3 times annually. The remaining 3.3 visits would be contingent upon providing a positive beach experience on the first visit.

- Following is a summary of Onondaga Lake Park visitors who visit beaches in the area, would use a beach at Onondaga Lake Park and believe the lake to be safe for swimming.

Unduplicated visitors to Onondaga Lake Park from Mid-June through Mid-September	203,544
Onondaga Lake Park visitors also visit beaches in the area	142,684
If there were a public beach at Onondaga Lake Park, would you use it	78,560
Do you agree that Onondaga Lake is safe for swimming	48,647
Total meeting all of the above criteria: <ul style="list-style-type: none"> • Already visit Onondaga Lake Park • Use public beaches in the region • Would use a beach at Onondaga Lake Park • Believe the lake is safe for swimming 	31,800

ONONDAGA LAKE PARK BEACH ATTENDANCE PROJECTION

Projections and estimates for potential visitors to a proposed beach located at the Onondaga Lake Park are based on the results of the internet survey conducted in January, 2019 in which 2,119 respondents were surveyed regarding the usage of the Onondaga County Parks, Onondaga Lake Park, area beaches, as well as, perceptions of safety regarding Onondaga Lake and the likelihood of using a beach at Onondaga Lake.

The survey was designed to use an outreach program to ask respondents to log into a website to take the survey. The sample, therefore, is weighted toward respondents with an interest in local parks as opposed to being representative of the entire population of Onondaga County. The projections for attendance are thus based on those residents already using Onondaga Lake Park. Onondaga County residents not using Onondaga Lake Park but may visit a beach at the park have not been included resulting in a very conservative estimate of potential beach use.

1. There were 2,037,792 visitors to Onondaga Lake Park in 2018. (This is down slightly from the 2016 and 2017 attendance figures of 2,196,498 and 2,154,203, respectively. The 2018 figures have been used.) Of the 2,037,792 visitors in 2018. Based on the internet survey, visitors to Onondaga Lake Park average 5.3 visits annually. This results in 384,489 unduplicated visitors annually. At a population per household of 2.41, there are 159,539 unduplicated households visiting Onondaga Lake Park annually. A total of 59.8% of all visitors use the park from June through September, the prime beach using period as demonstrated by attendance data for Jamesville Beach Park and Oneida Shores Park in which 80.3% and 77.3% of all visitors, respectively, use the parks from June through September.
2. Interviews with park officials and a review of attendance figures for Jamesville Beach Park and Oneida Shores Park indicate that very little beach activity occurs until mid-June or after mid-September. Therefore, we have used only 70% of the June and September Onondaga Lake Park attendance data. A total of 52.9% of the total Onondaga Lake Park visits occur during this period.
3. There are an estimated 203,544 unduplicated visitors using Onondaga Lake Park from mid-June through mid-September or 84,458 unduplicated households.

	TOTAL VISITORS	UNDUPLICATED VISITORS	UNDUPLICATED HOUSEHOLDS**
Total attendance at Onondaga Lake Park (2018)	2,037,792	384,489*	159,539
Estimated total attendance at Onondaga Lake Park mid-June through mid-September	1,078,781	203,544	84,458

*Visitors average 5.3 visits annually.

**Based on a population per household of 2.41.

4. Based on the internet survey, among those already visiting Onondaga Lake Park within the past 12 months, 70.1% also visit public beaches in the region. Applying this to the mid-June through mid-September attendance of 203,544 yields 142,684 Onondaga Lake Park visitors also visiting beaches in the region.

Q10—Have you visited Onondaga Lake Park in the past 12 months? Q16—Do you visit any public beaches in the region?			
Q10—Have you visited Onondaga Lake Park in the past 12 months?		Q16—Do you visit any public beaches in the region?	
	TOTAL	YES	NO
Q10: Yes	92.9%	70.1%	29.9%
	1,695	1,154	493
Q10: No	7.1%	58.1%	41.9%
	130	75	54
Total Respondents	1,825	1,229	547

5. Among those visiting Onondaga Lake Park within the past 12 months, 38.6% indicate they would use a beach at Onondaga Lake Park for their typical beach activities if one were available. This would total 78,568 visitors.

Q10—Have you visited Onondaga Lake Park in the past 12 months? Q20—If there were a beach on Onondaga Lake, would you use it hanging out, wading, swimming or other uses?				
Q10—Have you visited Onondaga Lake Park in the past 12 months?		Q20—If there were a beach on Onondaga Lake, would you use it hanging out, wading, swimming or other uses?		
	TOTAL	YES	NO	DON'T KNOW
Q10: Yes	92.9%	38.6%	50.0%	11.3%
	1,695	436	565	128
Q10: No	7.1%	16.2%	68.9%	14.9%
	130	12	51	11
Total Respondents	1,825	448	616	139

6. **According to the internet survey, 23.9% of those visiting Onondaga Lake Park within the past 12 months believe the lake is safe for swimming.** This would total 48,647 of the 203,544 unduplicated visitors from mid-June through mid-September.

Q10-Have you visited Onondaga Lake Park in the past 12 months? Q21 - Do you agree that Onondaga Lake is safe for swimming?				
Q10-Have you visited Onondaga Lake Park in the past 12 months?	Q21 - Do you agree that Onondaga Lake is safe for swimming?			
	TOTAL	YES	NO	DK/NA
Q10: Yes	92.9%	23.9%	54.6%	21.6%
	1,695	385	881	348
Q10: No	7.1%	11.8%	69.3%	18.9%
	130	15	88	24
Total Respondents	1,825	400	969	372

7. At total of 15.5% of all respondents visiting Onondaga Lake Park meet all of the above criteria. This would be a total of 31,600 visitors already using Onondaga Lake Park, use public beaches in the region, would use a beach at Onondaga Lake Park and believe the lake is safe for swimming.

It is reasonable to assume that there would be at least 31,600 potential first time beach visitors who are already using Onondaga Lake Park, believe the lake is safe for swimming, are currently visiting other beaches in the region and indicated that they would use a beach at the park if it were developed. Onondaga Lake Park visitors also visit beaches in the area an average of 4.3 times annually. The remaining 3.3 visits would be contingent upon providing a positive beach experience on the first visit.

8. Following is a summary of Onondaga Lake Park visitors who visit beaches in the area, would use a beach at Onondaga Lake Park and believe the lake to be safe for swimming.

Onondaga Lake Park visitors also visit beaches in the area	142,684
If there were a public beach at Onondaga Lake Park, would you use it	78,560
Do you agree that Onondaga Lake is safe for swimming	48,647
Total meeting all of the above criteria: <ul style="list-style-type: none">• Already visit Onondaga Lake Park• Use public beaches in the region• Would use a beach at Onondaga Lake Park• Believe the lake is safe for swimming	31,600

Appendix A – Park visitors

ONONDAGA LAKE PARK, JAMESVILLE BEACH PARK AND ONEIDA SHORES PARK MONTHLY ATTENDANCE - 2018			
	JAMESVILLE BEACH	ONEIDA SHORES	ONONDAGA LAKE PARK
January	1,498	1,102	47,846
February	1,631	1,045	33,228
March	1,723	1,285	21,889
April	1,751	2,238	57,685
May	2,613	7,242	163,140
June	15,560	22,162	236,738
July	16,111	26,464	382,545
August	6,995	13,077	368,770
September	18,687	5,015	231,070
October	1,869	3,598	151,610
November	1,428	1,479	138,866
December	1,569	1,571	204,405
Total	71,435	86,278	2,037,792
June through September Total	57,353	66,718	1,219,123
Mid-June - Mid-September Total	47,079	58,565	1,078,781
Percent	65.9%	67.9%	52.9%

ONONDAGA LAKE PARK ANNUAL ATTENDANCE 2008 - 2018	
2008	1,347,231
2009	1,380,003
2010	1,480,318
2011	1,413,378
2012	1,514,928
2013	1,607,910
2014	1,675,584
2015	1,933,067
2016	2,196,498
2017	2,154,203
2018	2,037,792

Appendix B – Screen for “Yes”

Q10 - Have you visited Onondaga Lake Park in the past 12 months?

Q16 - Do you visit any public beaches in the region?

Q20 - If there were a beach on Onondaga Lake, would you use it for any of these purposes?

Q21 - Do you agree that Onondaga Lake is safe for swimming?

Total responses replying “Yes” to all four questions 263

DEMOGRAPHICS

GENDER			
	SCREEN FOR “YES”		UNIVERSE
	NUMBER	PERCENT	PERCENT
Male	163	62.0%	49.5%
Female	91	34.6%	45.6%
Prefer not to say	9	3.4%	4.9%
Total	263	100.0%	100.0%

POPULATION PER HOUSEHOLD			
	SCREEN FOR “YES”		UNIVERSE
	NUMBER	PERCENT	PERCENT
One	28	10.6%	11.0%
Two	88	33.7%	36.2%
Three	57	21.8%	20.0%
Four	63	24.1%	20.0%
Five	21	8.0%	9.2%
Six or more	5	1.9%	3.5%
Total	263	100.0%	100.0%

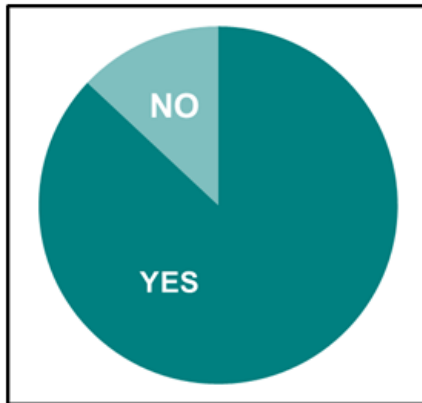
AGE			
	SCREEN FOR "YES"		UNIVERSE
	NUMBER	PERCENT	PERCENT
Under 25	18	6.8%	10.6%
25 – 34	53	20.3%	18.5%
35 – 44	53	20.3%	18.3%
45 – 54	57	21.8%	16.3%
55 – 64	42	16.1%	18.8%
65 – 74	30	11.4%	13.0%
75 or more	7	3.7%	2.9%
Prefer not to say	2	9.8%	1.6%
Total	263	100.0%	100.0%

INCOME			
	SCREEN FOR "YES"		UNIVERSE
	NUMBER	PERCENT	PERCENT
\$150,000 or more	42	16.0%	12.9%
\$100,000 to \$149,999	69	26.2%	20.0%
\$75,000 to \$99,999	49	18.6%	15.7%
\$50,000 to \$74,999	34	12.9%	14.9%
\$35,000 to \$49,999	16	6.1%	8.2%
\$25,000 to \$34,999	4	1.5%	3.7%
Under \$25,000	6	2.3%	3.0%
Prefer not to say	43	16.3%	21.7%
Total	263	100.0%	100.0%

Q1—Do you currently live in Onondaga County?

Asked of universe (2,119)

Answered 2,110 Skipped 9



ANSWER	RESPONSES	
Yes	1,833	86.9%
No	277	13.1%
TOTAL	2,110	100.0%

Q1 - Do you currently live in Onondaga County?
Q23 - What is your age?

	YES	NO	TOTAL
Less than 25	92.2%	7.8%	10.7%
	189	16	205
25-34	86.0%	14.0%	18.6%
	307	50	357
35-44	87.1%	12.9%	18.2%
	305	45	350
45-54	85.4%	14.7%	16.4%
	268	46	314
55-64	89.1%	10.9%	18.7%
	319	39	358
65-74	90.4%	9.6%	13.0%
	225	24	249
75 and over	100.0%	0.0%	2.9%
	56	0	56
Prefer not to say	90.0%	10.0%	1.6%
	27	3	30
Total Respondents	88.4%	11.6%	100.0%
	1,696	223	1,919

Q1 - Do you currently live in Onondaga County?
Q28 - What is your gender?

	YES	NO	TOTAL
Male	88.6%	11.4%	49.3%
	838	108	946
Female	88.3%	11.7%	45.8%
	775	103	878
Prefer not to answer	88.3%	11.7%	4.9%
	83	11	94
Total Respondents	88.4%	11.6%	100.0%
	1,696	222	1,918

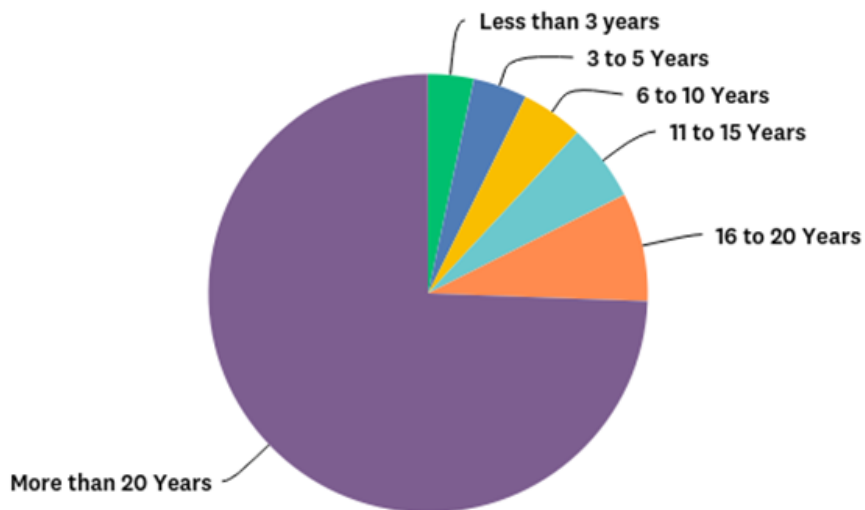
Q1 - Do you currently live in Onondaga County? Q24 - How many are there in your household?			
	YES	NO	TOTAL
One	91.5%	8.5%	11.1%
	194	18	212
Two	87.7%	12.3%	36.1%
	607	85	692
Three	88.8%	11.2%	20.0%
	340	43	383
Four	87.8%	12.2%	20.1%
	338	47	385
Five	87.1%	12.9%	9.3%
	155	23	178
Six or more	92.5%	7.5%	3.5%
	62	5	67
Total Respondents	88.5%	11.5%	100.0%
	1,696	221	1,917

Q1 - Do you currently live in Onondaga County? Q30 - What is your income?			
	YES	NO	TOTAL
Under \$25,000	93.0%	7.0%	3.0%
	53	4	57
Between \$25,000 and \$34,999	81.7%	18.3%	3.7%
	58	13	71
Between \$35,000 and \$49,999	88.0%	12.0%	8.2%
	139	19	158
Between \$50,000 and \$74,999	86.6%	13.4%	14.8%
	246	38	284
Between \$75,000 and \$99,999	89.4%	10.6%	15.7%
	270	32	302
Between \$100,000 and \$150,000 or more	88.8%	11.2%	20.0%
	341	43	384
\$150,000 or more	85.8%	14.2%	12.9%
	212	35	247
Prefer not to say	91.1%	8.9%	21.7%
	379	37	416
Total Respondents	88.5%	11.5%	100.0%
	1,698	221	1,919

Q2—How long have you lived in Onondaga County?

Asked of those replying "Yes" to Question 1 (1,833)

Answered 1,814 Skipped 19



ANSWER	RESPONSES	
Less than 3 years	61	3.4%
3 to 5 Years	72	4.0%
6 to 10 Years	83	4.6%
11 to 15 Years	103	5.7%
16 to 20 Years	145	8.0%
More than 20 Years	1,350	74.4%
TOTAL	1,814	100.0%

Q2 - How long have you lived in Onondga County?

Q23 - What is your age?

	LESS THAN 3 YEARS	3 TO 5 YEARS	6 TO 10 YEARS	11 TO 15 YEARS	16 TO 20 YEARS	MORE THAN 20 YEARS	TOTAL
Less than 25	8.5%	6.4%	1.6%	6.9%	35.5%	41.3%	11.1%
	16	12	3	13	67	78	189
25-34	8.5%	10.8%	12.1%	5.5%	4.9%	58.3%	18.1%
	26	33	37	17	15	179	307
35-44	3.6%	4.6%	6.5%	11.7%	9.1%	64.5%	18.1%
	11	14	20	36	28	198	307
45-54	0.0%	0.7%	2.2%	7.4%	5.2%	84.4%	15.8%
	0	2	6	20	14	227	269
55-64	0.6%	1.3%	2.2%	2.5%	2.8%	90.6%	18.8%
	2	4	7	8	9	290	320
65-74	0.4%	0.4%	1.3%	0.9%	0.9%	96.0%	13.2%
	1	1	3	2	2	216	225
75 and over	1.8%	5.5%	1.8%	1.8%	3.6%	85.5%	3.2%
	1	3	1	1	2	47	55
Prefer not to say	3.7%	0.0%	3.7%	0.0%	7.4%	85.2%	1.6%
	1	0	1	0	2	23	27
Total Respondents	3.4%	4.1%	4.6%	5.7%	8.2%	74.0%	100.0%
	58	69	78	97	139	1,258	1,699

Q2 - How long have you lived in Onondga County?

Q28 - What is your gender?

	LESS THAN 3 YEARS	3 TO 5 YEARS	6 TO 10 YEARS	11 TO 15 YEARS	16 TO 20 YEARS	MORE THAN 20 YEARS	TOTAL
Male	2.9%	2.6%	3.5%	4.9%	7.4%	78.8%	49.5%
	24	22	29	41	62	663	841
Female	3.8%	5.8%	5.8%	7.0%	9.3%	68.4%	45.6%
	29	45	45	54	72	529	774
Prefer not to answer	6.0%	2.4%	6.0%	3.6%	6.0%	76.2%	4.9%
	5	2	5	3	5	64	84
Total Respondents	3.4%	4.1%	4.6%	5.8%	8.2%	73.9%	100.0%
	58	69	79	98	139	1,256	1,699

Q2 - How long have you lived in Onondga County?

Q24 - How many are there in your household?

	LESS THAN 3 YEARS	3 TO 5 YEARS	6 TO 10 YEARS	11 TO 15 YEARS	16 TO 20 YEARS	MORE THAN 20 YEARS	TOTAL
One	7.3%	6.7%	7.3%	2.6%	2.6%	73.6%	11.4%
	14	13	14	5	5	142	193
Two	3.6%	3.6%	2.8%	3.1%	4.9%	81.9%	35.8%
	22	22	17	19	30	499	609
Three	2.9%	3.5%	6.7%	6.7%	7.9%	72.1%	20.1%
	10	12	23	23	27	246	341
Four	1.2%	4.1%	5.6%	10.6%	10.3%	68.1%	20.0%
	4	14	19	36	35	231	339
Five	2.6%	3.9%	2.6%	7.7%	17.4%	65.8%	9.1%
	4	6	4	12	27	102	155
Six or more	6.5%	3.2%	3.2%	4.8%	22.6%	59.7%	3.7%
	4	2	2	3	14	37	62
Total Respondents	3.4%	4.1%	4.6%	5.8%	8.1%	74.0%	100.0%
	58	69	79	98	138	1,257	1,699

Q2 - How long have you lived in Onondga County?

Q30 - What is your income?

	LESS THAN 3 YEARS	3 TO 5 YEARS	6 TO 10 YEARS	11 TO 15 YEARS	16 TO 20 YEARS	MORE THAN 20 YEARS	TOTAL
Under \$25,000	15.1%	5.7%	9.4%	1.9%	9.4%	58.5%	3.1%
	8	3	5	1	5	31	53
Between \$25,000 and \$34,999	3.5%	8.6%	5.2%	3.5%	8.6%	70.7%	3.4%
	2	5	3	2	5	41	58
Between \$35,000 and \$49,999	2.9%	7.4%	3.7%	2.9%	6.6%	76.5%	8.0%
	4	10	5	4	9	104	136
Between \$50,000 and \$74,999	4.4%	3.6%	4.4%	5.6%	6.4%	75.5%	14.6%
	11	9	11	14	16	188	249
Between \$75,000 and \$99,999	3.7%	3.7%	5.2%	5.2%	8.9%	73.3%	15.9%
	10	10	14	14	24	198	270
Between \$100,000 and	2.9%	5.3%	5.0%	7.3%	6.1%	73.5%	20.2%
	10	18	17	25	21	252	343
\$150,000 or more	1.4%	2.8%	5.6%	8.0%	9.9%	72.3%	12.5%
	3	6	12	17	21	154	213
Prefer not to say	2.6%	2.1%	3.2%	5.5%	10.0%	76.6%	22.3%
	10	8	12	21	38	291	380
Total Respondents	3.4%	4.1%	4.6%	5.8%	8.2%	74.0%	100.0%
	58	69	79	98	139	1,259	1,702

Q3—What is your Zip Code?

Asked of universe

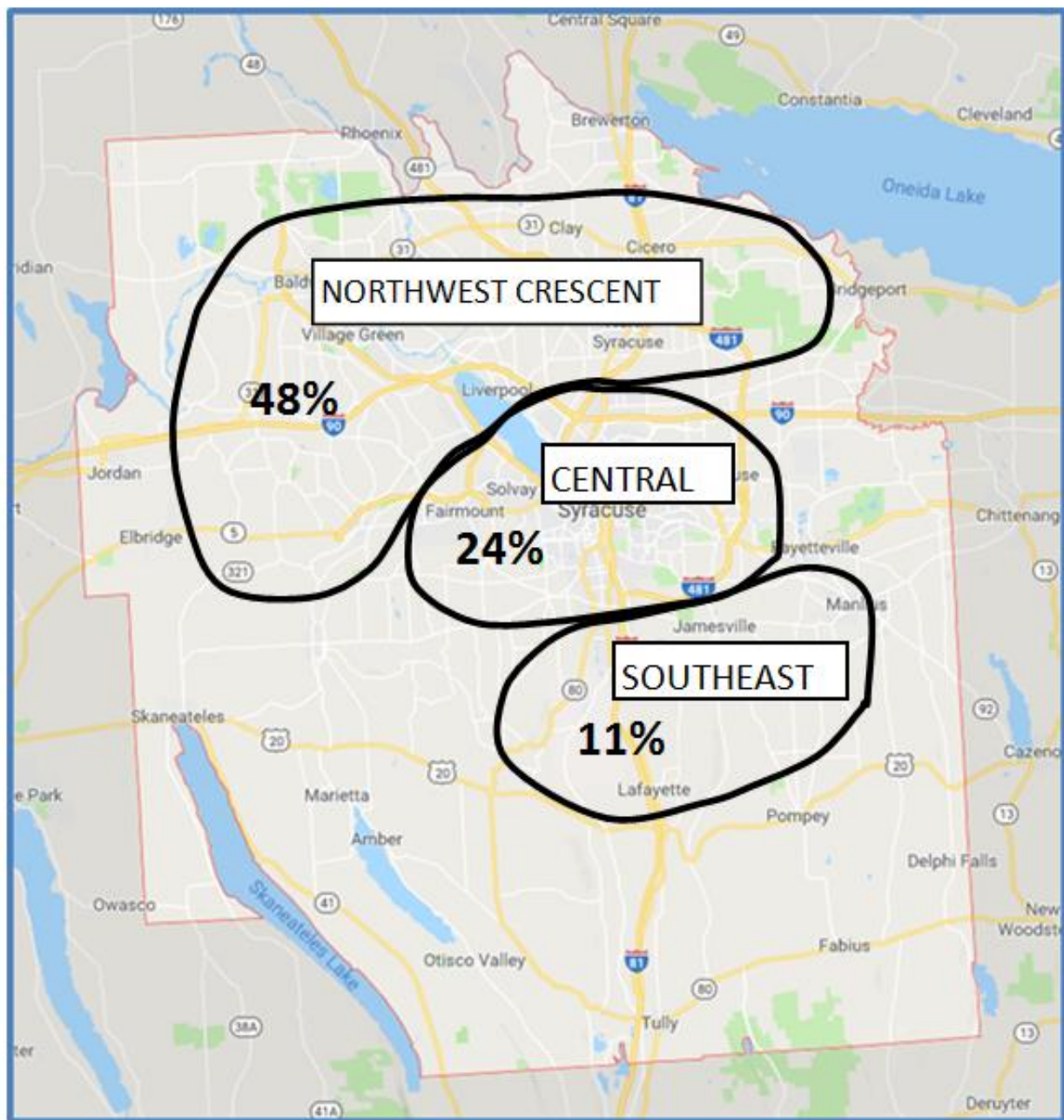
Answered 1,982 Skipped or incomplete answer 137

ANSWER	RESPONSE	
13090	164	8.3%
13088	153	7.7%
13027	144	7.3%
13219	108	5.4%
13215	96	4.8%
13031	91	4.6%
13212	63	3.2%
13039	60	3.0%
13210	58	2.9%
13057	56	2.8%
13066	53	2.7%
13208	53	2.7%
13209	51	2.6%
13104	46	2.3%
13205	44	2.2%
13206	43	2.2%
13204	40	2.0%
13224	40	2.0%
13078	39	2.0%
13041	37	1.9%
13214	36	1.8%
13029	29	1.5%
13203	29	1.5%
13152	24	1.2%
13211	21	1.1%
Less than 1.0% response	404	20.4%
TOTAL	1982	100.0%

CROSSTAB Q7 VERSUS Q3

Q7 - Which Onondaga County Park do you visit most often? (Filtered for Onondaga Lake Park) Q3 - What is your Zip Code?		
ZIP CODE	RESPONSE	
13027	134	12.6%
13031	132	12.4%
13039	91	8.6%
13041	53	5.0%
13078	43	4.0%
13066	43	4.0%
13057	43	4.0%
13088	39	3.7%
13090	33	3.1%
13104	30	2.8%
13202	29	2.7%
13203	26	2.4%
13205	24	2.3%
13204	24	2.3%
13206	23	2.2%
13207	20	1.9%
13208	17	1.6%
13209	16	1.5%
13210	15	1.4%
13214	14	1.3%
13212	14	1.3%
13215	13	1.2%
13224	12	1.1%
13219	12	1.1%
Less Than 1%	164	15.4%
Total	1,064	100.0%

Q7 - Which Onondaga County Park do you visit most often? (Filtered for Onondaga Lake Park) Q3 - What is your Zip Code? By region		
ZIP CODE	RESPONSE	
Northwest	512	48.1%
Central	259	24.4%
Southeast	116	10.9%
Other	177	16.6%
Total	1,064	100.0%

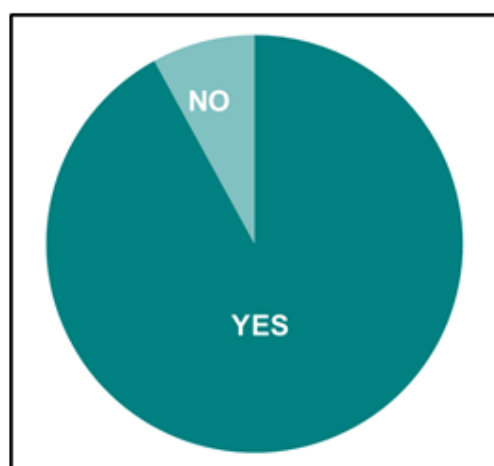


**DISTRIBUTION OF ONONDAGA LAKE PARK VISITORS
BY SUBMARKET**

Q4— Have you visited an Onondaga County Park in the past 12 Months?

Asked of universe

Answered 2,063 Skipped 56



ANSWER	RESPONSES	
Yes	1,896	91.9%
No	167	8.1%
TOTAL	2,063	100.0%

Q4 - Have you visited an Onondaga County Park in the past 12 months? Q28 - What is your age?			
	YES	NO	TOTAL
Less than 25	82.9%	17.1%	10.7%
	170	35	205
Less than 25	96.4%	3.7%	18.6%
	343	13	356
35-44	96.0%	4.0%	18.3%
	336	14	350
45-54	96.2%	3.9%	16.3%
	300	12	312
55-64	89.7%	10.3%	18.7%
	321	37	358
65-74	88.2%	11.8%	12.8%
	216	29	245
75 and over	75.9%	24.1%	2.8%
	41	13	54
Prefer not to say	86.7%	13.3%	1.6%
	26	4	30
Total Respondents	91.8%	8.2%	100.0%
	1,753	157	1,910

Q4 - Have you visited an Onondaga County Park in the past 12 months? Q28 - What is your gender?			
	YES	NO	TOTAL
Male	91.1%	8.9%	49.2%
	856	84	940
Female	93.1%	6.9%	45.8%
	814	60	874
Prefer not to answer	86.3%	13.7%	5.0%
	82	13	95
Total Respondents	91.8%	8.2%	100.0%
	1,752	157	1,909

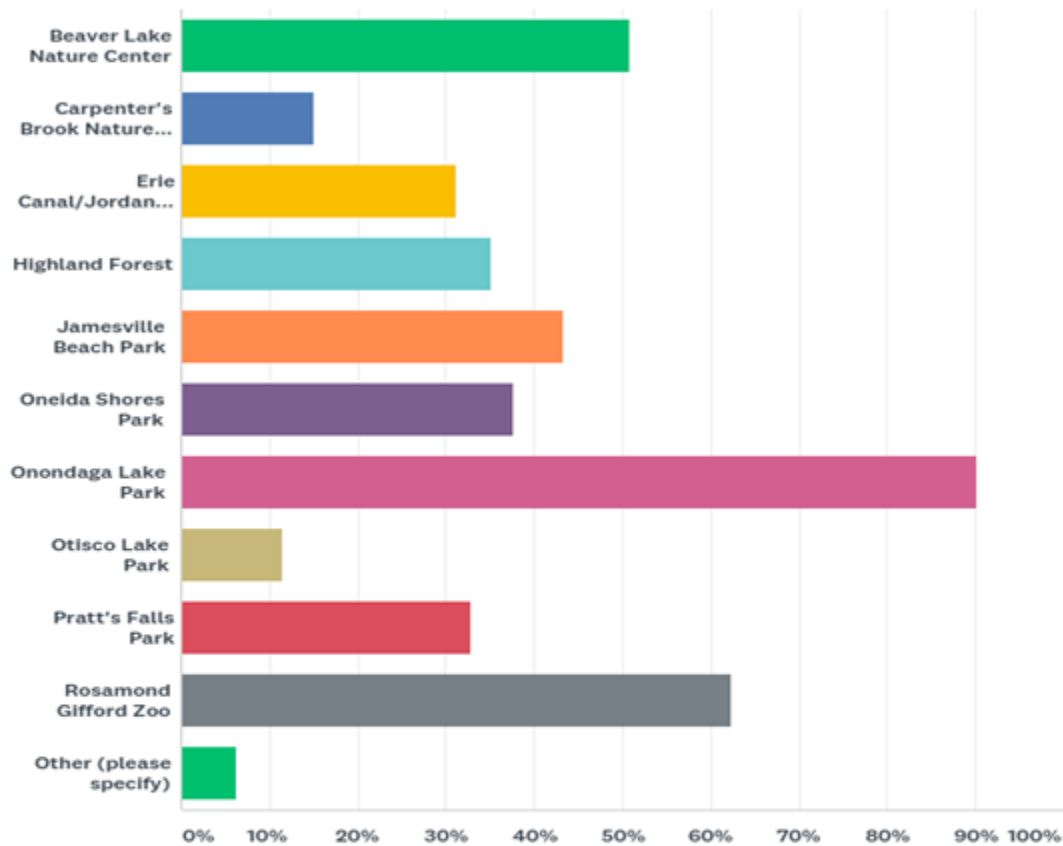
Q4 - Have you visited an Onondaga County Park in the past 12 months? Q24 - How many are there in your household?			
	YES	NO	TOTAL
One	89.1%	10.9%	11.1%
	188	23	211
Two	92.0%	8.0%	36.2%
	635	55	690
Three	91.8%	8.2%	19.8%
	347	31	378
Four	93.3%	6.8%	20.2%
	359	26	385
Five	91.5%	8.5%	9.3%
	162	15	177
Six or more	89.6%	10.5%	3.5%
	60	7	67
Total Respondents	91.8%	8.2%	100.0%
	1,751	157	1,908

Q4 - Have you visited an Onondaga County Park in the past 12 months? Q30 - What is your income?			
	YES	NO	TOTAL
Under \$25,000	91.1%	8.9%	2.9%
	51	5	56
Between \$25,000 and \$34,999	92.9%	7.1%	3.7%
	65	5	70
Between \$35,000 and \$49,999	91.1%	8.9%	8.2%
	143	14	157
Between \$50,000 and \$74,999	92.6%	7.4%	14.8%
	262	21	283
Between \$75,000 and \$99,999	91.7%	8.3%	15.8%
	276	25	301
Between \$100,000 and \$150,000 or more	94.8%	5.2%	20.0%
	362	20	382
\$150,000 or more	95.6%	4.5%	12.9%
	236	11	247
Prefer not to say	86.5%	13.5%	21.7%
	358	56	414
Total Respondents	91.8%	8.2%	100.0%
	1,753	157	1,910

Q5—Which parks have you visited? (Check all that apply)

Asked of those responding “Yes” to Question 4 (1,896)

Answered 1,841 Skipped 55



ANSWER	RESPONSES	
Beaver Lake Nature Center	937	50.90%
Carpenter's Brook Nature Center	278	15.10%
Erie Canal/Jordan Level Trail	575	31.23%
Highland Forest	648	35.20%
Jamesville Beach Park	797	43.29%
Oneida Shores Park	692	37.59%
Onondaga Lake Park	1,661	90.22%
Otisco Lake Park	210	11.41%
Pratt's Falls Park	604	32.81%
Rosamond Gifford Zoo	1,148	62.36%
Other	115	6.25%
Total Respondents: 1,841		

Q5 - Which parks have you visited (Check all that apply)

Q28 - What is your age?

	BEAVER LAKE NATURE CENTER	CARPENTER'S BROOK NATURE CENTER	ERIE CANAL JORDAN LEVEL TRAIL	HIGHLAND FOREST	JAMESVILLE BEACH PARK	ONEIDA SHORES PARK	ONONDAGA LAKE PARK	OTISCO LAKE PARK	PRATT'S FALLS PARK	ROSAMOND GIFFORD ZOO	OTHER (PLEASE SPECIFY)	TOTAL
Less than 25	45.3%	10.6%	44.7%	27.1%	50.6%	35.9%	92.9%	18.8%	37.1%	67.1%	3.5%	42.1%
	77	18	76	46	86	61	158	32	63	114	6	737
25-34	51.2%	8.5%	39.2%	36.0%	50.0%	44.7%	91.2%	11.7%	36.6%	70.8%	7.3%	87.4%
	175	29	134	123	171	153	312	40	125	242	25	1,529
35-44	64.6%	13.7%	30.4%	38.7%	48.5%	40.5%	89.0%	10.7%	38.1%	75.9%	8.3%	88.0%
	217	46	102	130	163	136	299	36	128	255	28	1,540
45-54	53.2%	20.1%	28.1%	38.5%	43.1%	36.5%	92.6%	7.7%	31.8%	58.5%	6.0%	71.1%
	159	60	84	115	129	109	277	23	95	175	18	1,244
55-64	42.8%	17.5%	23.4%	35.3%	32.8%	34.4%	87.8%	11.9%	26.6%	46.9%	5.6%	66.7%
	137	56	75	113	105	110	281	38	85	150	18	1,168
65-74	47.7%	19.4%	25.0%	34.7%	39.4%	30.6%	89.8%	10.2%	30.1%	55.1%	4.6%	47.7%
	103	42	54	75	85	66	194	22	65	119	10	835
75 and over	46.3%	17.1%	36.6%	26.8%	31.7%	31.7%	85.4%	12.2%	24.4%	46.3%	14.6%	8.7%
	19	7	15	11	13	13	35	5	10	19	6	153
Prefer not to say	57.7%	30.8%	38.5%	38.5%	46.2%	46.2%	96.2%	15.4%	30.8%	61.5%	3.9%	6.9%
	15	8	10	10	12	12	25	4	8	16	1	121
Total Respondents	144.8%	42.7%	88.3%	100.0%	122.6%	105.9%	253.8%	32.1%	92.9%	175.0%	18.0%	280.9%
	902	266	550	623	764	660	1,581	200	579	1,090	112	1,750

Q5 - Which parks have you visited (Check all that apply)

Q28 - What is your gender?

	BEAVER LAKE NATURE CENTER	CARPENTER'S BROOK NATURE CENTER	ERIE CANAL JORDAN LEVEL TRAIL	HIGHLAND FOREST	JAMESVILLE BEACH PARK	ONEIDA SHORES PARK	ONONDAGA LAKE PARK	OTISCO LAKE PARK	PRATT'S FALLS PARK	ROSAMOND GIFFORD ZOO	OTHER (PLEASE SPECIFY)	TOTAL
Male	48.5%	18.3%	29.4%	36.1%	40.4%	38.7%	90.0%	12.9%	30.0%	58.9%	6.0%	200.2%
	415	157	252	309	346	331	770	110	257	504	51	3,502
Female	53.7%	11.7%	32.9%	35.1%	47.3%	37.1%	90.5%	9.5%	36.2%	65.6%	6.4%	197.8%
	436	95	267	285	384	301	735	77	294	533	52	3,459
Prefer not to answer	60.5%	17.3%	39.5%	37.0%	43.2%	34.6%	91.4%	17.3%	37.0%	63.0%	11.1%	20.9%
	49	14	32	30	35	28	74	14	30	51	9	366
Total Respondents	51.5%	15.2%	31.5%	35.7%	43.7%	37.7%	90.3%	11.5%	33.2%	62.2%	6.4%	100.0%
	900	266	551	624	765	660	1,579	201	581	1,088	112	1,749

Q5 - Which parks have you visited (Check all that apply)

Q24 - How many are there in your household?

	BEAVER LAKE NATURE CENTER	CARPENTER'S BROOK NATURE CENTER	ERIE CANAL JORDAN LEVEL TRAIL	HIGHLAND FOREST	JAMESVILLE BEACH PARK	ONEIDA SHORES PARK	ONONDAGA LAKE PARK	OTISCO LAKE PARK	PRATT'S FALLS PARK	ROSAMOND GIFFORD ZOO	OTHER (PLEASE SPECIFY)	TOTAL
One	50.0%	13.3%	33.5%	30.3%	45.2%	32.5%	89.9%	8.0%	31.9%	47.3%	3.7%	41.5%
	94	25	63	57	85	61	169	15	60	89	7	725
Two	45.5%	15.5%	28.0%	35.6%	37.4%	34.9%	89.4%	11.4%	31.3%	54.3%	6.8%	141.3%
	288	98	177	225	237	221	566	72	198	344	43	2,469
Three	54.9%	14.7%	31.5%	37.9%	49.1%	40.5%	89.9%	12.4%	35.3%	64.5%	7.8%	86.8%
	190	51	109	131	170	140	311	43	122	223	27	1,517
Four	58.2%	15.3%	34.0%	39.0%	47.4%	40.1%	90.5%	11.7%	35.1%	73.8%	5.9%	92.6%
	209	55	122	140	170	144	325	42	126	265	21	1,619
Five	53.1%	16.1%	34.6%	30.9%	43.8%	35.2%	92.6%	11.7%	30.3%	76.5%	6.8%	40.0%
	86	26	56	50	71	57	150	19	49	124	11	699
Six or more	56.7%	20.0%	38.3%	33.3%	53.3%	58.3%	93.3%	18.3%	40.0%	73.3%	3.3%	16.8%
	34	12	23	20	32	35	56	11	24	44	2	293
Total Respondents	51.5%	15.3%	31.5%	35.6%	43.8%	37.6%	90.2%	11.6%	33.1%	62.3%	6.4%	100.0%
	901	267	550	623	765	658	1,577	202	579	1,089	111	1,748

Q5 - Which parks have you visited (Check all that apply)

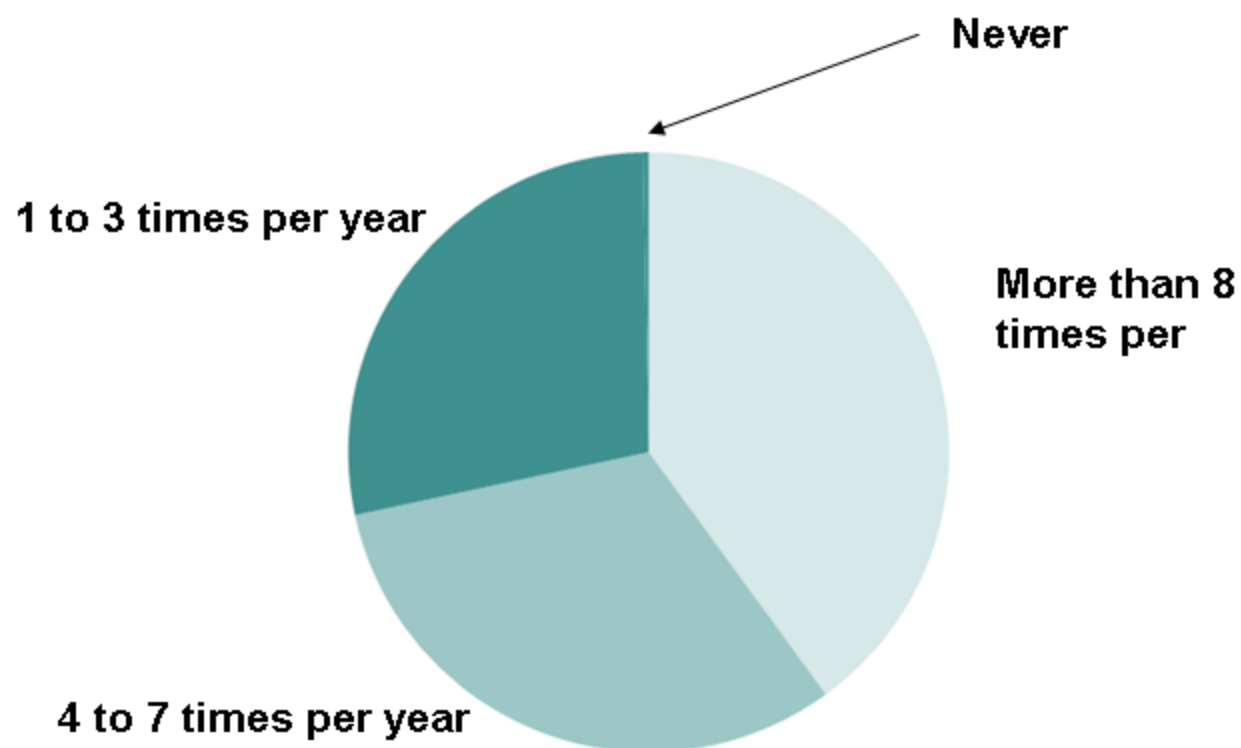
Q30 - What is your income?

	BEAVER LAKE NATURE CENTER	CARPENTER 'S BROOK NATURE CENTER	ERIE CANAL JORDAN LEVEL TRAIL	HIGHLAND FOREST	JAMESVILLE BEACH PARK	ONEIDA SHORES PARK	ONONDAGA LAKE PARK	OTISCO LAKE PARK	PRATT'S FALLS PARK	ROSAMOND GIFFORD ZOO	OTHER (PLEASE SPECIFY)	TOTAL
Under \$25,000	37%	10%	25%	20%	39%	29%	90%	12%	25%	47%	8%	10%
	19	5	13	10	20	15	46	6	13	24	4	175
\$25,000 to \$34,999	65%	12%	35%	35%	54%	40%	94%	15%	34%	65%	8%	17%
	42	8	23	23	35	26	61	10	22	42	5	297
\$35,000 to \$49,999	48%	13%	27%	35%	50%	42%	90%	13%	33%	62%	7%	34%
	68	19	38	49	71	60	128	19	47	88	10	597
\$50,000 to \$74,999	50%	17%	25%	33%	47%	42%	92%	14%	38%	65%	4%	63%
	131	44	65	85	122	110	239	36	98	169	10	1,109
\$75,000 to \$99,999	51%	14%	30%	31%	42%	36%	91%	10%	29%	62%	6%	63%
	141	38	82	86	115	100	250	28	80	172	16	1,108
\$100,000 to \$149,999	56%	16%	36%	42%	46%	35%	92%	11%	34%	64%	6%	90%
	202	57	129	153	165	128	333	39	122	231	21	1,580
\$150,000 or more	52%	14%	34%	40%	43%	38%	89%	12%	37%	65%	8%	58%
	122	33	81	94	102	89	209	28	87	154	20	1,019
Prefer not to say	49%	17%	33%	35%	38%	37%	88%	10%	31%	59%	7%	83%
	175	62	119	124	137	132	313	36	111	210	26	1,445
Total Respondents	51%	15%	31%	36%	44%	38%	90%	12%	33%	62%	6%	100%
	900	266	550	624	767	660	1,579	202	580	1,090	112	1,750

Q6—How often do you visit an Onondaga County Park?

Asked of those responding “Yes” to Question 4 (1,896)

Answered 1,839 Skipped 57



ANSWER	RESPONSES	
More than 8 times per year	735	40.0%
4 to 7 times per year	583	31.7%
1 to 3 times per year	516	28.1%
Never	5	0.3%
TOTAL	1,839	100.0%

Q6 - How often do you visit an Onondaga County Park? Q28 - What is your age?					
	MORE THAN 8 TIMES PER YEAR	4 TO 7 TIMES PER YEAR	1 TO 3 TIMES PER YEAR	NEVER	TOTAL
Less than 25	28.2%	34.1%	37.1%	0.6%	9.7%
	48	58	63	1	170
25-34	49.1%	27.8%	23.1%	0.0%	19.6%
	168	95	79	0	342
35-44	44.6%	35.7%	19.6%	0.0%	19.2%
	150	120	66	0	336
45-54	40.7%	32.7%	26.0%	0.7%	17.2%
	122	98	78	2	300
55-64	37.6%	30.1%	32.0%	0.3%	18.2%
	120	96	102	1	319
65-74	38.0%	27.3%	34.3%	0.5%	12.4%
	82	59	74	1	216
75 and over	40.0%	32.5%	27.5%	0.0%	2.3%
	16	13	11	0	40
Prefer not to say	53.9%	15.4%	30.8%	0.0%	1.5%
	14	4	8	0	26
Total Respondents	41.2%	31.0%	27.5%	0.3%	100.0%
	720	543	481	5	1,749

Q6 - How often do you visit an Onondaga County Park? Q28 - What is your gender?					
	MORE THAN 8 TIMES PER YEAR	4 TO 7 TIMES PER YEAR	1 TO 3 TIMES PER YEAR	NEVER	TOTAL
Male	39.6%	30.4%	29.6%	0.4%	48.8%
	338	260	253	3	854
Female	42.6%	31.6%	25.7%	0.1%	46.5%
	346	257	209	1	813
Prefer not to answer	41.5%	32.9%	24.4%	1.2%	4.7%
	34	27	20	1	82
Total Respondents	41.1%	31.1%	27.6%	0.3%	100.0%
	718	544	482	5	1,749

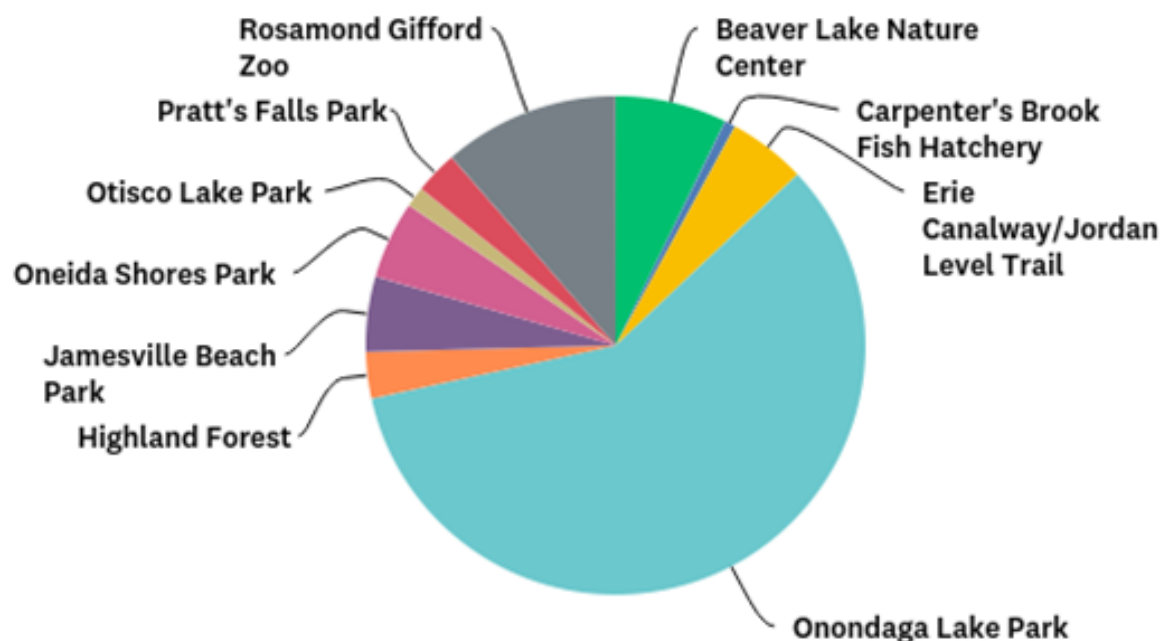
Q6 - How often do you visit an Onondaga County Park?					
Q24 - How many are there in your household?					
	MORE THAN 8 TIMES PER YEAR	4 TO 7 TIMES PER YEAR	1 TO 3 TIMES PER YEAR	NEVER	TOTAL
One	46.3%	28.2%	25.5%	0.0%	10.8%
	87	53	48	0	188
Two	40.6%	28.4%	30.6%	0.5%	36.1%
	256	179	193	3	631
Three	42.1%	33.4%	24.2%	0.3%	19.9%
	146	116	84	1	347
Four	41.8%	32.3%	25.9%	0.0%	20.6%
	150	116	93	0	359
Five	35.8%	34.0%	29.6%	0.6%	9.3%
	58	55	48	1	162
Six or more	33.3%	41.7%	25.0%	0.0%	3.4%
	20	25	15	0	60
Total	41.0%	31.1%	27.5%	0.3%	100.0%
Respondents	717	544	481	5	1,747

Q6 - How often do you visit an Onondaga County Park?					
Q30 - What is your income?					
	MORE THAN 8 TIMES PER YEAR	4 TO 7 TIMES PER YEAR	1 TO 3 TIMES PER YEAR	NEVER	TOTAL
Under \$25,000	49.0%	31.4%	19.6%	0.0%	2.9%
	25	16	10	0	51
\$25,000 to \$34,999	46.2%	27.7%	26.2%	0.0%	3.7%
	30	18	17	0	65
\$35,000 to \$49,999	43.7%	31.0%	25.4%	0.0%	8.1%
	62	44	36	0	142
\$50,000 to \$74,999	38.2%	33.2%	28.6%	0.0%	15.0%
	100	87	75	0	262
\$75,000 to \$99,999	39.9%	33.7%	25.7%	0.7%	15.8%
	110	93	71	2	276
\$100,000 to \$149,999	41.4%	34.4%	24.2%	0.0%	20.6%
	149	124	87	0	360
\$150,000 or more	42.1%	26.4%	31.5%	0.0%	13.44%
	99	62	74	0	235
Prefer not to say	39.9%	28.2%	31.0%	0.8%	20.5%
	143	101	111	3	358
Total	41.1%	31.2%	27.5%	0.3%	100.0%
Respondents	718	545	481	5	1,749

Q7—Which Onondaga County Park do you visit most often?

Asked of those responding "Yes" to Question 4 (1,896)

Answered 1,826 Skipped 70



ANSWER	RESPONSES	
Beaver Lake Nature Center	132	7.2%
Carpenter's Brook Fish Hatchery	13	0.7%
Erie Canalway/Jordan Level Trail	92	5.0%
Onondaga Lake Park	1,070	58.6%
Highland Forest	55	3.0%
Jamesville Beach Park	89	4.9%
Oneida Shores Park	92	5.0%
Otisco Lake Park	24	1.3%
Pratt's Falls Park	51	2.8%
Rosamond Gifford Zoo	208	11.4%
TOTAL	1,826	100.0%

Q7 - Which Onondaga County Park do you visit most often?

Q28 - What is your age?

	BEAVER LAKE NATURE CENTER	CARPENTER'S BROOK FISH HATCHERY	ERIE CANALWAY/JORDAN LEVEL TRAIL	ONONDAGA LAKE PARK	HIGHLAND FOREST	JAMESVILLE BEACH PARK	ONEIDA SHORES PARK	OTISCO LAKE PARK	PRATT'S FALLS PARK	ROSAMOND GIFFORD ZOO	TOTAL
Less than 25	5.3%	1.2%	7.1%	57.7%	2.4%	5.9%	4.7%	4.1%	5.9%	5.9%	9.8%
	9	2	12	98	4	10	8	7	10	10	170
25-34	6.4%	0.0%	4.4%	59.9%	2.3%	4.1%	5.3%	1.2%	2.1%	14.3%	19.7%
	22	0	15	205	8	14	18	4	7	49	342
35-44	9.9%	1.2%	6.3%	50.3%	4.8%	4.5%	3.3%	0.6%	2.4%	16.8%	19.2%
	33	4	21	168	16	15	11	2	8	56	334
45-54	6.0%	0.7%	5.0%	60.5%	3.3%	5.0%	7.4%	1.3%	3.0%	7.7%	17.2%
	18	2	15	181	10	15	22	4	9	23	299
55-64	8.6%	0.0%	5.1%	59.7%	2.9%	4.8%	5.4%	1.6%	3.5%	8.6%	18.1%
	27	0	16	188	9	15	17	5	11	27	315
65-74	6.1%	1.4%	4.2%	64.3%	2.8%	6.1%	3.8%	0.5%	0.9%	9.9%	12.3%
	13	3	9	137	6	13	8	1	2	21	213
75 and over	10.3%	0.0%	2.6%	59.0%	0.0%	5.1%	7.7%	0.0%	2.6%	12.8%	2.2%
	4	0	1	23	0	2	3	0	1	5	39
Prefer not to say	3.9%	3.9%	3.9%	69.2%	0.0%	3.9%	7.7%	0.0%	0.0%	7.7%	1.5%
	1	1	1	18	0	1	2	0	0	2	26
Total Respondents	7.3%	0.7%	5.2%	58.6%	3.0%	4.9%	5.1%	1.3%	2.8%	11.1%	100.0%
	127	12	90	1,018	53	85	89	23	48	193	1,738

Q7 - Which Onondaga County Park do you visit most often?

Q28 - What is your gender?

	BEAVER LAKE NATURE CENTER	CARPENTER'S BROOK FISH HATCHERY	ERIE CANALWAY/JORDAN LEVEL TRAIL	ONONDAGA LAKE PARK	HIGHLAND FOREST	JAMESVILLE BEACH PARK	ONEIDA SHORES PARK	OTISCO LAKE PARK	PRATT'S FALLS PARK	ROSAMOND GIFFORD ZOO	TOTAL
Male	6.0%	0.5%	4.0%	60.0%	4.0%	4.5%	5.8%	1.7%	3.1%	10.6%	48.9%
	51	4	34	509	34	38	49	14	26	90	849
Female	8.4%	0.9%	6.3%	57.5%	2.1%	5.2%	4.5%	1.0%	2.5%	11.7%	46.5%
	68	7	51	464	17	42	36	8	20	94	807
Prefer not to answer	9.9%	1.2%	6.2%	53.1%	3.7%	7.4%	4.9%	1.2%	2.5%	9.9%	4.7%
	8	1	5	43	3	6	4	1	2	8	81
Total Respondents	7.3%	0.7%	5.2%	58.5%	3.1%	5.0%	5.1%	1.3%	2.8%	11.1%	100.0%
	127	12	90	1,016	54	86	89	23	48	192	1,737

Q7 - Which Onondaga County Park do you visit most often?

Q24 - How many are there in your household?

	BEAVER LAKE NATURE CENTER	CARPENTER'S BROOK FISH HATCHERY	ERIE CANALWAY/JORD AN LEVEL TRAIL	ONONDAGA LAKE PARK	HIGHLAND FOREST	JAMESVILLE BEACH PARK	ONEIDA SHORES PARK	OTISCO LAKE PARK	PRATT'S FALLS PARK	ROSAMOND GIFFORD ZOO	TOTAL
One	10.2%	0.5%	3.7%	65.8%	2.1%	3.7%	2.1%	1.1%	3.2%	7.5%	10.8%
	19	1	7	123	4	7	4	2	6	14	187
Two	6.6%	0.3%	5.8%	62.2%	4.2%	4.8%	5.9%	1.0%	2.1%	7.2%	36.0%
	41	2	36	389	26	30	37	6	13	45	625
Three	7.5%	0.6%	6.4%	58.3%	0.9%	4.9%	5.5%	0.9%	3.5%	11.6%	19.9%
	26	2	22	201	3	17	19	3	12	40	345
Four	6.2%	0.6%	3.6%	54.1%	3.4%	5.6%	4.2%	1.1%	3.4%	17.9%	20.6%
	22	2	13	193	12	20	15	4	12	64	357
Five	7.4%	1.2%	5.6%	51.2%	3.7%	3.7%	4.9%	4.9%	3.1%	14.2%	9.3%
	12	2	9	83	6	6	8	8	5	23	162
Six or more	11.7%	5.0%	5.0%	45.0%	5.0%	8.3%	8.3%	0.0%	0.0%	11.7%	3.5%
	7	3	3	27	3	5	5	0	0	7	60
Total	7.3%	0.7%	5.2%	58.5%	3.1%	4.9%	5.1%	1.3%	2.8%	11.1%	100.0%
Respondents	127	12	90	1,016	54	85	88	23	48	193	1,736

Q7 - Which Onondaga County Park do you visit most often?

Q30 - What is your income?

	BEAVER LAKE NATURE CENTER	CARPENTER'S BROOK FISH HATCHERY	ERIE CANALWAY/JORD AN LEVEL TRAIL	ONONDAGA LAKE PARK	HIGHLAND FOREST	JAMESVILLE BEACH PARK	ONEIDA SHORES PARK	OTISCO LAKE PARK	PRATT'S FALLS PARK	ROSAMOND GIFFORD ZOO	TOTAL
Under \$25,000	7.8%	0.0%	2.0%	54.9%	0.0%	5.9%	11.8%	2.0%	3.9%	11.8%	2.9%
	4	0	1	28	0	3	6	1	2	6	51
\$25,000 to \$34,999	11.1%	0.0%	4.8%	54.0%	4.8%	1.6%	6.4%	4.8%	1.6%	11.1%	3.6%
	7	0	3	34	3	1	4	3	1	7	63
\$35,000 to \$49,999	6.3%	0.7%	3.5%	59.2%	4.9%	6.3%	4.9%	1.4%	1.4%	11.3%	8.2%
	9	1	5	84	7	9	7	2	2	16	142
\$50,000 to \$74,999	8.5%	0.0%	2.3%	62.2%	3.1%	4.6%	3.9%	1.2%	2.3%	12.0%	14.9%
	22	0	6	161	8	12	10	3	6	31	259
\$75,000 to \$99,999	6.9%	1.1%	4.4%	58.6%	3.6%	4.0%	4.4%	1.5%	2.6%	13.1%	15.8%
	19	3	12	161	10	11	12	4	7	36	275
\$100,000 to \$149,999	7.3%	0.3%	6.2%	59.8%	2.0%	3.9%	4.8%	1.1%	3.9%	10.9%	20.6%
	26	1	22	214	7	14	17	4	14	39	358
\$150,000 or more	6.0%	0.9%	8.5%	54.9%	4.3%	4.7%	5.1%	2.1%	3.4%	10.2%	13.5%
	14	2	20	129	10	11	12	5	8	24	235
Prefer not to say	7.0%	1.4%	5.9%	58.3%	2.3%	7.0%	5.9%	0.3%	2.3%	9.6%	20.4%
	25	5	21	207	8	25	21	1	8	34	355
Total	7.2%	0.7%	5.2%	58.6%	3.0%	4.9%	5.1%	1.3%	2.8%	11.1%	100.0%
Respondents	126	12	90	1,018	53	86	89	23	48	193	1,738

Q8—Why did you visit that park most often?

Asked of those responding “Yes” to Question 4 (1,896)

Answered 1,592 Skipped 302 or Invalid

Trails	636	39.9%
Proximity/Location	551	34.6%
Peaceful/Scenery	125	7.9%
Dog Friendly	92	5.8%
Playground	82	5.2%
Boating/Marina	53	3.3%
Programs/Events	47	3.0%
Beach	46	2.9%
Water Front	41	2.6%
Fishing/Hunting	38	2.4%
Lots to Do	34	2.1%
Well Maintained	33	2.1%
Wildlife/Birding/Nature	26	1.6%
Exercise	24	1.5%
Lights on the Lake	23	1.4%
Picnic	23	1.4%
Favorite Park	21	1.3%
Family Time	16	1.0%
Other	<u>123</u>	<u>7.7%</u>
Total Respondents	1,592	127.8%
Total Responses	2,034	100.00%

Q8—Why did you visit that park most often?

Asked of those responding “Yes” to Question 4 (1,896) and
“Onondaga Lake Park” to Question 7

ONONDAGA LAKE PARK KEY WORD DISTRIBUTION

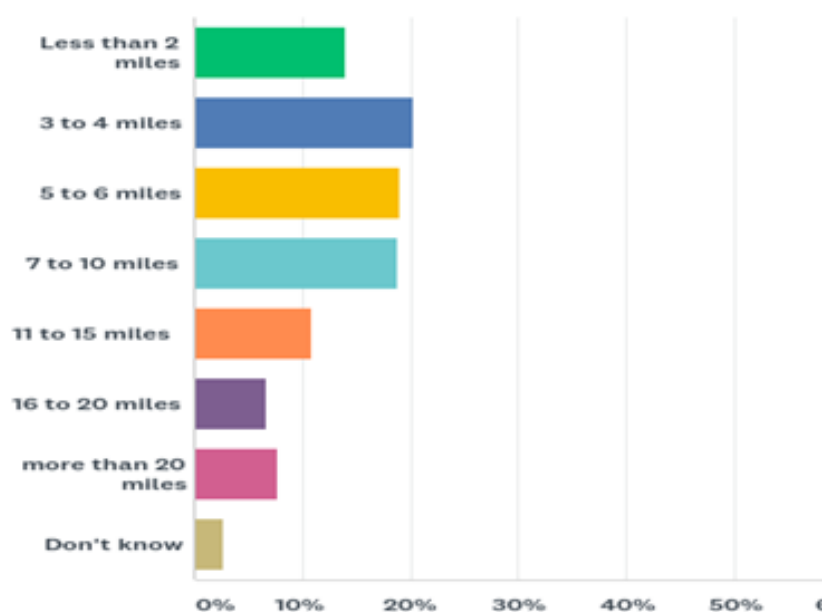
Answered 1,592 Skipped 302 or Invalid

TRAILS		OTHER ACTIVITIES		FAMILY	
Walk	362	Dog Friendly	70	Family	27
Bike/Cycling	108	Playground	64	Kids	24
Run	91	Exercist	23	Children	11
Trails	87	Picnic	23	BOATING	
RollerBlade	21	Lights on the Lake	21	Boat	20
Parkway	18	Sit	21	Kayak	12
Paths	17	Fishing	18	Marina	7
Jog	6	Activities	18	NATURAL BEAUTY	
PROXIMETY/LOCATION		Recreation	17	Lake/Water	101
Close	221	NATURAL BEAUTY		Beautiful	24
Location	47	Lake/Water	101	Scenery/Scenic	17
Proximity	37	Beautiful	24	Views	14
Convenient	36	Scenery/Scenic	17	Peaceful	4
Neay	30	Views	14	Atmosphere	2
Liverpool	18	Peaceful	4	OTHER	
FAMILY		Atmosphere	2	Like	41
Family	27	BOATING		Best	10
Kids	24	Boat	20	Parking	8
Children	11	Kayak	12	Free	4
		Marina	7		

Q9—Approximately how far do you travel to visit that park?

Asked of those responding “Yes” to Question 4 (1,896)

Answered 1,831 Skipped 65



ANSWER	RESPONSES	
Less than 2 miles	255	13.9%
3 to 4 miles	370	20.2%
5 to 6 miles	348	19.0%
7 to 10 miles	346	18.9%
11 to 15 miles	198	10.8%
16 to 20 miles	123	6.7%
more than 20 miles	142	7.8%
Don't know	49	2.7%
TOTAL	1,831	100.0%

Q9 - Approximately how far to you travel to visit that park?

Q28 - What is your Age?

	LESS THAN 2 MILES	3 TO 4 MILES	5 TO 6 MILES	7 TO 10 MILES	11 TO 15 MILES	16 TO 20 MILES	MORE THAN 20 MILES	DON'T KNOW	TOTAL
Less than 25	12.9%	19.4%	21.8%	17.1%	9.4%	7.1%	7.1%	5.3%	9.8%
	22	33	37	29	16	12	12	9	170
25-34	12.8%	19.8%	16.9%	21.0%	9.9%	6.4%	9.6%	3.5%	19.7%
	44	68	58	72	34	22	33	12	343
35-44	15.9%	20.4%	14.4%	15.9%	13.2%	8.4%	9.0%	3.0%	19.2%
	53	68	48	53	44	28	30	10	334
45-54	12.4%	21.7%	16.7%	20.4%	11.7%	5.4%	9.7%	2.0%	17.2%
	37	65	50	61	35	16	29	6	299
55-64	14.9%	18.7%	25.3%	18.0%	10.4%	6.3%	5.4%	1.0%	18.2%
	47	59	80	57	33	20	17	3	316
65-74	17.9%	19.8%	21.7%	21.2%	9.0%	6.1%	3.3%	0.9%	12.2%
	38	42	46	45	19	13	7	2	212
75 and over	14.6%	26.8%	24.4%	17.1%	4.9%	0.0%	7.3%	4.9%	2.4%
	6	11	10	7	2	0	3	2	41
Prefer not to say	11.5%	30.8%	7.7%	15.4%	11.5%	11.5%	7.7%	3.9%	1.5%
	3	8	2	4	3	3	2	1	26
Total	14.4%	20.3%	19.0%	18.8%	10.7%	6.5%	7.6%	2.6%	100.0%
Respondents	250	354	331	328	186	114	133	45	1,741

Q9 - Approximately how far to you travel to visit that park?

Q28 - What is your gender?

	LESS THAN 2 MILES	3 TO 4 MILES	5 TO 6 MILES	7 TO 10 MILES	11 TO 15 MILES	16 TO 20 MILES	MORE THAN 20 MILES	DON'T KNOW	TOTAL
Male	15.5%	22.6%	18.7%	18.6%	10.2%	5.1%	7.5%	1.8%	48.9%
	132	192	159	158	87	43	64	15	850
Female	13.4%	18.6%	19.8%	19.2%	10.9%	7.4%	7.7%	3.1%	46.4%
	108	150	160	155	88	60	62	25	808
Prefer not to answer	12.2%	17.1%	12.2%	17.1%	13.4%	14.6%	7.3%	6.1%	4.7%
	10	14	10	14	11	12	6	5	82
Total	14.4%	20.5%	18.9%	18.8%	10.7%	6.6%	7.6%	2.6%	100.0%
Respondents	250	356	329	327	186	115	132	45	1,740

Q9 - Approximately how far to you travel to visit that park?

Q24 - How many are there in your household?

	LESS THAN 2 MILES	3 TO 4 MILES	5 TO 6 MILES	7 TO 10 MILES	11 TO 15 MILES	16 TO 20 MILES	MORE THAN 20 MILES	DON'T KNOW	TOTAL
One	21.6%	19.5%	19.5%	19.5%	6.0%	5.4%	5.4%	3.2%	10.6%
	40	36	36	36	11	10	10	6	185
Two	14.0%	21.1%	20.9%	17.8%	10.1%	6.2%	7.9%	2.1%	36.3%
	88	133	132	112	64	39	50	13	631
Three	15.4%	22.3%	14.8%	21.5%	13.0%	5.5%	4.1%	3.5%	19.8%
	53	77	51	74	45	19	14	12	345
Four	12.0%	19.6%	19.9%	18.2%	12.0%	7.0%	9.5%	1.7%	20.5%
	43	70	71	65	43	25	34	6	357
Five	9.3%	18.0%	18.6%	18.6%	9.9%	8.1%	12.4%	5.0%	9.3%
	15	29	30	30	16	13	20	8	161
Six or more	18.3%	13.3%	16.7%	15.0%	13.3%	16.7%	6.7%	0.0%	3.5%
	11	8	10	9	8	10	4	0	60
Total	14.4%	20.3%	19.0%	18.7%	10.8%	6.7%	7.6%	2.6%	100.0%
Respondents	250	353	330	326	187	116	132	45	1,739

Q9 - Approximately how far to you travel to visit that park?

Q30 - What is your income?

	LESS THAN 2 MILES	3 TO 4 MILES	5 TO 6 MILES	7 TO 10 MILES	11 TO 15 MILES	16 TO 20 MILES	MORE THAN 20 MILES	DON'T KNOW	TOTAL
Under \$25,000	9.8%	25.5%	15.7%	19.6%	7.8%	13.7%	7.8%	0.0%	2.9%
	5	13	8	10	4	7	4	0	51
\$25,000 to \$34,999	18.5%	16.9%	16.9%	12.3%	9.2%	6.2%	16.9%	3.1%	3.7%
	12	11	11	8	6	4	11	2	65
\$35,000 to \$49,999	19.3%	22.1%	17.9%	20.0%	6.4%	5.0%	7.1%	2.1%	8.0%
	27	31	25	28	9	7	10	3	140
\$50,000 to \$74,999	12.7%	23.6%	15.4%	22.8%	9.7%	7.3%	6.2%	2.3%	14.9%
	33	61	40	59	25	19	16	6	259
\$75,000 to \$99,999	15.3%	18.3%	19.3%	18.3%	13.9%	6.2%	7.3%	1.5%	15.7%
	42	50	53	50	38	17	20	4	274
\$100,000 to \$149,999	13.0%	21.3%	19.4%	18.6%	11.6%	6.1%	8.3%	1.7%	20.7%
	47	77	70	67	42	22	30	6	361
\$150,000 or more	16.2%	18.7%	21.3%	15.3%	12.3%	4.7%	9.8%	1.7%	13.5%
	38	44	50	36	29	11	23	4	235
Prefer not to say	12.9%	19.1%	20.8%	19.9%	9.3%	7.6%	4.8%	5.6%	20.5%
	46	68	74	71	33	27	17	20	356
Total	14.4%	20.4%	19.0%	18.9%	10.7%	6.5%	7.5%	2.6%	100.0%
Respondents	250	355	331	329	186	114	131	45	1,741

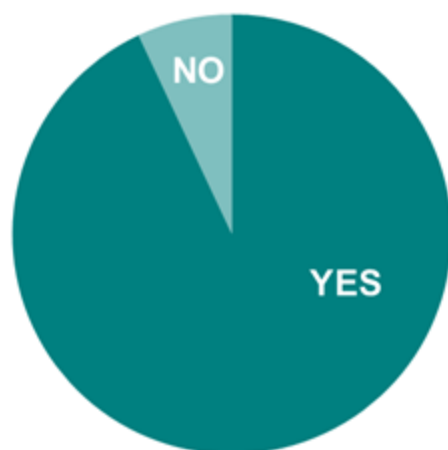
CROSSTAB Q7 VERSUS Q9

Q7 - Which Onondaga County Park do you visit most often"									
Q9 - Approximately how far do you travel to that park"									
Q7 - Which Onondaga County Park do you visit most often"	Q9 - How far do you travel to visit that park?								MEDIAN
	LESS THAN 2 MILES	3 TO 4 MILES	5 TO 6 MILES	7 TO 10 MILES	11 TO 15 MILES	16 TO 20 MILES	MORE THAN 20 MILES	DON'T KNOW	
Beaver Lake Nature Center	6.8%	8.3%	16.7%	22.0%	15.2%	15.2%	10.6%	5.3%	9.8
	9	11	22	29	20	20	14	7	
Carpenter's Brook Fish Hatchery	0.0%	7.7%	7.7%	46.2%	15.4%	7.7%	7.7%	7.7%	9.7
	0	1	1	6	2	1	1	1	
Erie Canalway/Jordan	20.7%	31.5%	13.0%	15.2%	6.5%	4.4%	3.3%	5.4%	4.7
	19	29	12	14	6	4	3	5	
Onondaga Lake Park	16.8%	23.9%	22.4%	18.3%	8.0%	4.1%	4.8%	1.7%	5.8
	179	255	239	195	85	44	51	18	
Highland Forest	0.0%	5.7%	3.8%	17.0%	13.2%	35.9%	24.5%	0.0%	17.4
	0	3	2	9	7	19	13	0	
Jamesville Beach Park	5.6%	18.0%	20.2%	24.7%	12.4%	9.0%	7.9%	2.3%	7.8
	5	16	18	22	11	8	7	2	
Oneida Shores Park	9.8%	15.2%	10.9%	17.4%	18.5%	9.8%	15.2%	3.3%	9.9
	9	14	10	16	17	9	14	3	
Otisco Lake Park	8.3%	8.3%	8.3%	16.7%	8.3%	16.7%	25.0%	8.3%	13.5
	2	2	2	4	2	4	6	2	
Pratt's Falls Park	10.0%	12.0%	16.0%	22.0%	16.0%	4.0%	14.0%	6.0%	8.6
	5	6	8	11	8	2	7	3	
Rosamond Gifford Zoo	12.3%	14.7%	15.7%	18.1%	19.1%	5.4%	12.3%	2.5%	8.4
	25	30	32	37	39	11	25	5	
Total Respondents	13.9%	20.2%	19.1%	18.9%	10.9%	6.7%	7.8%	2.5%	6.5
	253	367	346	343	197	122	141	46	

Q10—Have you visited Onondaga Lake Park in the past 12 Months?

Asked of those responding “Yes” to Question 4 (1,896)

Answered 1,825 Skipped 71



ANSWER	RESPONSES	
Yes	1,695	92.9%
No	130	7.1%
TOTAL	1,825	100.0%

Q10 - Have you visited Onondaga Lake Park in the past 12 months? Q28 - What is your age?			
	YES	NO	TOTAL
Less than 25	91.1%	8.9%	9.7%
	154	15	169
25-34	93.0%	7.0%	19.8%
	319	24	343
35-44	94.3%	5.7%	19.2%
	315	19	334
45-54	95.3%	4.7%	17.2%
	284	14	298
55-64	90.5%	9.5%	18.2%
	286	30	316
65-74	92.0%	8.0%	12.3%
	196	17	213
75 and over	89.5%	10.5%	2.2%
	34	4	38
Prefer not to say	92.3%	7.7%	1.5%
	24	2	26
Total Respondents	92.8%	7.2%	100.0%
	1,612	125	1,737

Q10 - Have you visited Onondaga Lake Park in the past 12 months? Q28 - What is your gender?			
	YES	NO	TOTAL
Male	92.8%	7.2%	48.6%
	782	61	843
Female	93.2%	6.8%	46.7%
	756	55	811
Prefer not to answer	87.8%	12.2%	4.7%
	72	10	82
Total Respondents	92.7%	7.3%	100.0%
	1,610	126	1,736

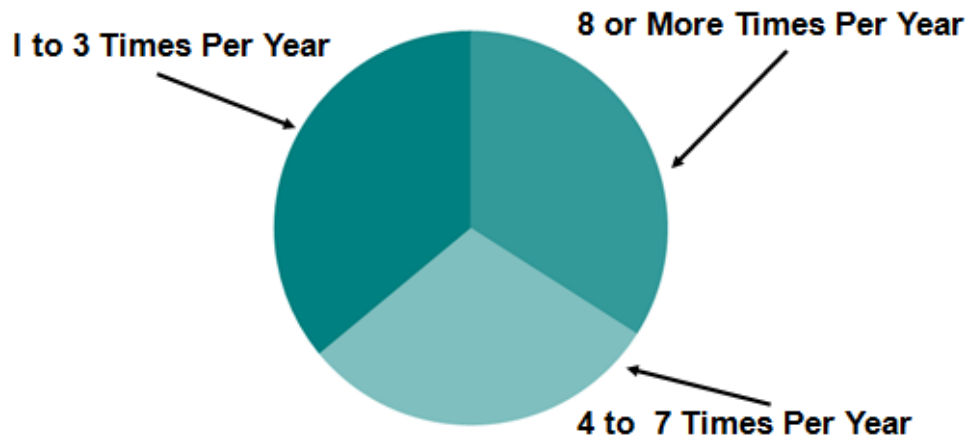
Q10 - Have you visited an Onondaga County Park in the past 12 months? Q30 - What is your income?			
	YES	NO	TOTAL
Under \$25,000	92.2%	7.8%	2.9%
	47	4	51
\$25,000 to \$34,999	95.4%	4.6%	3.7%
	62	3	65
\$35,000 to \$49,999	92.2%	7.8%	8.1%
	130	11	141
\$50,000 to \$74,999	93.1%	6.9%	15.0%
	242	18	260
\$75,000 to \$99,999	92.7%	7.3%	15.8%
	254	20	274
\$100,000 to \$149,999	94.4%	5.6%	20.7%
	340	20	360
\$150,000 or more	92.7%	7.3%	13.4%
	216	17	233
Prefer not to say	90.4%	9.6%	20.3%
	319	34	353
Total Respondents	92.7%	7.3%	100.0%
	1,610	127	1,737

Q10 - Have you visited an Onondaga County Park in the past 12 months? Q24 - How many are there in your household?			
	YES	NO	TOTAL
One	92.0%	8.0%	10.8%
	172	15	187
Two	91.9%	8.1%	36.2%
	577	51	628
Three	94.2%	5.9%	19.7%
	322	20	342
Four	93.6%	6.4%	20.6%
	334	23	357
Five	91.3%	8.7%	9.3%
	147	14	161
Six or more	93.3%	6.7%	3.5%
	56	4	60
Total Respondents	92.7%	7.3%	100.0%
	1,608	127	1,735

Q11—How often do you visit Onondaga Lake park?

Asked of those responding "Yes" to Question 10 (1,695)

Answered 1,686 Skipped 9



ANSWER	RESPONSES	
8 or more times per year	572	33.9%
4 to 7 times per year	498	29.5%
1 to 3 times per year	616	36.5%
TOTAL	1,686	100.0%

Q11 - How often do you visit Onondaga Lake Park?					
Q23 - What is your age?					
	8 OR MORE TIMES PER YEAR	4 TO 7 TIMES PER YEAR	1 TO 3 TIMES PER YEAR	4 TIMES PER YEAR	TOTAL
Less than 25	23.7%	29.5%	46.8%	0.0%	9.5%
	37	46	73	0	156
25-34	38.1%	28.1%	33.8%	0.0%	19.5%
	122	90	108	0	320
35-44	32.7%	34.0%	33.3%	0.0%	19.3%
	104	108	106	0	318
45-54	34.7%	30.2%	35.1%	0.0%	17.5%
	100	87	101	0	288
55-64	35.7%	26.2%	38.1%	0.0%	17.9%
	105	77	112	0	294
65-74	36.1%	28.8%	35.1%	0.0%	12.5%
	74	59	72	0	205
75 and over	30.8%	30.8%	38.5%	0.0%	2.4%
	12	12	15	0	39
Prefer not to say	50.0%	25.0%	25.0%	0.0%	1.5%
	12	6	6	0	24
Total Respondents	34.4%	29.5%	36.1%	0.0%	100.0%
	566	485	593	0	1,644

Q11 - How often do you visit Onondaga Lake Park?					
Q28 - What is your gender?					
	8 OR MORE TIMES PER YEAR	4 TO 7 TIMES PER YEAR	1 TO 3 TIMES PER YEAR	4 TIMES PER YEAR	TOTAL
Male	34.0%	29.0%	37.0%	0.0%	49.1%
	274	234	298	0	806
Female	34.2%	30.6%	35.3%	0.0%	46.7%
	262	234	270	0	766
Prefer not to answer	40.0%	24.3%	35.7%	0.0%	4.3%
	28	17	25	0	70
Total Respondents	34.3%	29.5%	36.1%	0.0%	100.0%
	564	485	593	0	1,642

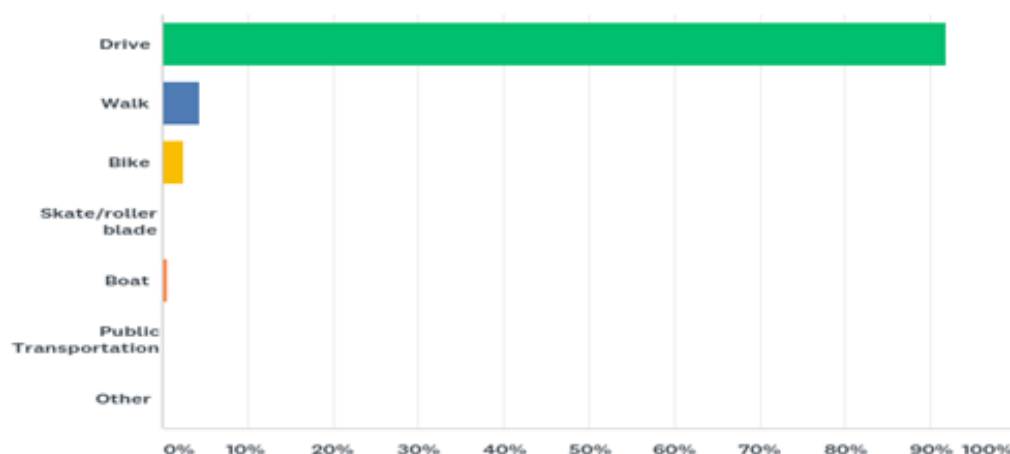
Q11 - How often do you visit Onondaga Lake Park? Q24 - How many are there in your household?					
	8 OR MORE TI MES PER YEAR	4 TO 7 TIMES PER YEAR	1 TO 3 TIMES PER YEAR	4 TIMES PER YEAR	TOTAL
One	45.4%	24.7%	29.9%	0.0%	10.6%
	79	43	52	0	174
Two	35.2%	27.6%	37.2%	0.0%	36.2%
	209	164	221	0	594
Three	34.6%	29.2%	36.1%	0.0%	20.2%
	115	97	120	0	332
Four	30.1%	33.9%	36.0%	0.0%	20.5%
	101	114	121	0	336
Five	28.4%	34.5%	37.2%	0.0%	9.0%
	42	51	55	0	148
Six or more	28.6%	30.4%	41.1%	0.0%	3.4%
	16	17	23	0	56
Total Respondents	34.3%	29.6%	36.1%	0.0%	100.0%
	562	486	592	0	1,640

Q11 - How often do you visit Onondaga Lake Park? Q30 - What is your income?					
	8 OR MORE TI MES PER YEAR	4 TO 7 TIMES PER YEAR	1 TO 3 TIMES PER YEAR	4 TIMES PER YEAR	TOTAL
Under \$25,000	39.6%	25.0%	35.4%	0.0%	2.9%
	19	12	17	0	48
\$25,000 to \$34,999	41.3%	14.3%	44.4%	0.0%	3.8%
	26	9	28	0	63
\$35,000 to \$49,999	33.6%	33.6%	32.8%	0.0%	8.2%
	45	45	44	0	134
\$50,000 to \$74,999	34.3%	30.7%	35.1%	0.0%	15.1%
	85	76	87	0	248
\$75,000 to \$99,999	36.1%	30.2%	33.7%	0.0%	15.7%
	93	78	87	0	258
\$100,000 to \$149,999	31.5%	32.7%	35.8%	0.0%	21.1%
	109	113	124	0	346
\$150,000 or more	34.1%	28.6%	37.3%	0.0%	13.4%
	75	63	82	0	220
Prefer not to say	34.5%	27.7%	37.9%	0.0%	19.8%
	112	90	123	0	325
Total Respondents	34.3%	29.6%	36.1%	0.0%	100.0%
	564	486	592	0	1,642

Q13—How do you most often travel to Onondaga Lake park?

Asked of those responding “Yes” to Question 10 (1,695)

Answered 1,686 Skipped 9



ANSWER	RESPONSES	
Drive	1,550	91.9%
Walk	74	4.4%
Bike	42	2.5%
Skate/roller blade	3	0.2%
Boat	10	0.6%
Public Transportation	2	0.1%
Other	5	0.3%
TOTAL	1,686	100.0%

Q13 - How do you most often travel to Onondaga Lake Park?

Q23 - What is your age?

	DRIVE	WALK	BIKE	SKATE/ ROLLER BLADE	BOAT	PUBLIC TRANSPOR TATION	OTHER	TOTAL
Less than 25	93.6%	1.9%	1.9%	1.3%	0.0%	0.0%	1.3%	9.4%
	145	3	3	2	0	0	2	155
25-34	92.5%	4.1%	2.5%	0.3%	0.3%	0.0%	0.3%	19.4%
	295	13	8	1	1	0	1	319
35-44	94.0%	3.1%	1.9%	0.0%	0.3%	0.3%	0.3%	19.4%
	300	10	6	0	1	1	1	319
45-54	94.1%	3.5%	1.7%	0.0%	0.7%	0.0%	0.0%	17.6%
	273	10	5	0	2	0	0	290
55-64	85.8%	7.1%	5.1%	0.0%	1.7%	0.3%	0.0%	17.9%
	253	21	15	0	5	1	0	295
65-74	91.2%	6.4%	2.0%	0.0%	0.0%	0.0%	0.5%	12.4%
	186	13	4	0	0	0	1	204
75 and over	94.9%	5.1%	0.0%	0.0%	0.0%	0.0%	0.0%	2.4%
	37	2	0	0	0	0	0	39
Prefer not to say	91.7%	4.2%	4.2%	0.0%	0.0%	0.0%	0.0%	1.5%
	22	1	1	0	0	0	0	24
Total Respondents	91.9%	4.4%	2.6%	0.2%	0.5%	0.1%	0.3%	100.0%
	1,511	73	42	3	9	2	5	1,645

Q13 - How do you most often travel to Onondaga Lake Park?

Q28 - What is your gender?

	DRIVE	WALK	BIKE	SKATE/ ROLLER BLADE	BOAT	PUBLIC TRANSPOR TATION	OTHER	TOTAL
Male	90.0%	5.0%	3.7%	0.3%	0.7%	0.1%	0.3%	49.2%
	727	40	30	2	6	1	2	808
Female	93.3%	4.2%	1.4%	0.1%	0.4%	0.1%	0.4%	46.4%
	712	32	11	1	3	1	3	763
Prefer not to answer	97.2%	1.4%	1.4%	0.0%	0.0%	0.0%	0.0%	4.4%
	70	1	1	0	0	0	0	72
Total Responde	91.8%	4.4%	2.6%	0.2%	0.5%	0.1%	0.3%	100.0%
	1,509	73	42	3	9	2	5	1,643

Q13 - How do you most often travel to Onondaga Lake Park?

Q24 - How many are there in your household?

	DRIVE	WALK	BIKE	SKATE/ ROLLER BLADE	BOAT	PUBLIC TRANSPOR TATION	OTHER	TOTAL
One	89.1%	5.2%	4.6%	0.0%	0.0%	1.2%	0.0%	10.6%
	155	9	8	0	0	2	0	174
Two	90.5%	5.8%	2.7%	0.0%	0.9%	0.0%	0.2%	36.0%
	535	34	16	0	5	0	1	591
Three	92.5%	4.2%	1.5%	0.3%	0.6%	0.0%	0.9%	20.4%
	309	14	5	1	2	0	3	334
Four	92.6%	3.9%	3.0%	0.3%	0.3%	0.0%	0.0%	20.5%
	312	13	10	1	1	0	0	337
Five	96.0%	2.0%	0.7%	0.0%	0.7%	0.0%	0.7%	9.1%
	143	3	1	0	1	0	1	149
Six or more	94.6%	0.0%	3.6%	1.8%	0.0%	0.0%	0.0%	3.4%
	53	0	2	1	0	0	0	56
Total Respondents	91.8%	4.4%	2.6%	0.2%	0.5%	0.1%	0.3%	100.0%
	1,507	73	42	3	9	2	5	1,641

Q13 - How do you most often travel to Onondaga Lake Park?

Q30 - What is your income?

	DRIVE	WALK	BIKE	SKATE/ ROLLER BLADE	BOAT	PUBLIC TRANSPOR TATION	OTHER	TOTAL
Under \$25,000	89.6%	6.3%	2.1%	2.1%	0.0%	0.0%	0.0%	2.9%
	43	3	1	1	0	0	0	48
\$25,000 to \$34,999	96.8%	1.6%	1.6%	0.0%	0.0%	0.0%	0.0%	3.8%
	61	1	1	0	0	0	0	63
\$35,000 to \$49,999	95.5%	2.3%	0.8%	0.0%	0.8%	0.8%	0.0%	8.1%
	127	3	1	0	1	1	0	133
\$50,000 to \$74,999	93.1%	2.9%	3.3%	0.0%	0.4%	0.0%	0.4%	15.0%
	229	7	8	0	1	0	1	246
\$75,000 to \$99,999	91.1%	4.3%	4.3%	0.0%	0.4%	0.0%	0.0%	15.7%
	235	11	11	0	1	0	0	258
\$100,000 to \$149,999	91.6%	5.5%	1.7%	0.0%	0.9%	0.0%	0.3%	21.1%
	318	19	6	0	3	0	1	347
\$150,000 or more	89.6%	5.0%	3.6%	0.5%	1.4%	0.0%	0.0%	13.4%
	197	11	8	1	3	0	0	220
Prefer not to say	91.5%	5.5%	1.8%	0.3%	0.0%	0.3%	0.6%	20.0%
	300	18	6	1	0	1	2	328
Total Respondents	91.9%	4.4%	2.6%	0.2%	0.5%	0.1%	0.2%	100.0%
	1,510	73	42	3	9	2	4	1,643

Q14—What activities or events do you participate in at Onondaga Lake Park?

Asked of those responding “Yes” to Question 10 (1,695)

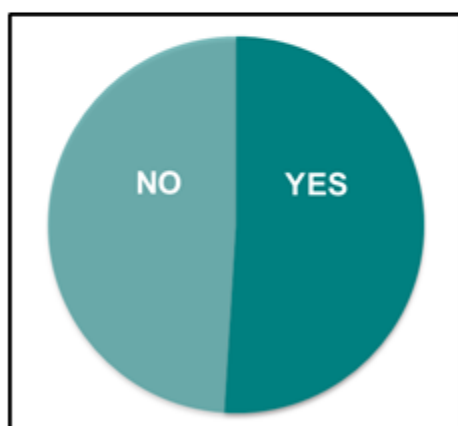
Answered 1,590 Skipped 105

ACTIVITY	NUMBER OF RESPONSES	PERCENT OF RESPONDENTS
Walk	996	62.6%
Lights on the lake	264	16.6%
Run	255	16.0%
Bike/cycle	204	12.8%
Events	187	11.8%
Playground	178	11.2%
Dog Park/Dog Walk	112	7.0%
Picnic	105	6.6%
Looking at lake/water	49	3.1%
Fishing	46	2.9%
Boating	35	2.2%
Kayaking	33	2.1%
Sitting	22	1.4%
Roller Blading	20	1.3%
Birding	18	1.1%
Relaxing	17	1.1%
Concerts	16	1.0%
Wegman's Park	14	0.9%
Exercise	14	0.9%
Salt Museum	12	0.8%
Read	12	0.8%
Swimming	10	0.6%
Other	422	26.5%
Total Respondents	1,590	100.0%
Total Responses	3,037	191.0%

Q15—Do you think there are enough beaches available for residents in Onondaga County?

Asked of universe (2,119)

Answered 1,969 Skipped 150



ANSWER	RESPONSES	
Yes	1,002	50.9%
No	967	49.1%
TOTAL	1,969	100.0%

Q15 - Do you think there are enough public beaches available for residents in Onondaga County?
Q23 - What is your age?

	YES	NO	TOTAL
Less than 25	43.4%	56.6%	10.7%
	89	116	205
25-34	42.4%	57.6%	18.5%
	150	204	354
35-44	48.3%	51.7%	18.3%
	169	181	350
45-54	49.2%	50.8%	16.4%
	155	160	315
55-64	60.7%	39.3%	18.7%
	218	141	359
65-74	54.8%	45.2%	12.9%
	136	112	248
75 and over	58.9%	41.1%	2.9%
	33	23	56
Prefer not to say	70.0%	30.0%	1.6%
	21	9	30
Total Respondents	50.7%	49.3%	100.0%
	971	946	1,917

Q15 - Do you think there are enough public beaches available for residents in Onondaga County?
Q28 - What is your gender?

	YES	NO	TOTAL
Male	47.8%	52.2%	49.5%
	454	495	949
Female	52.1%	47.9%	45.6%
	455	419	874
Prefer not to answer	64.2%	35.8%	5.0%
	61	34	95
Total Respondents	50.6%	49.4%	100.0%
	970	948	1,918

Q15 - Do you think there are enough public beaches available for residents in Onondaga County?
Q24 - How many are there in your household?

	YES	NO	TOTAL
One	54.3%	45.8%	11.1%
	115	97	212
Two	53.0%	47.0%	36.1%
	366	325	691
Three	49.7%	50.3%	20.1%
	191	193	384
Four	48.2%	51.8%	20.1%
	185	199	384
Five	44.1%	55.9%	9.2%
	78	99	177
Six or more	49.3%	50.8%	3.5%
	33	34	67
Total Respondents	50.5%	49.5%	100.0%
	968	947	1,915

Q15 - Do you think there are enough public beaches available for residents in Onondaga County?
Q30 - What is your income?

	YES	NO	TOTAL
Under \$25,000	47.37%	52.63%	2.97%
	27	30	57
\$25,000 to \$34,999	54.29%	45.71%	3.65%
	38	32	70
\$35,000 to \$49,999	46.84%	53.16%	8.24%
	74	84	158
\$50,000 to \$74,999	54.23%	45.77%	14.81%
	154	130	284
\$75,000 to \$99,999	46.51%	53.49%	15.70%
	140	161	301
\$100,000 to \$149,999	45.05%	54.95%	20.03%
	173	211	384
\$150,000 or more	43.32%	56.68%	12.88%
	107	140	247
Prefer not to say	61.78%	38.22%	21.70%
	257	159	416
Total Respondents	50.6%	49.4%	100.0%
	970	947	1,917

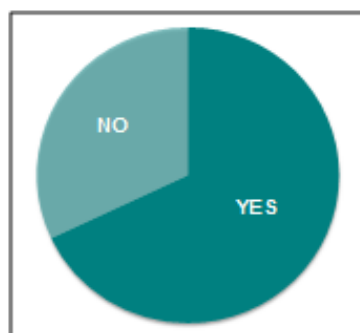
CROSSTAB Q10 VERSUS Q15

Q10—Have you visited Onondaga Lake Park in the past 12 months? Q15—Do you think there are enough public beaches available for residents in Onondaga County?			
Q10—Have you visited Onondaga Lake Park in the past 12 months?		Q15—Do you think there are enough public beaches available for residents in Onondaga County?	
	TOTAL	YES	NO
Q10: Yes	92.7%	49.42%	50.6%
	1,643	812	831
Q10: No	7.3%	61.24%	38.8%
	129	79	50
Total Respondents	1,772	891	881

Q16—Do you visit any public beaches in the region?

Asked of universe (2,119)

Answered 1,970 Skipped 149



ANSWER	RESPONSES	
Yes	1,342	68.1%
No	628	31.9%
TOTAL	1,970	100.0%

Q16 - Do you visit any public beaches in the region? Q23 - What is your age?			
	YES	NO	TOTAL
Less than 25	70.7%	29.3%	10.7%
	145	60	205
25-34	76.7%	23.3%	18.5%
	273	83	356
35-44	77.8%	22.2%	18.3%
	274	78	352
45-54	70.7%	29.3%	16.4%
	222	92	314
55-64	58.8%	41.2%	18.9%
	213	149	362
65-74	52.8%	47.2%	12.9%
	131	117	248
75 and over	49.1%	50.9%	2.8%
	26	27	53
Prefer not to say	73.3%	26.7%	1.6%
	22	8	30
Total Respondents	68.0%	32.0%	100.0%
	1,306	614	1,920

Q16 - Do you visit any public beaches in the region? Q28 - What is your gender?			
	YES	NO	TOTAL
Male	63.7%	36.3%	49.4%
	604	344	948
Female	72.6%	27.4%	45.7%
	636	240	876
Prefer not to answer	69.5%	30.5%	5.0%
	66	29	95
Total Respondents	68.1%	31.9%	100.0%
	1,306	613	1,919

Q16 - Do you visit any public beaches in the region? Q24 - How many are there in your household?			
	YES	NO	TOTAL
One	58.8%	41.2%	11.0%
	124	87	211
Two	58.4%	41.6%	36.2%
	405	289	694
Three	73.7%	26.3%	20.0%
	283	101	384
Four	79.5%	20.5%	20.1%
	306	79	385
Five	76.8%	23.2%	9.2%
	136	41	177
Six or more	76.1%	23.9%	3.5%
	51	16	67
Total Respondents	68.0%	32.0%	100.0%
	1,305	613	1,918

Q16 - Do you visit any public beaches in the region? Q30 - What is your income?			
	YES	NO	TOTAL
Under \$25,000	68.4%	31.6%	3.0%
	39	18	57
\$25,000 to \$34,999	76.1%	23.9%	3.7%
	54	17	71
\$35,000 to \$49,999	69.7%	30.3%	8.1%
	108	47	155
\$50,000 to \$74,999	67.6%	32.4%	15.0%
	194	93	287
\$75,000 to \$99,999	68.2%	31.8%	15.7%
	206	96	302
\$100,000 to \$149,999	72.1%	27.9%	20.0%
	277	107	384
\$150,000 or more	65.3%	34.7%	12.9%
	162	86	248
Prefer not to say	64.4%	35.6%	21.7%
	268	148	416
Total Respondents	68.1%	31.9%	100.0%
	1,308	612	1,920

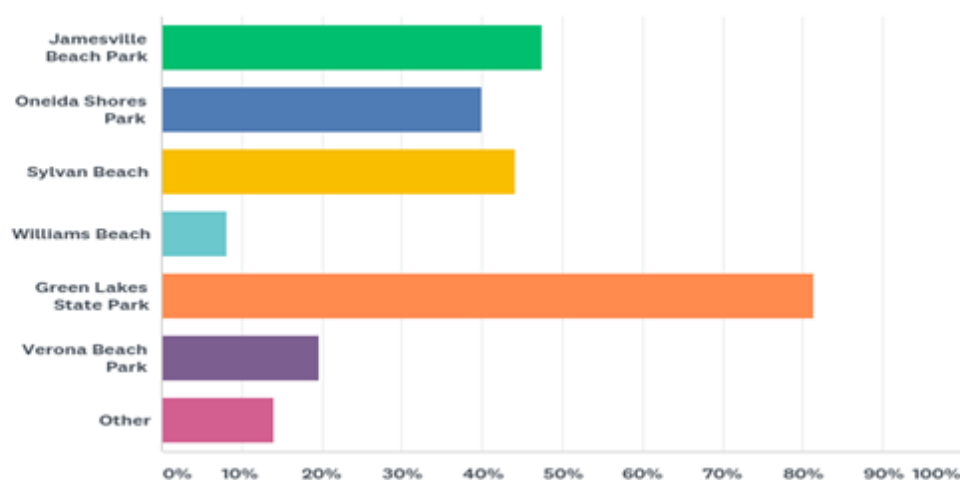
CROSSTAB Q10 VERSUS Q16

Q10-Have you visited Onondaga Lake Park in the past 12 months? Q16—Do you visit any public beaches in the region?			
Q10-Have you visited Onondaga Lake Park in the past 12 months?		Q16—Do you visit any public beaches in the region?	
	TOTAL	YES	NO
Q10: Yes	92.7%	70.1%	29.9%
	1,643	1,154	493
Q10: No	7.3%	58.1%	41.9%
	129	75	54
Total Respondents	1,772	1,229	547

Q17—Which do you visit? (Check all that apply)

Asked of those responding "Yes" to Question 16 (1,342)

Answered 1,314 Skipped 28



ANSWER	RESPONSES	
Jamesville Beach Park	624	47.5%
Oneida Shores Park	526	40.0%
Sylvan Beach	581	44.2%
Williams Beach	107	8.1%
Green Lakes State Park	1,069	81.4%
Verona Beach Park	258	19.6%
Other	184	14.0%
Total Respondents: 1,314		

Q17 - Which do you visit? (Check all that apply)

Q23 - What is your age?

	JAMESVILLE BEACH PARK	ONEIDA SHORES PARK	SYLVAN BEACH	WILLIAMS BEACH	GREEN LAKES STATE PARK	VERONA BEACH PARK	OTHER	TOTAL
Less than 25	51.7%	35.9%	63.5%	5.5%	86.9%	20.0%	9.0%	30.2%
	75	52	92	8	126	29	13	395
25-34	51.1%	40.5%	56.2%	7.7%	84.7%	21.5%	12.4%	57.4%
	140	111	154	21	232	59	34	751
35-44	50.7%	41.6%	42.7%	5.8%	85.4%	20.1%	18.6%	55.5%
	139	114	117	16	234	55	51	726
45-54	44.8%	38.5%	34.8%	11.8%	76.9%	15.8%	17.7%	40.6%
	99	85	77	26	170	35	39	531
55-64	40.8%	42.7%	33.7%	9.0%	79.6%	16.6%	12.8%	37.9%
	86	90	71	19	168	35	27	496
65-74	43.3%	40.3%	38.8%	7.5%	71.6%	23.1%	10.5%	24.1%
	58	54	52	10	96	31	14	315
75 and over	50.0%	28.6%	32.1%	14.3%	78.6%	25.0%	7.1%	5.0%
	14	8	9	4	22	7	2	66
Prefer not to say	50.0%	50.0%	27.3%	9.1%	72.7%	22.7%	18.2%	4.2%
	11	11	6	2	16	5	4	55
Total Respondents	47.5%	40.1%	44.2%	8.1%	81.3%	19.6%	14.1%	100.0%
	622	525	578	106	1,064	256	184	1,309

Q17 - Which do you visit? (Check all that apply)

Q28 - What is your gender?

	JAMESVILLE BEACH PARK	ONEIDA SHORES PARK	SYLVAN BEACH	WILLIAMS BEACH	GREEN LAKES STATE PARK	VERONA BEACH PARK	OTHER	TOTAL
Male	46.3%	42.5%	46.0%	8.7%	78.4%	19.4%	13.2%	118.0%
	281	258	279	53	476	118	80	1,545
Female	48.3%	38.2%	43.4%	7.7%	84.3%	20.1%	14.0%	124.4%
	307	243	276	49	536	128	89	1,628
Prefer not to answer	51.5%	36.4%	34.9%	7.6%	83.3%	16.7%	19.7%	12.6%
	34	24	23	5	55	11	13	165
Total Respondents	47.5%	40.1%	44.2%	8.2%	81.5%	19.6%	13.9%	100.0%
	622	525	578	107	1,067	257	182	1,309

Q17 - Which do you visit? (Check all that apply)

Q24 - How many are there in your household?

	JAMESVILLE BEACH PARK	ONEIDA SHORES PARK	SYLVAN BEACH	WILLIAMS BEACH	GREEN LAKES STATE PARK	VERONA BEACH PARK	OTHER	TOTAL
One	46.4%	30.4%	38.4%	6.4%	76.0%	12.0%	11.2%	21.1%
	58	38	48	8	95	15	14	276
Two	44.7%	39.3%	41.7%	8.2%	81.2%	20.3%	12.1%	76.6%
	181	159	169	33	329	82	49	1,002
Three	49.5%	43.1%	49.1%	8.1%	83.4%	21.2%	14.8%	58.3%
	140	122	139	23	236	60	42	762
Four	50.2%	39.7%	39.7%	8.1%	81.4%	18.2%	16.9%	59.7%
	154	122	122	25	250	56	52	781
Five	44.5%	40.9%	53.3%	9.5%	82.5%	23.4%	14.6%	28.1%
	61	56	73	13	113	32	20	368
Six or more	52.9%	51.0%	54.9%	9.8%	80.4%	25.5%	9.8%	11.1%
	27	26	28	5	41	13	5	145
Total Respondents	47.5%	40.0%	44.3%	8.2%	81.3%	19.7%	13.9%	100.0%
	621	523	579	107	1,064	258	182	1,308

Q17 - Which do you visit? (Check all that apply)

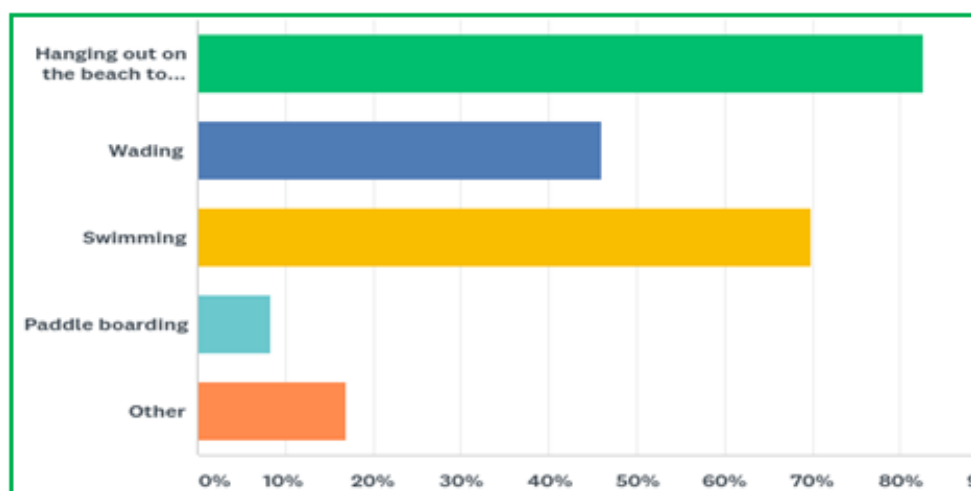
Q30 - What is your income?

	JAMESVILLE BEACH PARK	ONEIDA SHORES PARK	SYLVAN BEACH	WILLIAMS BEACH	GREEN LAKES STATE PARK	VERONA BEACH PARK	OTHER	TOTAL
Under \$25,000	48.7%	41.0%	48.7%	10.3%	87.2%	28.2%	18.0%	8.4%
	19	16	19	4	34	11	7	110
\$25,000 to \$34,999	53.7%	57.4%	66.7%	1.9%	88.9%	27.8%	13.0%	12.7%
	29	31	36	1	48	15	7	167
\$35,000 to \$49,999	48.7%	42.3%	55.0%	15.3%	74.8%	24.3%	9.9%	22.9%
	54	47	61	17	83	27	11	300
\$50,000 to \$74,999	50.5%	44.9%	48.5%	7.2%	80.4%	18.0%	10.3%	38.4%
	98	87	94	14	156	35	20	504
\$75,000 to \$99,999	49.0%	40.8%	50.0%	6.3%	85.0%	23.8%	10.2%	41.7%
	101	84	103	13	175	49	21	546
\$100,000 to \$149,999	47.7%	33.2%	33.6%	9.0%	79.8%	17.0%	14.4%	49.6%
	132	92	93	25	221	47	40	650
\$150,000 or more	46.3%	41.9%	41.9%	6.3%	82.5%	14.4%	17.5%	30.6%
	74	67	67	10	132	23	28	401
Prefer not to say	43.0%	37.8%	39.3%	8.2%	80.7%	18.9%	18.2%	50.7%
	116	102	106	22	218	51	49	664
Total Respondents	47.5%	40.1%	44.2%	8.1%	81.4%	19.7%	14.0%	100.0%
	623	526	579	106	1,067	258	183	1,311

Q19—When you visit a local beach, do you use it for? (Check all that apply)

Asked of those responding “Yes” to Question 16 (1,342)

Answered 1,314 Skipped 28



ANSWER	RESPONSES	
Hanging out on the beach to read, picnic, etc.	1,085	82.57%
Wading	604	45.97%
Swimming	917	69.79%
Paddle boarding	109	8.30%
Other	222	16.89%
Total Respondents: 1,314		

Q19 - When you visit a local public beach, what do you use it for? Check all that apply)

Q23 - What is your age?

	HANGING OUT	WADING	SWIMMING	PADDLE BOARDING	OTHER	TOTAL
Less than 25	91.7% 133	29.7% 43	76.6% 111	13.8% 20	11.7% 17	24.8% 324
25-34	92.3% 253	49.3% 135	73.7% 202	8.4% 23	12.0% 33	49.4% 646
35-44	86.5% 236	60.8% 166	79.1% 216	7.7% 21	13.9% 38	51.7% 677
45-54	73.0% 162	45.5% 101	72.1% 160	8.1% 18	16.7% 37	36.5% 478
55-64	76.3% 161	39.8% 84	60.7% 128	7.1% 15	25.6% 54	33.8% 442
65-74	73.1% 98	38.8% 52	58.2% 78	5.2% 7	20.2% 27	20.0% 262
75 and over	75.0% 21	42.9% 12	32.1% 9	3.6% 1	21.4% 6	3.7% 49
Prefer not to say	72.7% 16	36.4% 8	45.5% 10	4.6% 1	40.9% 9	3.4% 44
Total Respondent	82.5% 1,080	45.9% 601	69.8% 914	8.1% 106	16.9% 221	100.0% 1,309

Q19 - When you visit a local public beach, what do you use it for? Check all that apply)

Q28 - What is your gender?

	HANGING OUT	WADING	SWIMMING	PADDLE BOARDING	OTHER	TOTAL
Male	79.8% 485	41.0% 249	69.2% 421	6.9% 42	16.5% 100	99.1% 1,297
Female	85.2% 541	50.9% 323	71.0% 451	9.0% 57	16.4% 104	112.8% 1,476
Prefer not to answer	86.4% 57	45.5% 30	62.1% 41	15.2% 10	24.2% 16	11.8% 154
Total Respondents	82.7% 1,083	46.0% 602	69.7% 913	8.3% 109	16.8% 220	100.0% 1,309

Q19 - When you visit a local public beach, what do you use it for? Check all that apply)

Q24 - How many are there in your household?

	HANGING OUT	WADING	SWIMMING	PADDLE BOARDING	OTHER	TOTAL
One	80.8%	40.0%	60.8%	7.2%	21.6%	20.1%
	101	50	76	9	27	263
Two	80.3%	42.8%	60.7%	5.9%	20.6%	65.4%
	327	174	247	24	84	856
Three	86.2%	45.6%	72.1%	8.5%	16.6%	49.5%
	244	129	204	24	47	648
Four	86.0%	54.6%	76.5%	11.1%	11.8%	56.1%
	263	167	234	34	36	734
Five	78.1%	43.8%	78.8%	7.3%	14.6%	23.3%
	107	60	108	10	20	305
Six or more	80.0%	44.0%	84.0%	16.0%	12.0%	9.0%
	40	22	42	8	6	118
Total Respondents	82.7%	46.0%	69.6%	8.3%	16.8%	100.0%
	1,082	602	911	109	220	1,308

Q19 - When you visit a local public beach, what do you use it for? Check all that apply)

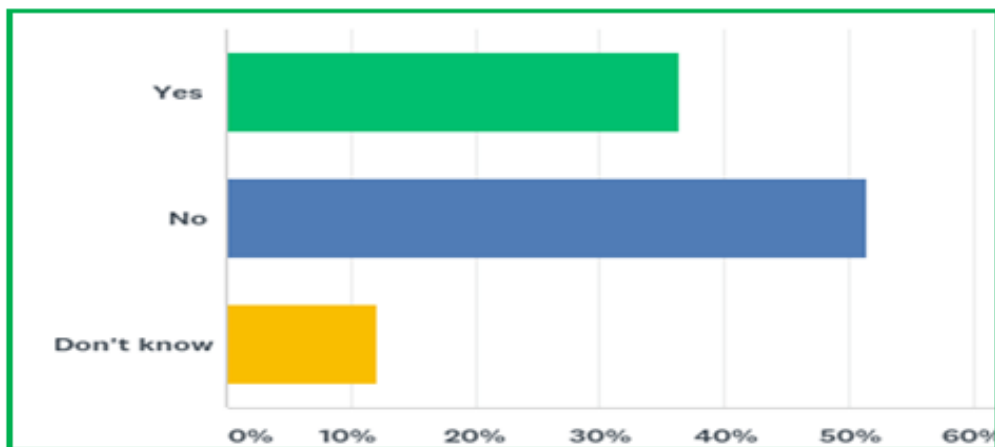
Q30 - What is your income?

	HANGING OUT	WADING	SWIMMING	PADDLE BOARDING	OTHER	TOTAL
Under \$25,000	89.7%	51.3%	71.8%	5.1%	20.5%	7.1%
	35	20	28	2	8	93
\$25,000 to \$34,999	83.3%	50.0%	81.5%	7.4%	16.7%	9.8%
	45	27	44	4	9	129
\$35,000 to \$49,999	87.4%	46.0%	73.0%	6.3%	9.9%	18.8%
	97	51	81	7	11	247
\$50,000 to \$74,999	82.9%	52.9%	65.8%	5.2%	15.0%	32.7%
	160	102	127	10	29	428
\$75,000 to \$99,999	85.0%	48.1%	75.2%	9.7%	14.1%	36.5%
	175	99	155	20	29	478
\$100,000 to \$149,999	82.7%	41.7%	71.9%	10.4%	14.8%	47.0%
	230	116	200	29	41	616
\$150,000 or more	82.5%	49.4%	70.0%	10.0%	18.1%	28.1%
	132	79	112	16	29	368
Prefer not to say	77.4%	40.4%	62.2%	7.8%	24.1%	43.6%
	209	109	168	21	65	572
Total Respondents	82.6%	46.0%	69.8%	8.3%	16.9%	100.0%
	1,083	603	915	109	221	1,311

Q20—If there were a beach on Onondaga Lake, would you use it for any of these purposes?

Asked of those responding “Yes” to Question 16 (1,342)

Answered 1,314 Skipped 28



ANSWER	RESPONSES	
Yes	478	36.4%
No	676	51.5%
Don't know	160	12.2%
TOTAL	1,314	100.0%

Q20 - If there were a public beach on Onondaga Lake, would you use it for any of these purposes? Q23 - What is your age?				
	YES	NO	DONT KNOW	TOTAL
Less than 25	29.7%	56.6%	13.8%	11.1%
	43	82	20	145
25-34	34.4%	54.6%	11.0%	20.9%
	94	149	30	273
35-44	33.9%	54.0%	12.0%	20.9%
	93	148	33	274
45-54	44.1%	45.5%	10.4%	17.0%
	98	101	23	222
55-64	36.5%	50.2%	13.3%	16.1%
	77	106	28	211
65-74	36.8%	48.1%	15.0%	10.2%
	49	64	20	133
75 and over	55.2%	34.5%	10.3%	2.2%
	16	10	3	29
Prefer not to say	22.7%	63.6%	13.6%	1.7%
	5	14	3	22
Total Respondent	36.3%	51.5%	12.2%	100.0%
	475	674	160	1,309

Q20 - If there were a public beach on Onondaga Lake, would you use it for any of these purposes? Q28 - What is your gender?				
	YES	NO	DONT KNOW	TOTAL
Male	46.6%	42.6%	10.9%	46.4%
	283	259	66	608
Female	27.4%	59.0%	13.7%	48.6%
	174	375	87	636
Prefer not to answer	30.3%	62.1%	7.6%	5.0%
	20	41	5	66
Total Respondents	36.4%	51.5%	12.1%	100.0%
	477	675	158	1,310

Q20 - If there were a public beach on Onondaga Lake, would you use it for any of these purposes? Q24 - How many are there in your household?				
	YES	NO	DON'T KNOW	TOTAL
One	46.4%	47.2%	6.4%	9.6%
	58	59	8	125
Two	39.9%	46.8%	13.3%	31.0%
	162	190	54	406
Three	35.8%	51.1%	13.1%	21.6%
	101	144	37	282
Four	30.6%	55.1%	14.3%	23.5%
	94	169	44	307
Five	34.3%	58.4%	7.3%	10.5%
	47	80	10	137
Six or more	29.4%	58.8%	11.8%	3.9%
	15	30	6	51
Total Respondents	36.5%	51.4%	12.2%	100.0%
	477	672	159	1,308

Q20 - If there were a public beach on Onondaga Lake, would you use it for any of these purposes? Q30 - What is your income?				
	YES	NO	DON'T KNOW	TOTAL
Under \$25,000	33.3%	64.1%	2.6%	3.0%
	13	25	1	39
\$25,000 to \$34,999	20.8%	66.0%	13.2%	4.0%
	11	35	7	53
\$35,000 to \$49,999	33.6%	55.5%	10.9%	8.4%
	37	61	12	110
\$50,000 to \$74,999	37.1%	48.5%	14.4%	14.8%
	72	94	28	194
\$75,000 to \$99,999	40.8%	48.5%	10.7%	15.7%
	84	100	22	206
\$100,000 to \$149,999	41.6%	49.1%	9.3%	21.3%
	116	137	26	279
\$150,000 or more	42.5%	41.9%	15.6%	12.2%
	68	67	25	160
Prefer not to say	28.5%	57.4%	14.1%	20.6%
	77	155	38	270
Total Respondents	36.5%	51.4%	12.1%	100.0%
	478	674	159	1,311

CROSSTAB Q16 X Q 20

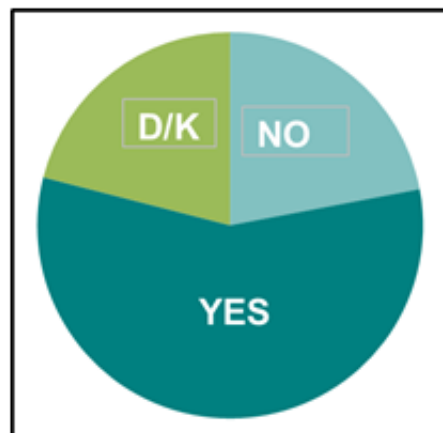
Q16—Do you visit any public beaches in the region?		Q20—If there were a beach on Onondaga Lake, would you use it hanging out, wading, swimming or other uses?		
	TOTAL	YES	NO	DK/NA
Q10: Yes	93.9%	38.6%	50.0%	11.3%
	1,129	436	565	128
Q10: No	6.2%	16.2%	68.9%	14.9%
	74	12	51	11
Total Respondents	1,203	448	616	139

Q21—Following are a few questions regarding Onondaga Lake..
The lake has undergone an extensive cleanup process and the re-
stored water body has met New York State standards for swim-
ming for several years.

Do you agree that Onondaga Lake is safe for swimming?

Asked of universe

Answered 1,931 Skipped 188



ANSWER	RESPONSES	
Yes	426	22.1%
No	1,093	56.6%
Don't know	412	21.3%
TOTAL	1,931	100.0%

Q21 - Do you agree that Onondaga Lake is safe for swimming?				
Q23 - What is your age?				
Less than 25	12.7%	68.3%	19.0%	10.7%
	26	140	39	205
25-34	21.9%	57.7%	20.5%	18.6%
	78	206	73	357
35-44	20.7%	58.5%	20.7%	18.3%
	73	206	73	352
45-54	26.1%	53.2%	20.7%	16.3%
	82	167	65	314
55-64	22.5%	55.6%	21.9%	18.7%
	81	200	79	360
65-74	24.0%	52.4%	23.6%	13.0%
	60	131	59	250
75 and over	32.1%	41.1%	26.8%	2.9%
	18	23	15	56
Prefer not to say	23.3%	56.7%	20.0%	1.6%
	7	17	6	30
Total Respondent	22.1%	56.7%	21.3%	100.0%
	425	1,090	409	1,924

Q21 - Do you agree that Onondaga Lake is safe for swimming?				
Q28 - What is your gender?				
	YES	NO	DON'T KNOW	TOTAL
Male	27.8%	49.5%	22.7%	49.5%
	265	471	216	952
Female	17.0%	63.4%	19.6%	45.6%
	149	556	172	877
Prefer not to answer	11.6%	65.3%	23.2%	4.9%
	11	62	22	95
Total Respondents	22.1%	56.6%	21.3%	100.0%
	425	1,089	410	1,924

Q21 - Do you agree that Onondaga Lake is safe for swimming?				
Q24 - How many are there in your household?				
	YES	NO	DON'T KNOW	TOTAL
One	22.3%	55.0%	22.8%	11.0%
	47	116	48	211
Two	24.4%	51.0%	24.6%	36.2%
	170	355	171	696
Three	21.6%	59.6%	18.8%	20.0%
	83	229	72	384
Four	21.8%	58.6%	19.7%	20.1%
	84	226	76	386
Five	15.7%	66.3%	18.0%	9.3%
	28	118	32	178
Six or more	16.4%	65.7%	17.9%	3.5%
	11	44	12	67
Total Respondents	22.0%	56.6%	21.4%	100.0%
	423	1,088	411	1,922

Q21 - Do you agree that Onondaga Lake is safe for swimming?				
Q30 - What is your income?				
Under \$25,000	19.3%	59.7%	21.1%	3.0%
	11	34	12	57
\$25,000 to \$34,999	12.7%	64.8%	22.5%	3.7%
	9	46	16	71
\$35,000 to \$49,999	16.6%	60.5%	22.9%	8.2%
	26	95	36	157
\$50,000 to \$74,999	21.7%	58.0%	20.3%	14.9%
	62	166	58	286
\$75,000 to \$99,999	26.4%	53.1%	20.5%	15.8%
	80	161	62	303
\$100,000 to \$149,999	24.2%	52.0%	23.9%	20.0%
	93	200	92	385
\$150,000 or more	31.6%	46.2%	22.3%	12.8%
	78	114	55	247
Prefer not to say	16.0%	65.3%	18.7%	21.7%
	67	273	78	418
Total Respondents	22.1%	56.6%	21.3%	100.0%
	426	1,089	409	1,924

CROSSTAB Q10 X Q 21

Q10-Have you visited Onondaga Lake Park in the past 12 months? Q21 - Do you agree that Onondaga Lake is safe for swimming?				
Q10-Have you visited Onondaga Lake Park in the past 12 months?		Q21 - Do you agree that Onondaga Lake is safe for swimming?		
	TOTAL	YES	NO	DK/NA
Q10: Yes	92.7%	23.9%	54.6%	21.6%
	1,614	385	881	348
Q10: No	7.3%	11.8%	69.3%	18.9%
	127	15	88	24
Total Respondents	1,741	400	969	372

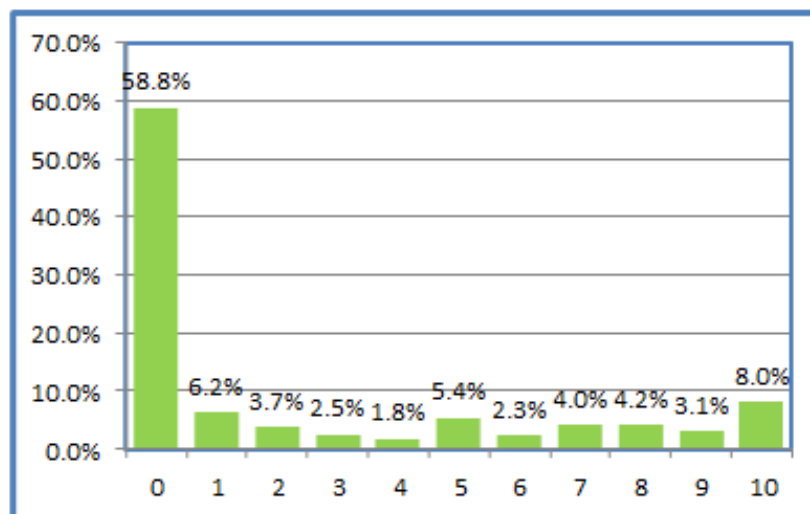
Q22—If you visited Onondaga Lake Park, how likely is it that you and your family would swim in Onondaga Lake?

Zero being “not at all likely” and 10 being “absolutely likely”.

Asked of universe

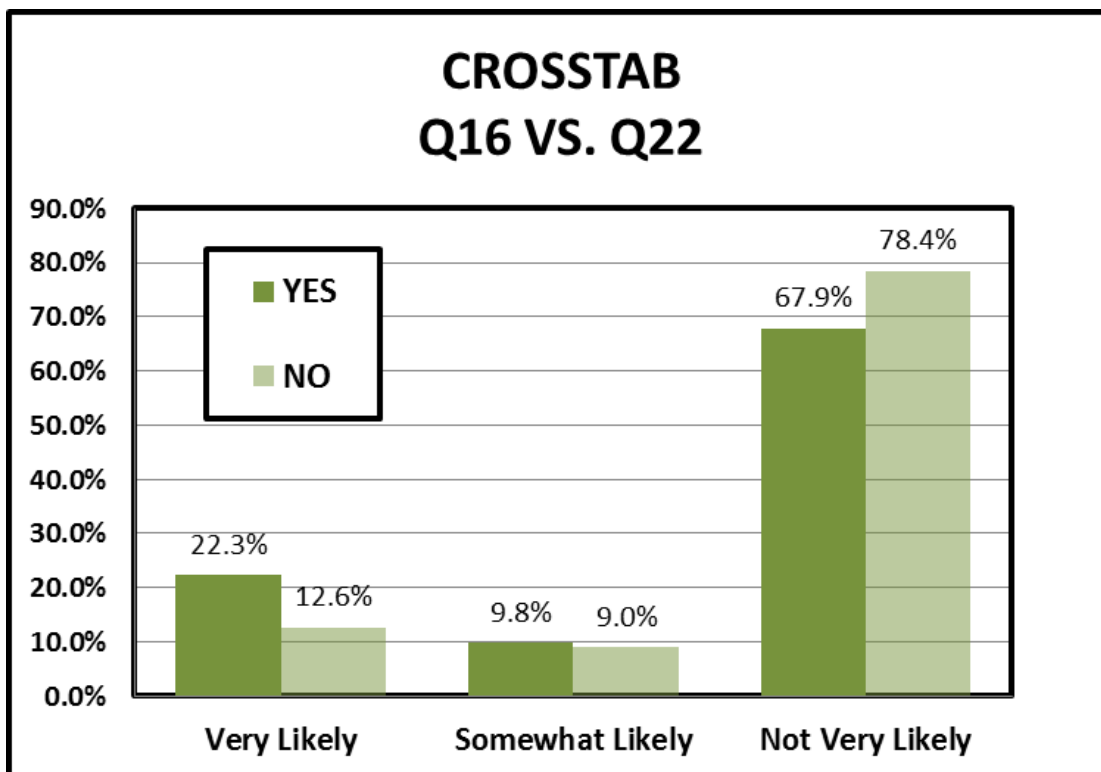
Answered 1,894 Skipped 225

LIKELY	NUMBER	PERCENT
0	1114	58.8%
1	117	6.2%
2	71	3.7%
3	47	2.5%
4	34	1.8%
5	103	5.4%
6	43	2.3%
7	76	4.0%
8	79	4.2%
9	58	3.1%
10	<u>152</u>	<u>8.0%</u>
	1894	100.0%



CROSSTAB Q16 X Q22

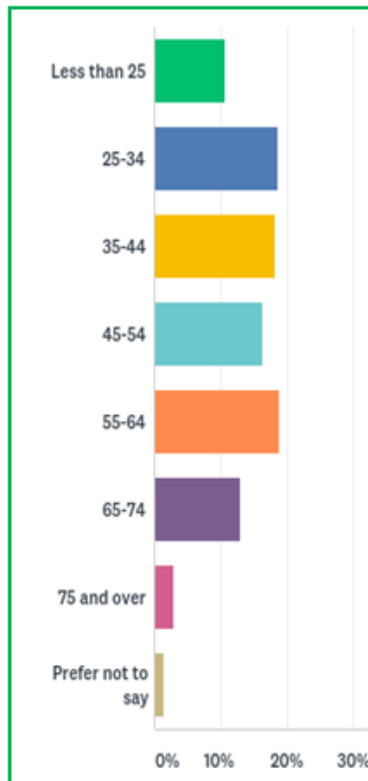
Q16— Do you visit any public beaches in the region?			
Q22— If you visited Onondaga Lake Park, how likely is it that you and your family would swim in Onondaga Lake? Zero being "not at all likely" and 10 being "absolutely likely.")			
	YES	NO	TOTAL
Very Likely (Responding 7 to 10)	22.3%	12.6%	19.2%
	286	76	362
Somewhat Likely (Responding 4 to 6)	9.8%	9.0%	9.5%
	126	54	180
Not Likely (Responding 0 to 3)	67.9%	78.4%	71.3%
	871	473	1344
Total Respondents	100.0%	100.0%	100.0%
	1,283	603	1,886



Q23—What is your age?

Asked of universe

Answered 1,928 Skipped 191

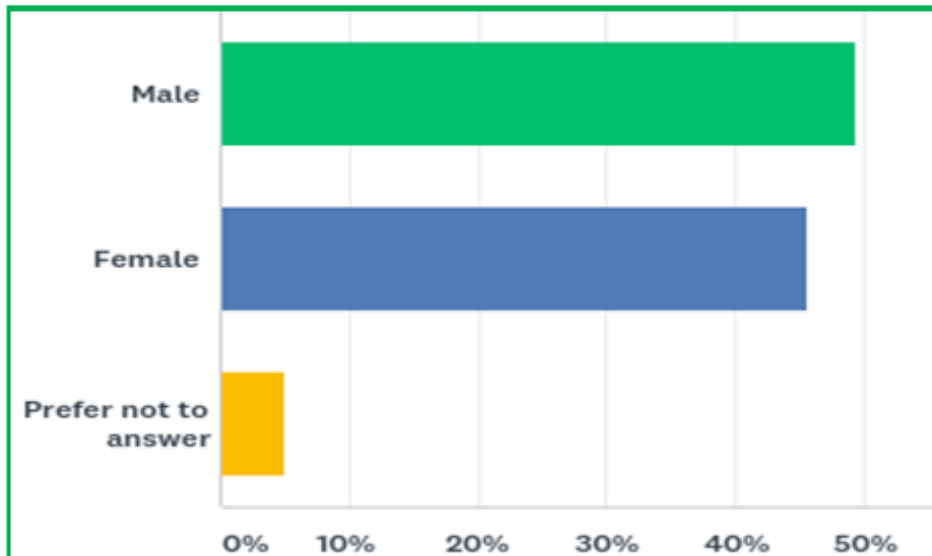


ANSWER	RESPONSES	
Less than 25	205	10.6%
25-34	357	18.5%
35-44	352	18.3%
45-54	315	16.3%
55-64	362	18.8%
65-74	251	13.0%
75 and over	56	2.9%
Prefer not to say	30	1.6%
TOTAL	1,928	100.0%

Q28—What is your Gender?

Asked of universe

Answered 1,927 Skipped 192

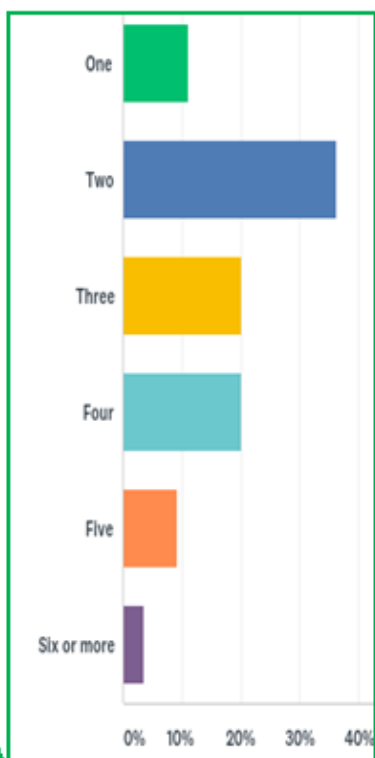


ANSWER	RESPONSES	
Male	953	49.5%
Female	879	45.6%
Prefer not to answer	95	4.9%
TOTAL	1,927	100.0%

Q24—How many are there in your household?

Asked of universe

Answered 1,926 Skipped 193

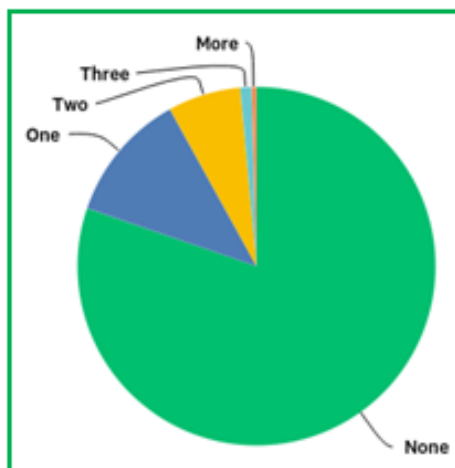


ANSWER	RESPONSES	
One	212	11.0%
Two	698	36.2%
Three	385	20.0%
Four	386	20.0%
Five	178	9.2%
Six or more	67	3.5%
TOTAL	1,926	100.0%

Q25—How many are there in your household under age six?

Asked of universe

Answered 1,929 Skipped 190

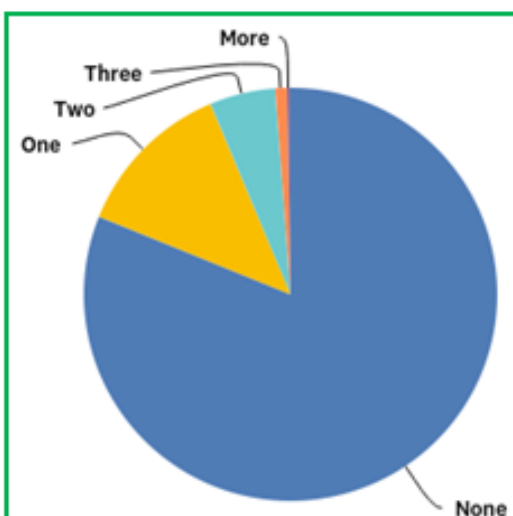


ANSWER	RESPONSES	
None	1,548	80.3%
One	226	11.7%
Two	127	6.6%
Three	20	1.0%
More	8	0.4%
TOTAL	1,929	100.0%

Q26—How many are there in your household age 6 to 12?

Asked of universe

Answered 1,931 Skipped 188

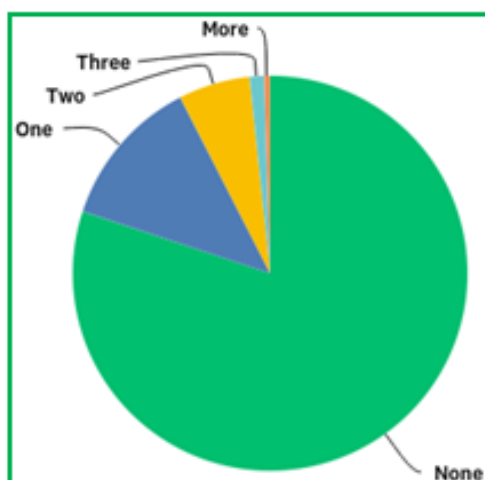


ANSWER	RESPONSES	
None	1,567	81.2%
One	242	12.5%
Two	99	5.1%
Three	18	0.9%
More	5	0.3%
TOTAL	1,931	100.0%

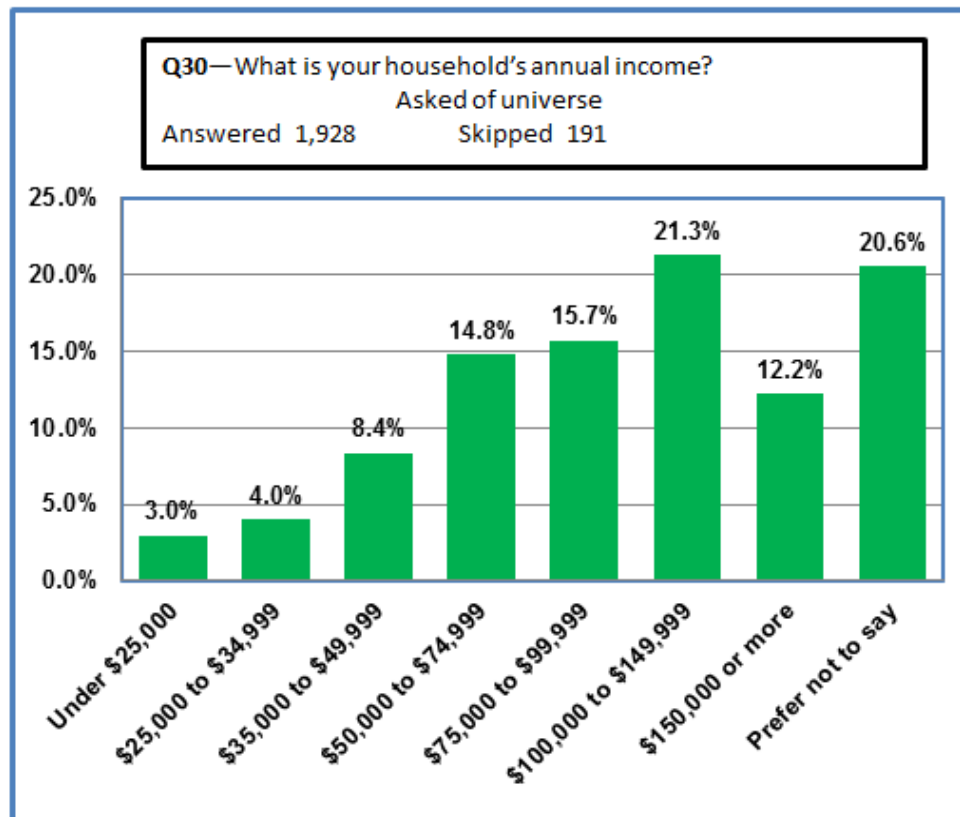
Q27—How many are there in your household age 13 to 19?

Asked of universe

Answered 1,928 Skipped 191



ANSWER	RESPONSES	
None	1,544	80.1%
One	239	12.4%
Two	113	5.9%
Three	23	1.2%
More	9	0.5%
TOTAL	1,928	100.0%

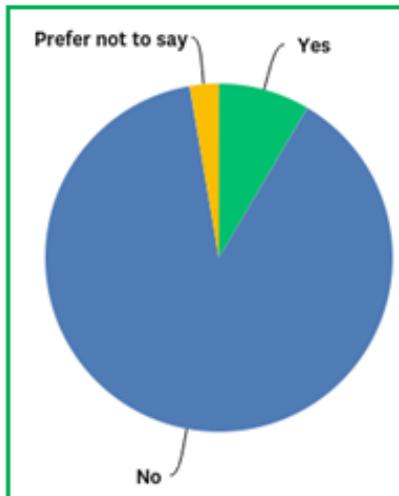


Q30 - What is your income?	
	TOTAL
Under \$25,000	3.0%
	39
\$25,000 to \$34,999	4.0%
	53
\$35,000 to \$49,999	8.4%
	110
\$50,000 to \$74,999	14.8%
	194
\$75,000 to \$99,999	15.7%
	206
\$100,000 to \$149,999	21.3%
	279
\$150,000 or more	12.2%
	160
Prefer not to say	20.6%
	270
Total	100.0%
Respondents	1,311

Q29—Do you, or any persons in your household, have challenges with mobility or special needs?

Asked of universe

Answered 1,927 Skipped 192



ANSWER	RESPONSES	
Yes	164	8.5%
No	1,715	88.8%
Prefer not to say	52	2.7%
TOTAL	1,931	100.0%

Onondaga County Parks is considering the development of a new beach facility on Onondaga Lake.

Your opinion regarding this new facility is greatly appreciated. All respondents will have the opportunity to enter a drawing for one of three \$50 Amazon gift cards.

The survey should take no longer than 7 minutes of your time. All responses will be strictly confidential and presented in aggregate format. No names or addresses are collected.

ONONDAGA COUNTY PARKS

1. Do you currently live in Onondaga County?
 - ☐ Yes (Go to Q2)
 - ☐ No (Go to Q3)
2. How long have you lived in Onondaga County?
 - ☐ Less than 3 years (Go to Q3)
 - ☐ 3 to 5 Years (Go to Q3)
 - ☐ 6 to 10 Years (Go to Q3)
 - ☐ 11 to 15 Years (Go to Q3)
 - ☐ 16 to 20 Years (Go to Q3)
 - ☐ More than 20 Years (Go to Q3)
3. What is your Zip Code? _____ (Go to Q4)
4. Have you visited an Onondaga County Park in the past 12 months?
 - ☐ Yes (Go to Q5)
 - ☐ No (Go to Q15)
5. Which parks have you visited (Check all that apply)
 - ☐ Beaver Lake Nature Center (Go to Q6)
 - ☐ Carpenter's Brook Nature Center (Go to Q6)
 - ☐ Erie Canal/Jordan Level Trail (Go to Q6)
 - ☐ Highland Forest (Go to Q6)
 - ☐ Jamesville Beach Park (Go to Q6)
 - ☐ Oneida Shores Park (Go to Q6)
 - ☐ Onondaga Lake Park (Go to Q6)
 - ☐ Otisco Lake Park (Go to Q6)
 - ☐ Pratt's Falls Park (Go to Q6)
 - ☐ Rosamond Gifford Zoo (Go to Q6)
 - ☐ Other (please specify) (Go to Q6)

6. How often do you visit an Onondaga County Park?

- ☐ More than 8 times per year (Go to Q7)
- ☐ 4 to 7 times per year (Go to Q7)
- ☐ 1 to 3 times per year (Go to Q7)
- ☐ Never (Go to Q7)

7. Which Onondaga County Park do you visit most often?

- ☐ Beaver Lake Nature Center (Go to Q8)
- ☐ Carpenter's Brook Fish Hatchery (Go to Q8)
- ☐ Erie Canalway/Jordan Level Trail (Go to Q8)
- ☐ Highland Forest (Go to Q8)
- ☐ Jamesville Beach Park (Go to Q8)
- ☐ Oneida Shores Park (Go to Q8)
- ☐ Otisco Lake Park (Go to Q8)
- ☐ Pratt's Falls Park (Go to Q8)
- ☐ Rosamond Gifford Zoo (Go to Q8)

8. Why do you visit that park most often? _____ (Go to Q9)

9. Approximately how far to you travel to visit that park? (Go to Q10)

- ☐ Less than 2 miles (Go to Q10)
- ☐ 3 to 4 miles (Go to Q10)
- ☐ 5 to 6 miles (Go to Q10)
- ☐ 7 to 10 miles (Go to Q10)
- ☐ 11 to 15 miles (Go to Q10)
- ☐ 16 to 20 miles (Go to Q10)
- ☐ more than 20 miles (Go to Q10)
- ☐ Don't know (Go to Q10)

10. Have you visited Onondaga Lake Park in the past 12 months?

- ☐ Yes (Go to Q11)
- ☐ No (Go to Q15)

11. How often do you visit an Onondaga Lake Park?

- ☐ 8 or more times per year (Go to Q12)
- ☐ 4 to 7 times per year (Go to Q12)
- ☐ 1 to 3 times per year (Go to Q12)
- ☐ 1 to 4 times per year (Go to Q12)

12. Approximately how far do you travel to visit Onondaga Lake Park?

- ☐ Less than 2 miles (Go to Q13)
- ☐ 3 to 4 miles (Go to Q13)
- ☐ 5 to 6 miles (Go to Q13)
- ☐ 7 to 10 miles (Go to Q13)
- ☐ 11 to 15 miles (Go to Q13)
- ☐ 16 to 20 miles (Go to Q13)
- ☐ more than 20 miles (Go to Q13)
- ☐ Don't know (Go to Q13)

13. How do you most often travel to Onondaga Lake Park?

- ☐ Drive (Go to Q14)
- ☐ Walk (Go to Q14)
- ☐ Bike (Go to Q14)
- ☐ Skate (Go to Q14)
- ☐ Boat (Go to Q14)
- ☐ Public Transportation (Go to Q14)
- ☐ Other (Go to Q14)

14. What activities or events do you participate in at Onondaga Lake Park? (Check all that apply)

- ☐ Exercise (Go to Q15)
- ☐ Recreation (Go to Q15)
- ☐ Events (Go to Q15)
- ☐ Environment (Go to Q15)
- ☐ Sports (Go to Q15)
- ☐ Activities (Go to Q15)
- ☐ Personal/Social (Go to Q15)
- ☐ Work/Education (Go to Q15)
- ☐ Other (Go to Q15)

15. Do you think there are enough beaches available for residents in Onondaga County

- ☐ Yes (Go to Q16)
- ☐ No (Go to Q16)

16. Do you visit any public beaches in the region?

- ☐ Yes (Go to Q17)
- ☐ No (Go to Q21)

17. Which do you visit? (Check all that apply)

- ☐ Jamesville Beach Park (Go to Q18)
- ☐ Oneida Shores Park (Go to Q18)
- ☐ Sylvan Beach (Go to Q18)
- ☐ Williams Beach (Go to Q18)
- ☐ Green Lakes State Park (Go to Q18)
- ☐ Verona Beach Park (Go to Q18)
- ☐ Other (Go to Q18)

18. How often do you visit a beach in the region?

- ☐ 8 or more times per year (Go to Q19)
- ☐ 4 to 7 times per year (Go to Q19)
- ☐ 1 to 3 times per year (Go to Q19)
- ☐ Never (Go to Q19)

19. When you visit a local beach, do you use it for: Check all that apply)

Hanging out on the beach to read, picnic, etc.

- ☐ Wading (Go to Q20)
- ☐ Swimming (Go to Q20)
- ☐ Paddle boarding (Go to Q20)
- ☐ Other (Go to Q20)

20. If there were a beach on Onondaga Lake, would you use it for any of these purposes?

- ☐ Yes (Go to Q21)
- ☐ No (Go to Q21)
- ☐ Don't know (Go to Q21)

21. Following are a few questions regarding Onondaga Lake. The lake has undergone an extensive cleanup process and the restored water body has met New York State standards for swimming for several years.

Upstate Freshwater Institute and Ecologic prepares the Ambient Monitoring Program Annual Reports. The following link contains all the reports and references on the most recent data on swimmability.

<http://www.ongov.net/wep/we15html>.

Do you agree that Onondaga Lake is safe for swimming?

- ☐ Yes (Go to Q22)
- ☐ No (Go to Q22)
- ☐ Don't know (Go to Q22)

22. If you visited Onondaga Lake Park, how likely is it that you and your family would swim in Onondaga Lake?

Zero being "Not at all likely and 10 being "Absolutely likely" _____ (Go to Q23)

23. Following are a few questions for demographic purposes.

What is your age?

- ☐ Less than 25 Go to Q24)
- ☐ 25-34 Go to Q24)
- ☐ 35-44 Go to Q24)
- ☐ 45-54 Go to Q24)
- ☐ 55-64 Go to Q24)
- ☐ 65-74 Go to Q24)
- ☐ 75 and over Go to Q24)
- ☐ Prefer not to say Go to Q24)

24. How many are there in your household?

- ☐ One (Go to Q25)
- ☐ Two (Go to Q25)
- ☐ Three (Go to Q25)
- ☐ Four (Go to Q25)
- ☐ Five (Go to Q25)
- ☐ Six or more (Go to Q25)

25. How many are there in your household under age 6?

- ☐ None (Go to Q26)
- ☐ One (Go to Q26)
- ☐ Two (Go to Q26)
- ☐ Three (Go to Q26)
- ☐ More (Go to Q26)

26. How many are there in your household age 6 to 12?

- ☐ None (Go to Q27)
- ☐ One (Go to Q27)
- ☐ Two (Go to Q27)
- ☐ Three (Go to Q27)
- ☐ More (Go to Q27)

27. How many in your household are age 13 to 19?

- ☐ None (Go to Q28)
- ☐ One (Go to Q28)
- ☐ Two (Go to Q28)
- ☐ Three (Go to Q28)
- ☐ More (Go to Q28)

28. What is your gender

- ☐ Male (Go to Q29)
- ☐ Female (Go to Q29)
- ☐ Prefer not to answer (Go to Q29)

29. Do you, or any persons in your household, have challenges with mobility or special needs?

- ☐ Yes (Go to Q30)
- ☐ No (Go to Q30)
- ☐ Prefer not to say (Go to Q30)

30. What is your household's annual income?

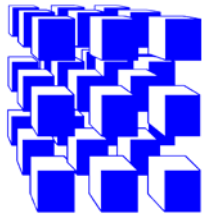
- ☐ Under \$25000 (Go to Q31)
- ☐ Between \$25,000 and \$34,999 (Go to Q31)
- ☐ Between \$35,000 and \$49,999 (Go to Q31)
- ☐ Between \$50,000 and \$74,999 (Go to Q31)
- ☐ Between \$75,000 and \$99,999 (Go to Q31)
- ☐ Between \$100,000 and \$149,999 (Go to Q31)
- ☐ \$150,000 or more (Go to Q31)
- ☐ Prefer not to say (Go to Q31)

31. Would you like to enter our drawing for one of three \$50 Amazon gift cards?

- ☐ Yes (Go to Q32)
- ☐ No (End of survey)

32. Please enter your email address _____ (End of survey)

APPENDIX 6



CME
Associates, Inc.

6035 Corporate Drive
East Syracuse, New York 13057
(315) 701-0522
(315) 701-0526 (Fax)
www.cmeassociates.com

Transmittal

February 10, 2020

Barton & Loguidice, D.P.C.
433 Electronics Parkway
Liverpool, New York 13088

Attn: Mr. John P. Donohue, P.E., Senior Vice President

Re: Onondaga Lake Beach Building Project
Liverpool, New York
CME Project No.: 27610-05

Gentlepeople:

Enclosed you will find....

<u>Number of Copies</u>	<u>Report Number</u>	<u>Description</u>
3	27610B-01-0220	Preliminary Subsurface Exploration and Foundation Report

This report was emailed to Mr. John P. Donohue at jdonohue@bartonandloguidice.com on 02/10/20.

Respectfully submitted,
CME Associates, Inc.

Roonak Ghaderi, Ph.D.
Staff Geotechnical Engineer

RG.cw

Preliminary Subsurface Exploration and Foundation Report

Onondaga Lake Beach Building Project Liverpool, New York

Prepared For: (Client)

Barton & Loguidice, D.P.C.

Attn: Mr. John P. Donohue, P.E., Senior Vice President
433 Electronics Parkway
Liverpool, New York 13088
Phone: 315.410.6656
Email: jdonohue@bartonandloguidice.com

Prepared By: (Geotechnical Engineer)

CME Associates, Inc.

Attn: Ms. Roonak Ghaderi, Ph.D.
and Mr. Anas N. Anasthas, P.E.
6035 Corporate Drive
East Syracuse, New York 13057
Phone: 315.701.0522 Ext. 260
Fax: 315.701.0526
Email: rghaderi@cmeassociates.com

**CME Report No.: 27610B-01-0220
February 10, 2020**

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Attachment Listing:

Conceptual Site Layout Plan, SK-1 (1 of 1)
 Surcharge and Settlement Monitoring Plan, SK-2 (1 of 1)
 CME Exploration Location Plan, ELP-1 (1 of 1)
 GPS Coordinates and Elevation Table (1 of 1)
 CME Subsurface Exploration-Test Boring Log (5 of 5)
 Laboratory Test Summary Report (2 of 2)
 ASCE 7 Hazards Report (3 of 3)
 General Information & Key to Test Boring Logs (4 of 4)

Preliminary Subsurface Exploration and Foundation Report Onondaga Lake Beach Building Project Liverpool, New York

1.0 INTRODUCTION

CME Associates, Inc. (CME) is pleased to provide this Preliminary Subsurface Exploration and Foundation Report for the subject project. CME advanced one Test Boring in January 2020, and conducted laboratory index testing on selected soil samples. The Scope of Basic Services and this report have been provided pursuant to the Agreement between CME and Barton & Loguidice, D.P.C. (Client), for Professional Services, executed on 12/05/19, which incorporates CME Proposal/Agreement Number: 05.5911R(1), dated 11/14/19.

This report provides a summary of subsurface conditions identified in the Test Boring and provides preliminary geotechnical recommendations for the proposed new building, as contracted in the agreement. Providing geotechnical recommendations for all sitework features planned as part of this project are outside of CME's Scope of Basic Services, and are expressly excluded from this report.

It is CME's professional opinion that the subsurface conditions identified in this exploration are not favorable to support the proposed new building utilizing a conventional shallow footing foundation and slab-on-grade system, due to concerns expressed later in this report. Ground improvement by surcharging the building pad will be required to support the proposed new building via a conventional shallow footing foundation and slab-on-grade system.

2.0 PROPOSED DEVELOPMENT

The proposed development will consist of a new single story beach building at the Onondaga Lake Park. No basement is planned. Please refer to the attached *Conceptual Site Layout Plan*, labeled *SK-1*, not dated, provided by Client, for the location of the proposed new building. The finish floor of the proposed building is planned at elevation 372 feet. The building framing will consist of bearing walls and columns, with a concrete slab-on-grade. The maximum factored column and wall loads are 22 kips and 910 pounds per lineal foot, respectively, according to Client.

Existing grade around the proposed building is at an approximate elevation of 367. As shown on the *Conceptual Site Layout Plan*, retaining walls are planned around the proposed building to allow for the raising of surrounding grades.

Please review the above information and let us know, in writing, if any of the above information is incorrect.

3.0 EXPLORATION METHODOLOGY

3.1 Exploration Layout and Utility Clearance

One Test Boring, labeled B-1, was advanced at the subject project site. The Boring location was staked in the field by CME. Please refer to the attached *Exploration Location Plan*, labeled ELP-1, for approximate location of the Test Boring. CME contacted Dig Safely New York (DSNY) to clear public utilities at the Test Boring location. No utility conflict was noted at the exploration location.

Elevation at grade and GPS coordinates at the Boring location were determined by CME using hand-held GPS Survey Equipment. Please refer to the attached *GPS Coordinates and Elevation Table*, for details.

3.2 Test Boring

The Test Boring was advanced using a Central Mine Equipment Model 550X, ATV mounted, rotary exploration drill rig, equipped with 3-1/4" I.D. hollow stem augers and drive sampling tools. Soil sampling was conducted using a 140-pound automatic hammer dropping through a distance of 30 inches to drive a 2" O.D. split barrel sampler in general conformance with ASTM Standard Practice D1586. Upon completion, the borehole was backfilled with auger cuttings to closely match existing grade.

The Test Boring samples were logged and visually classified in the field by the undersigned Engineer and/or the driller, and a portion of each soil sample was placed and sealed in a glass jar. The soil classifications were later reviewed by the undersigned Engineer in CME's AASHTO re:source¹ Accredited East Syracuse Laboratory using the modified Burmister Soil Classification System, as described in the attached document, entitled *General Information & Key to Test Boring Logs* (Key).

3.3 Laboratory Testing

The undersigned Engineer selected soil samples for laboratory testing in CME's East Syracuse Laboratory. The ASTM Standard Methods used, and the test results are presented in the attached *Laboratory Test Summary Report*.

4.0 SUBSURFACE CONDITIONS

The subsurface conditions presented herein have been generalized for simplicity and brevity by the CME Geotechnical Engineer from the actual data presented on the attached *Test Boring Log*. Please refer to said log for actual conditions encountered at the time, location and elevation of each sample obtained. It is possible for the subsurface conditions between sampling intervals to vary from those expressed in this section or on the *Test Boring Log*.

4.1 Surface Conditions and Subsurface Profile

The limited subsurface exploration conducted for this project consists of one Test Boring, which was advanced near the center of the proposed building footprint. The Test Boring identified approximately 2 to 3 inches of Topsoil and Organic Matter at grade.

Below surfacings, the Test Boring penetrated Lacustrine (Lakebed) Deposits, consisting of Marl, underlain by Silt and Clay, to boring termination depth. A brief description of each stratum is given below.

Marl: Below Surfacings, the Test Boring penetrated Marl to about 50 feet below existing grade. Based on Standard Penetration Testing (SPT), the Marl is very soft to soft in consistency. Lenses of Silt and Peat were also sampled within this stratum at random depths.

Marl is a mixture of sea shells, silt, sand, clay and calcium carbonate formed under marine conditions. Marl is white or light grey in color and is sometimes layered or mixed with Peat. Marl has a low specific gravity and is lightweight. Marl varies from sand-sized grains to clay-sized grains and is sometimes slightly plastic to plastic due to Organic Silt or Clay content.

¹ **AASHTO re:source** – American Association of State Highway & Transportation Officials (AASHTO) Materials Reference Laboratory, a Federal Agency having jurisdiction to assess laboratory competency according to the Standards of the United States of America. CME East Syracuse accreditation includes testing of Portland Cement Concrete, Aggregate and Soil Materials. www.AASHTOresource.org.

Marl is typically saturated and compressible. Laboratory testing, consisting of Natural Moisture Content, Atterberg Limits, Organic Content and Specific Gravity Testing, was conducted on selected samples retrieved from the Marl Layer. The laboratory testing resulted in Natural Moisture Contents ranging from about 46% to 82% and Liquid Limits ranging from 53 to 62. The laboratory testing shows that the Natural Moisture Content of this Marl is close to or above its Liquid Limit, which indicates that the Marl is in a thick fluid-like state and exists in a Normally Consolidated State. A Normally Consolidated State means that these soils have not felt past pressure greater than the current overburden pressure (pressure currently above it).

Marl at this site is highly susceptible to compression and consolidation under new loads imposed, and is not a suitable bearing soil for foundations, floor slabs and other sitework features (such as pavements, retaining walls, ramps, stairs, sidewalks, etc.). Structures and improvements constructed to bear over this stratum will undergo significant long-term settlement.

Silt and Clay: Below Marl, the Test Boring penetrated layers of Clayey Silt and Silty Clay. This stratum was penetrated to Boring termination depth (100 feet). Based on Standard Penetration Testing (SPT), this Stratum is soft to stiff in consistency.

Laboratory testing, consisting of Natural Moisture Content and Atterberg Limits Testing, was conducted on selected samples retrieved from this stratum. The laboratory testing resulted in Natural Moisture Contents ranging from about 20% to 24%, and a Liquid Limit of 23. The Natural Moisture Content of the samples tested is close to or above the Liquid Limit, which indicates that these soils are in a thick fluid-like consistency and exist in a Normally Consolidated State. These soils are susceptible to consolidation under new loading, leading to long-term settlement of improvements constructed above it.

4.2 Groundwater Observations

Groundwater level observations and measurements are made by the CME field crew when groundwater accumulates in the Borehole. CME notes water level inside the borehole during advancement and following casing (auger) removal. CME also notes the visual appearance of the moisture condition of the samples as retrieved. The condition and time of groundwater level observations are unique to each Boring, time and date, and are recorded on the individual Test Boring Log.

While drilling, wet soils were sampled starting from about 2 feet below existing grade, corresponding to about elevation 365, indicative of possible groundwater level at the time of CME's exploration in January 2020. However, groundwater was observed in Boring B-1 at a depth of 31 feet below existing grade, corresponding to about elevation 336 feet. Please note, the Marl Stratum has low permeability and groundwater may not have accumulated and stabilized in the borehole during the short duration of this exploration. Groundwater level at this site is likely at the level of the adjacent Onondaga Lake.

Groundwater fluctuations at this site will occur depending on several factors, such as rainfall, seasonal changes, Onondaga Lake level, prevailing climate, and adjacent construction operations, among other factors.

4.3 Expansive Soils

Based on CME's visual naked-eye classification of the soil samples retrieved from the explorations and the definition of "Expansive Soil" given in Section 1803.5.3 of the Building Code², soils exhibiting potentially expansive character were encountered by this exploration program.

² Building Code = NYS Amended 2015 IBC

Marl and Silt and Clay soils present at this site, are potentially expansive. However, significant change in moisture condition in these soils is not anticipated after the completion of proposed construction. Also, the finish floor of the proposed building is planned at elevation 372, which will require placement of about 5 feet of Structural Fill to raise grades. This will increase the overburden pressure on the underlying potentially expansive soils. Therefore, it is CME's professional opinion that foundation and slab heave due to soil expansion is not a concern for the proposed new building.

4.4 Site Class

Based on a computational analysis using the information from the CME Test Boring and the Building Code Section 1613, which references Chapter 20 of ASCE 7, the subject project site is defined as a "Soft Clay Soil" profile, representative of a Site Class "E". The Test Boring did not encounter soils vulnerable to liquefaction, sudden collapse or failure under seismic loading conditions.

According to Client, the proposed building is considered Risk Category II, Non-essential Facility. Please refer to the attached *ASCE 7 Hazards Report* for Design Spectral Response Curves for Risk Category II, Non-essential Structures.

5.0 GEOTECHNICAL RECOMMENDATIONS

5.1 General Foundation Considerations

Subsurface conditions at the subject project site are not favorable for the proposed construction. The Marl present at this site is highly compressible and is present from below Topsoil surfacing to about 50 feet depth. The soft Silt and Clay soils present below the Marl stratum is also compressible. Please refer to Report Section 4.1 for a description of material characteristics and their engineering significance relative to the proposed new construction. The Marl stratum and the underlying soft soils are highly susceptible to compression and consolidation under the weight of the new Fill planned to be placed to raise grade, as well as the weight of the proposed building. This will result in significant post construction settlements to the proposed building.

Obtaining undisturbed Shelby tube samples (required for One-Dimensional Consolidation Testing) from the Marl stratum was not feasible, due to its near-liquid consistency. Marl samples retrieved via split-spoon samples were observed to be in a runny, thick liquid consistency. Therefore, conducting One-Dimensional Consolidation testing on Marl samples, which is required to obtain consolidation parameters for a detailed settlement analysis, was not an option. Therefore, CME conducted soil index testing on split-spoon samples retrieved from the Marl stratum, to estimate soil properties to calculate ballpark order of magnitude of settlement. Based on the estimated consolidation soil parameters, consolidation settlement of the Marl stratum, under the weight of the new Structural Fill alone, is estimated to be on the order of 2 feet or more.

CME understands that a foundation system consisting of piles and structurally supported slab was considered by the Design Team. The soil profile at this site to 100 feet depth does not exhibit a competent/dense stratum to utilize end bearing piles. Further, friction piles may not be feasible or desirable at this site due to significant downdrag loads on piles, which will result from negative skin friction. Negative skin friction occurs when soils in contact with the pile settles, which drags the pile down as settlement of subsurface soils occur under the weight of the new Structural Fill. Therefore, supporting the proposed building utilizing piles and structural slab is not a favorable/feasible option for this project, with site grades planned to be raised. It should be noted that a foundation system consisting of piles and structural slab may be considered if site grades are not raised and a crawl space is utilized under the building.

Subgrade improvement via a Surcharge Program may be considered to mitigate the settlement concerns discussed earlier, and to be able to utilize a shallow footing foundation and slab-on-grade system to support the proposed building. Under this approach, the permanent Structural Fill will be installed to proposed finish floor elevation of the building, and then a temporary surcharge load above it. The temporary surcharge load will remain for a period until the rate of settlement has approached zero. The temporary surcharge will then be removed, and the building pad will be released for general construction. A conventional shallow footing foundation and slab-on-grade may then be utilized to support the proposed building. Some post construction settlement will still occur long term, at a relatively slower rate.

A conference call was convened with representatives of Client and Popli Design Group (Popli) and the undersigned engineers to discuss the above-mentioned geotechnical concerns and foundation considerations. Client and Popli elected to support the proposed building utilizing a conventional shallow footing foundation and slab-on-grade system, after Ground Improvement via a Surcharge Program.

This report presents preliminary recommendations for shallow footing foundations, assuming a Surcharge Program will be implemented, as recommended in this report. The Surcharge Program shall be implemented as early as practical to allow for maximum surcharge period (wait period) between completion of Surcharge Fill placement and removal of Surcharge Fill. CME recommends that the building pad construction and Surcharge placement occur at least two years prior to start of general construction. CME also recommends all Fill placement planned in the sitework areas be completed at least two years prior to general construction, to lessen the risk of excessive post construction grade settlements in the sitework areas.

5.2 Surcharge Program

Please refer to the attached Surcharge and Settlement Monitoring Plan for the limits of building pad and temporary surcharge. The building pad preparation and installation of temporary surcharge should commence as early as possible to allow for maximum surcharge period before the building pad can be released for foundation construction.

The building pad preparation, installation of Settlement Monitoring Gauges, Permanent Structural Fill placement, Temporary Surcharge Fill placement, and Settlement Monitoring Program shall take place in CME's presence and under the direct supervision of the CME Professional Geotechnical Engineer (PGE). Please contact CME at least two weeks prior to start of building pad earthwork to schedule CME to examine and approve exposed grades within the building pad and to install Settlement Gauges, prior to placement of Permanent Structural Fill. Please refer to the attached Surcharge and Settlement Monitoring Plan, labeled SK-2, for details of this program.

Building Pad preparation requires removal of surficial topsoil and organic matter from within the building pad. Following removals, the exposed grade shall be probed and examined by the CME PGE. The CME PGE shall delineate any unstable grades and direct remediation procedures, if required.

Following grade approval by the CME PGE, a Crushed Stone Pad of minimum 18" in thickness shall be installed. The Crushed Stone Pad shall consist of a 50/50 blend of NYSDOT Size Designation Number 1 and Number 2 Crushed Stone, placed over a stabilization geotextile (such as Mirafi 500X, or approved equal), and compacted using a plate type compactor making 3 overlapping passes. This Crushed Stone Pad is intended to provide a stable platform for the installation of the Permanent Structural Fill.

After the Crushed Stone Pad is installed and approved by CME PGE, permanent Structural Fill (consisting of Lightweight Sand Fill) placement may commence to achieve finish floor elevation of the proposed building. A separation geotextile (such as Mirafi 140N or approved equal) shall be placed between the Crushed Stone Pad and Permanent Structural Fill. Structural Fill shall be placed in 10 to 12 inch thick lifts, with each lift compacted to 93% to 95% of Maximum Dry Density (MDD), as determined by ASTM D698. One passing in-place density test per lift per 1000 square feet of the area, with a minimum of 3 passing in-place density tests per lift, shall be achieved.

Temporary Surcharge Fill placement shall occur at least 1 week after completion of the Permanent Structural Fill placement. Conduct in-place density testing on surcharge fill lifts to verify a minimum of 400 psf of surcharge (based on dry density) is installed. Temporary Surcharge Fill will remain in-place for about 1 to 2 years, after completion of surcharge installation. Actual surcharge period will be determined by the CME PGE, based on the settlement monitoring results. After the required surcharge period has been achieved, the Temporary Surcharge Fill may be removed. CME recommends that the Temporary Surcharge Fill consist of NYSDOT Type 2 or Type 4 (NYSDOT Item No. 304.12 or Item No. 304.14) Subbase Course material, so that this material may be re-used at this site as subbase under new pavements and slab-on-grade.

Foundation excavation shall commence only after the building pad has been released for foundation construction, by the CME PGE.

Please refer to Report Sections 5.6 and 5.7 for recommendations on Building Pad Structural Fill material, placement and quality control testing.

5.3 Footing Foundations

Foundation recommendations are provided presuming that the building pad will be prepared as outlined in Report Section 5.2 and that the required surcharge period will be allowed prior to start of foundation excavation. Also, the proposed site retaining walls planned around the proposed building shall be installed and backfilled prior to excavating for building foundations.

Excavation for retaining wall foundations will likely encounter groundwater, depending on the time of the year the excavation takes place. Please refer to Report Section 4.2 and the attached *Boring Logs* for groundwater information. Please note, wet soils were sampled starting from about elevation 365, indicative of possible groundwater level at the time of CME's exploration in January 2020. The contractor shall provide a satisfactory construction dewatering system to make and maintain foundation excavations in-the-dry, until completion of foundation construction and backfilling. CME recommends that the groundwater level be lowered to at least 2 feet below the deepest plan excavation.

All footing foundations for the retaining walls shall bear on a Crushed Stone Pad of minimum 12" in thickness, which is placed over inorganic, native soil examined and approved by the CME PGE. The Crushed Stone Pad shall consist of a 50/50 blend of NYSDOT Size Designation Number 1 and Number 2 Crushed Stone, enveloped in a soil separator fabric (such as Mirafi 140N or equivalent approved product) and compacted using a small walk-behind plate tamper making 3 overlapping passes. All footing foundations for the proposed building shall bear on the Permanent Structural Fill or the Crushed Stone Pad installed during building pad construction, after examination and approval by the CME PGE.

Footing foundations bearing on Permanent Structural Fill or on a Crushed Stone Pad installed as outlined above may be designed using a Presumptive Soil Bearing Pressure of 1,000 psf. Minimum footing width shall be 2 feet for continuous strip footings, and 5 feet for isolated spread footings.

For footings bearing on a minimum of 12" of Crushed Stone Pad or Permanent Structural Fill, CME recommends a minimum frost cover of 4 feet, measured from bottom of footing to adjacent finish grade.

Footing foundations installed in accordance with this report's recommendations are predicted to settle less than about 2 inches. Differential settlement between adjacent spread footings is predicted to be less than about 1 inch. Approximately half of this settlement is expected to occur within about one year after construction. The remaining settlement is expected to occur over a period of about 5 years after that.

5.4 Lateral Earth Pressure

It is CME's understanding that cantilever retaining walls are planned around the proposed building.

Lateral earth pressure recommendations given below assume that the walls will be backfilled with Lightweight Sand Fill, backfill material and placement will conform to recommendations given in Sections 5.6 and 5.7 of this report, and that adequate amounts of weep holes will be installed in the walls to prevent hydrostatic pressure build up.

Active earth pressure may be calculated using an equivalent active fluid pressure of 40 pcf. Passive earth pressure within 3 feet of finish grade shall not be relied upon. Passive earth pressure below 3 feet of finish grade may be calculated using an equivalent passive fluid pressure of 250 pcf.

Permanent vertical surface surcharge loads shall also be considered in the lateral earth pressure analysis. The surface surcharge pressure may be translated to horizontal pressure by using a 0.25 (25%) factor with the resultant rectangular distribution applied to a depth equal to the width of the surcharge.

A Friction Factor of 0.3 (no factor of safety applied) may be used to calculate sliding resistance between concrete footing and bearing surface.

5.5 Fill & Backfill

All Structural Fill and Backfill below plan subgrade elevation and within the building pad, under slabs and sidewalks shall consist of Lightweight Sand Fill.

Maximum Dry Density of Lightweight Sand, as determined by ASTM D698 (Standard Proctor) shall not exceed 110 pcf, and the material gradation shall conform to the following:

<u>Particle Size Designation</u>	<u>Percent Passing by Dry Weight</u>
1/4"	100
#40	0 - 50
#200	0 - 10

Lightweight Sand Fill material data submittal shall be reviewed and approved by the CME PGE, prior to ordering the material. The minimum requirements for a prequalification submittal shall include the following test results which are not more than 2 months old:

- ✓ Sieve Analysis – ASTM D422
- ✓ Moisture-Density Relationship – ASTM D698

5.6 Filling & Backfilling Execution

CME recommends that all filling and backfilling to occur on this project be accomplished in a workmanlike manner according to good industry practice. All filling and backfilling shall be installed in a quality-controlled manner with prequalified materials, with quality assurance structural tests and inspections conducted at regular intervals according to the Building Code Chapters 17 and 18, and consistent with the following methodology.

1. The grade to receive fill shall be dry, free of mud, water and loose or frozen material. The grade shall be proofrolled, inspected and deemed satisfactory by the CME PGE prior to placement of fill.
2. Fill material shall be placed on satisfactory grade, in a manner to minimize segregation. The fill shall be placed in nearly horizontal lifts commencing at the lowest fill area elevation and proceeding with each lift upward and outward from the lower lift.
3. The moisture content of the material shall be adjusted prior to application of compaction such that it is within 3% of the Optimum Moisture Content. This procedure may involve adding water when the fill material is too dry or discing and aerating to reduce moisture when the fill material is too wet.
4. The compacted lift thickness and minimum in-place field density shall conform to the recommendations provided in Table 1.

Table 1: Structural Fill Compaction and Lift Thickness Recommendations		
Percent Compaction	Range of Compacted Lift Thickness (inches)	Fill Area Description
93% to 95% (Note 1)	10 to 12	Mass-Fill areas.
93% to 95% (Note 1)	6 to 8	Confined areas such as utility trenches and foundation backfill.
95% (Note 2)	10 to 12	Subbase Course under slabs and pavements.
1. Based on Maximum Dry Density, as determined using ASTM D698, Standard Proctor. 2. Based on Maximum Dry Density, as determined using ASTM D1557, Modified Proctor		

5. When the test results indicate that insufficient compaction has been obtained in any layer, the Contractor shall take action to modify or alter the moisture content of the soil, provide additional compaction or make other adjustments to increase the in-place soil density. If the Contractor cannot obtain satisfactory compaction due to material properties, the Contractor shall remove the unsatisfactory material and replace with new material.
6. Materials which are frozen, or which include mud, debris, organics or other deleterious materials shall be removed and replaced with clean specified material.
7. No fill shall be placed over an area or lift of fill that has not been tested and achieved satisfactory results.

6.0 SOIL SPECIAL INSPECTION

In addition to the Geotechnical Engineering Observation and Inspection specified previously in this Report, the Building Code requires special inspection and tests for all structural fill, backfill, concrete and reinforcement of the geotechnical constructions proposed for this project.

6.1 Accredited Testing Agency Required

CME recommends that the Testing Agency providing special inspections and structural tests be Accredited by a Nationally Recognized Authority (such as: AASHTO Re:source, A2LA or NVLAP) to demonstrate compliance with ASTM E329-14a to conduct soil, aggregate and concrete materials testing. All testing and inspection staff must possess current credentials and nationally recognized certification or licensure which is applicable to the specific material and construction element that they are inspecting and/or testing.

6.2 Required Inspections & Tests of Soils

The CME PGE and the *2015 New York Amended International Building Code (IBC)* require special inspections and structural tests to test and verify site preparation, fill placement and foundation load-bearing requirements, in addition to the special inspections of reinforced concrete foundation and slab elements specified in IBC Table 1705.3. CME has prepared Table 2 to satisfy the provisions of the IBC and this report.

Table 2: Onondaga Lake Beach Building Project, Liverpool, New York Schedule of Foundation Special Inspection & Structural Testing	
Verification, Test and Inspection Description	Required Frequency and Inspector Qualification
1. Prior to placement of any fill, verify complete removal of Topsoil, Organic Matter and other deleterious materials.	Continuously as grades are exposed by CME PGE.
2. Perform classification and testing of controlled fill material.	Continuously by NICET Certified Technician or ICC.
3. Verify use of proper material, density and lift thickness during placement and compaction of controlled fill.	Continuously by NICET Certified Technician or ICC. One passing in-place density test per lift per 2500 square feet of the area.
4. Observe installation of Settlement Monitoring Gauges, monitor settlement, interpret data, determine surcharge period and release building pad for foundation excavation.	Continuously during building pad preparation and surcharge period by CME PGE.
5. Verify that foundation excavations are extended to proper depth and have reached satisfactory soil and witness the installation of Crushed Stone Pad.	Continuously as grades are exposed by CME PGE.
6. Verify that the bearing grade is adequate to achieve the design bearing capacity.	Continuously as grades are exposed by CME PGE.
Geotechnical Report = Subsurface Exploration and Foundation Report by CME Associates, Inc., CME Report No. 27610B-01-0220. IBC = 2015 New York Amended International Building Code. PGE = Professional Geotechnical Engineer, a NY licensed P.E., with a minimum of 5 years of practical field experience. NICET = National Institute for Certification in Engineering Technologies. A Level II Certified Engineering Technician in Soil Construction Materials. ICC = International Code Council - Soil Special Inspector. The Testing Agency providing these Special Inspections and Structural tests shall be Accredited to demonstrate compliance with ASTM E329-14a to conduct soil and aggregate materials testing.	

7.0 OTHER IMPORTANT CONSIDERATIONS

CME provides the information in this section for those using our reports, so they may acquire a better understanding of geotechnical engineering professional practice and the limitations associated with its application to this and other projects.

7.1 Changes to the Project

CME has described in Report Section 2.0 our understanding of the proposed development at the time this report is published. It is anticipated that the preliminary plans may change during design phase. Substantial changes consist of many items such as, but not limited to; bearing elevation, floor elevation, planned depth of cuts or fills, decrease or increase in design loads, structure footprint growth or shrinkage, structure location movement, time period of construction (compression or relaxation), and addition or deletion of sublevel (basement or crawlspace) area, among others.

Please advise CME of substantial changes so CME can evaluate the continued applicability of the analyses and recommendations given in this Report. It will help reduce project risks, could save you time and money, and result in a higher quality construction project.

7.2 Review of Plans & Specs

CME recommends that it be afforded the opportunity to review the Plans and Specifications, prepared pursuant to this Report, prior to Bidding. This review will help to verify that a correct interpretation of CME's recommendations and design intent given in this Report are implemented and incorporated into the Construction Documents. Since CME is not aware of the project schedule, it is the responsibility of the Client to forward the applicable construction contract documents to CME for review. Please allow at least 5 business days for CME to complete the review and issue a report of comments and findings.

7.3 Construction Phase Geotechnical Services

The analysis and recommendations contained in this report are preliminary and are based on the specific data obtained from the limited subsurface explorations referenced in this report. The explorations indicate subsurface conditions only at the specific locations and times, and only to the depths penetrated. The validity of the recommendations is based in part on CME's assumptions about the stratigraphy, as well as, information about the proposed development provided by others. CME's assumptions may be confirmed only during earthwork and foundation construction operations.

The recommendations made in this report are based on the "Observational Method". The Observational Method ensures continuity from the design to the construction and has been at the heart of many successful construction projects. It relies upon extensive use of monitoring and observational procedures during the construction. Construction monitoring allows CME to take advantage of conditions more favorable than those anticipated based on the subsurface exploration program. It often provides for timely warning when conditions are less favorable, allowing for changes or alterations to be made before a problem shows itself in newly completed construction. Therefore, it is recommended that CME be retained to provide Construction Phase Observation and the Soil and Foundation Special Inspections.

It is very important to point out that CME's engineering recommendations given in this Report are premised upon CME being retained to provide Construction Phase Geotechnical Engineering Observation as they relate to earthwork, filling and backfilling, and foundation installations. If others are retained to provide construction phase observation, a complete understanding, interpretation or execution of CME's reported recommendations may not occur. CME will not assume responsibility for the performance of the structures, slabs and pavements when CME is not providing the construction phase observation.

8.0 STANDARD OF CARE AND WARRANTY

CME has endeavored to conduct the services identified herein in a manner consistent with that level of care and skill ordinarily exercised by members of the geotechnical engineering profession currently practicing in the same locality and under similar conditions as this project. No warranty, either express or implied, is made or intended by CME's proposal, contract, and written and oral reports, all of which warranties are hereby expressly disclaimed. CME shall not be responsible for the acts or omissions of Client, its contractors, agents and consultants. CME has relied upon information supplied by Client, its contractors, agents and consultants, or information available from generally accepted reputable sources, without independent verification, and CME assumes no responsibility for the accuracy thereof.

9.0 CLOSING COMMENTS

In accordance with CME's Subcontract for Geotechnical Services, CME will dispose of all unconsumed samples sixty (60) days after submission of this report. All consumed samples were disposed of immediately after test completion. If you would like to keep the unconsumed samples for a longer time period, please email a request to do so, within five (5) business days from the date of this report to Cristina White, cwhite@cmeassociates.com.

Please do not hesitate to contact our office if you have any questions regarding this report, its conclusions, its recommendations, or its application to actual field conditions revealed during construction.

Respectfully Submitted,
CME Associates, Inc.

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Roonak Ghaderi, Ph.D.
Staff Geotechnical Engineer

RG.cw

Reviewed By,
CME Associates, Inc.

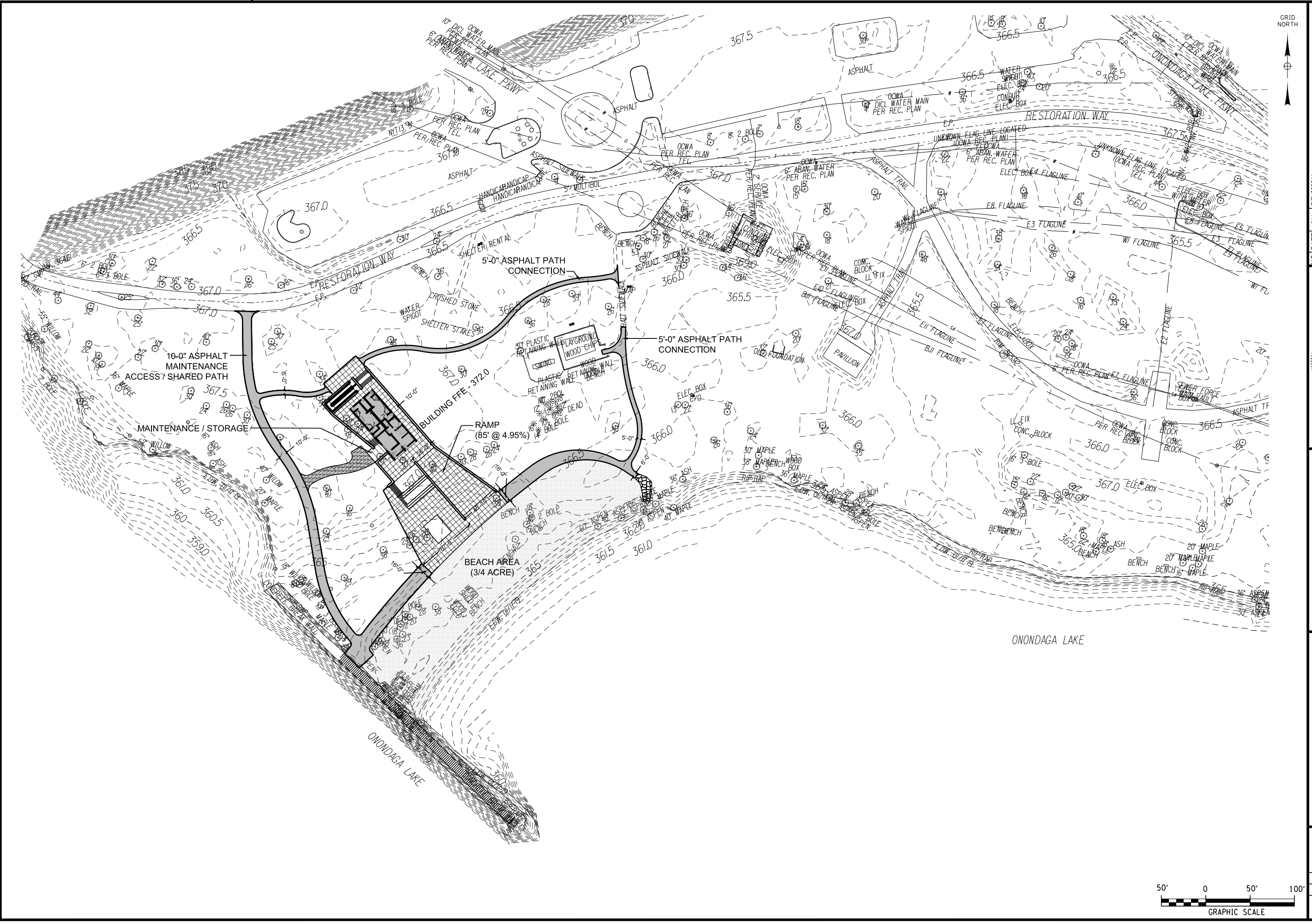
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Anas N. Anasthas, P.E.
Senior Geotechnical Engineer

JBN
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IN CHARGE OF _____ DESIGNED BY _____ CHECKED BY _____ ESTIMATED BY _____ CHECKED BY _____ DRAFTED BY _____ CHECKED BY _____



 ONONDAGA COUNTY		Barton & Loguidice UNAUTHORIZED ALTERATION OR ADDITION TO THIS DRAWING IS A VIOLATION OF THE NEW YORK STATE EDUCATION LAW ARTICLE 145 SECTION 7209		82	
ONONDAGA COUNTY ONONDAGA LAKE BEACH		ONONDAGA COUNTY		CONCEPTUAL SITE LAYOUT	
				SCALE: AS SHOWN	
				DATE ISSUED:	
				DRAWING SK-1	



Onondaga Lake Beach Building Project, Liverpool, New York

8. Foundation excavation shall commence only after the building pad has been released for foundation construction, by the CME PGE.

6. The CME PGE shall review the settlement data and determine when the building pad can be released for removal of Surcharge and foundation construction.

CME EXPLORATION LOCATION PLAN ELP-1

Onondaga Lake Beach Building Project
Liverpool, New York

Attachment to CME Report No. 27610B-01-0220

Legend

- B-1: Approximate Boring Location
- ▲ REF-1: Reference Point

New York State Thruway (Toll road)

REF-1 ▲

● B-1

GPS Coordinates and Elevations Table
Onondaga Lake Beach Building Project
Liverpool, New York

Boring ID	Latitude	Longitude	Elevation (FT. AMSL)
B-1	43.11575694	-76.24124543	367.2
REF-1	43.11617238	-76.24084321	366.8

Notes:

AMSL: Above Mean Sea Level

GPS coordinates were obtained utilizing a Spectra Precision Ranger 3 GPS Survey equipment.

NYSDOT CORS positions are based on NAD 83 (2011).

Elevations are based on the North American Vertical Datum of 1988 (NAVD 1988).

An additional reference point elevation was determined at the following location:

1) REF-1: the top of the platform beneath a water spigot located to the northwest of the playground area in the park.

SUBSURFACE EXPLORATION – TEST BORING LOG

Project: Onondaga Lake Beach Building Project, Liverpool, NY							Report No.: 27610B-01-0220			
Client: Barton & Loguidice, DPC							Date Started: 01/20/20		Finished: 01/21/20	
Location of Boring: See Exploration Location Plan							Elevation of Surface of Boring: 367.2'			
METHODS OF INVESTIGATION							GROUND WATER OBSERVATIONS			
Casing: 3-1/4" ID H. Stem Auger			Driller: Beau Fletcher				Date	Time	Depth	Casing At
Casing Hammer:			Driller: Ryan Casatelli							
Other:			Inspector: R. Ghaderi, Ph.D.				01/20/20	While drilling	31.0'	90.0'
Soil Sampler: 2" OD Split Barrel			Rod Size: AWJ				01/21/20	Before casing removed	31.0'	100.0'
Sampler Hammer: Wt. 140 lbs.			Fall: 30 in.				01/21/20	After casing removed	3.0'	out
Make & Model of Drill Rig:			CME 550X ATV Mounted				01/21/20	After casing removed	caved @ 36.5'	out
LOG OF BORING SAMPLES							CLASSIFICATION OF MATERIAL			
Depth Scale (Feet)	Casing Blows/ Foot	Sample I.D.	Depth of Sample (Feet)		Sample Type/ Recovery (Inches)	Blows On Sampler Per 6 inches	Depth Of Change (feet)	c – coarse m – medium f – fine		SPT "N" or RQD
			From	To				and – 35 to 50 % some – 20 to 35 % little – 10 to 20 % trace – 0 to 10 %		
0	XXX	1A	0.0	0.2	SS/12	2-2-2-2	0.2	Topsoil (moist)		4
		1B	0.2	0.7			Brown SILT, little cmf SAND, ROOTS (moist, medium stiff)			
	H	1C	0.7	2.0	SS/24	1-1-1-1	0.7	Light Gray MARL (moist, medium stiff) Light Gray MARL with sea shells (wet, soft)		2
		O	2	2.0				4.0		
	5	L	3A	4.0	5.6	SS/16	2-1-2-1		Brown SILT, little cmf SAND, ROOTS (wet, soft)	
O										
W		3B	5.6	6.0	SS/24	WH-WH-1-1		Light Gray MARL with PEAT (wet) Light Gray MARL with Dark Brown SILT (wet, soft)		1
		4	6.0	8.0						
10		S	5A	8.0	9.2	SS/16	WH-WH-WH-WH		Dark Brown SILT, little ORGANIC MATERIAL (wet, very soft) Light Gray MARL (wet, very soft)	
	5B		9.2	10.0						
	T	6	10.0	12.0	SS/24	WH-WH-WH-WH		Beige MARL with sea shells (wet, very soft)		0
		E								
	15	M	7	12.0	14.0	SS/24	WH-WH-WH-WH		Similar as above (wet, very soft)	
A			8	14.0	16.0					
U								Similar as above (wet, very soft)		0
		G								
20		E								
	R		9	18.0	20.0				SS/24	WH-WH-WH-WH
Continued on page 2										

SS – Split Spoon, U – Undisturbed Tube, C – Core, WH – Weight of Hammer, WR – Weight of Rod

Remarks:

LOG OF BORING SAMPLES							CLASSIFICATION OF MATERIAL			
Depth Scale (Feet)	Casing Blows/ Foot	Sample I.D.	Depth of Sample (Feet)		Sample Type/ Recovery (Inches)	Blows On Sampler Per 6 inches	Depth Of Change (feet)	and – 35 to 50 % some – 20 to 35 % little – 10 to 20 % trace – 0 to 10 %		SPT “N” or RQD
			From	To				c – coarse m – medium f – fine		
20	H O L L O W S T E M A U G E R	10	23.0	25.0	SS/24	WH-WH-WH-WH		Continued from page 1		0
25								Light Gray MARL with sea shells (wet, very soft)		
30		11	28.0	30.0	SS/24	WH-WH-WH-WH		Similar as above (wet, very soft)		0
35		12	33.0	35.0	SS/24	WH-WH-1-1		Similar as above (wet, very soft)		1
40		13A	38.0	39.5	SS/24	WH-WH-WH-WH		Similar as above (wet, very soft)		0
		13B	39.5	40.0				Light Gray MARL with sea shells and SILT (moist, very soft) Continued on page 3		

SS – Split Spoon, U – Undisturbed Tube, C – Core, WH – Weight of Hammer, WR – Weight of Rod

Remarks:

LOG OF BORING SAMPLES							CLASSIFICATION OF MATERIAL				
Depth Scale (Feet)	Casing Blows/ Foot	Sample I.D.	Depth of Sample (Feet)		Sample Type/ Recovery (Inches)	Blows On Sampler Per 6 inches	Depth Of Change (feet)	c – coarse m – medium f – fine	and – 35 to 50 % some – 20 to 35 % little – 10 to 20 % trace – 0 to 10 %	SPT “N” or RQD	
			From	To							
40	H O L L O W	14	43.0	45.0	SS/24	WH-WH-WH-WH		Continued from page 2		0	
45								Light Gray MARL with sea shells (wet, very soft)			
50		S	15A	48.0	49.3	SS/24	2-3-3-5	49.3	Light Gray MARL with sea shells (wet, medium stiff)		6
		T	15B	49.3	50.0	Grey SILT and MARL, trace CLAY (wet, medium stiff)					
55	E M A U G E R	16	58.0	60.0	SS/22	2-2-1-1				3	
60								Continued on page 4			

SS – Split Spoon, U – Undisturbed Tube, C – Core, WH – Weight of Hammer, WR – Weight of Rod

Remarks:

LOG OF BORING SAMPLES							CLASSIFICATION OF MATERIAL			
Depth Scale (Feet)	Casing Blows/ Foot	Sample I.D.	Depth of Sample (Feet)		Sample Type/ Recovery (Inches)	Blows On Sampler Per 6 inches	Depth Of Change (feet)	and – 35 to 50 % some – 20 to 35 % little – 10 to 20 % trace – 0 to 10 %		SPT “N” or RQD
			From	To				c – coarse m – medium f – fine		
60	H O L L O W	17	68.0	70.0	SS/14	WH-WH-3-4		Continued from page 3		3
65										
70	S T E M A U G E R	18	78.0	80.0	SS/20	6-5-5-6		Brown/Grey SILT, trace fine SAND (wet, soft)		10
75										

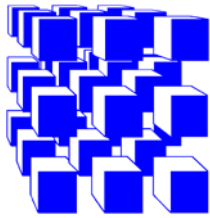
SS – Split Spoon, U – Undisturbed Tube, C – Core, WH – Weight of Hammer, WR – Weight of Rod

Remarks:

LOG OF BORING SAMPLES							CLASSIFICATION OF MATERIAL			
Depth Scale (Feet)	Casing Blows/ Foot	Sample I.D.	Depth of Sample (Feet)		Sample Type/ Recovery (Inches)	Blows On Sampler Per 6 inches	Depth Of Change (feet)	c – coarse	and – 35 to 50 %	SPT “N” or RQD
			From	To				m – medium	some – 20 to 35 %	
80	H O L L O W	19	88.0	90.0	SS/20	6-7-7-5		Continued from page 4		14
85										
90										
	A U G E R							Brown/Grey SILT, trace fine SAND (moist, stiff)		
95										
	XXX							40.0’ of material blown up in augers. Augered to 100.0’, no change. Terminated boring at 100’.		
100										
								Bottom of Boring @ 100.0'		

SS – Split Spoon, U – Undisturbed Tube, C – Core, WH – Weight of Hammer, WR – Weight of Rod

Remarks:



LABORATORY TEST SUMMARY
Onondaga Lake Beach Building Project, Liverpool, New York
CME Report No.: 27610L-01-0220
February 4, 2020
Page 1 of 2

CME Representatives obtained soil samples from Test Borings advanced as part of the Subsurface Exploration Program conducted for the subject project. Selected samples were delivered to CME's East Syracuse facility, an AASHTO re:source¹ accredited laboratory for various laboratory testing. The results are presented below:

Sample ID Notations: B - Test Boring, S – Sample

I. Natural Moisture Content (ASTM D2216)

Sample ID	Natural Moisture (%)	Sample ID	Natural Moisture (%)
B-1; S-1A	48.8	B-1; S-10	76.2
B-1; S-1B	32.3	B-1; S-11	70.0
B-1; S-1C	54.1	B-1; S-12	64.6
B-1; S-2	68.3	B-1; S-13A	65.8
B-1; S-3A	34.3	B-1; S-13B	46.2
B-1; S-3B	60.5	B-1; S-14	46.3
B-1; S-4	82.4	B-1; S-15A	72.8
B-1; S-5A	47.9	B-1; S-15B	22.8
B-1; S-5B	65.3	B-1; S-16	23.7
B-1; S-6	73.7	B-1; S-17	22.4
B-1; S-7	75.7	B-1; S-18	22.2
B-1; S-8	79.0	B-1; S-19	20.4
B-1; S-9	74.4		

II. Atterberg Limits Testing (ASTM D4318)

Sample ID	Liquid Limit	Plastic Limit	Plasticity Index	Natural Moisture (%)
B-1; S-2	62	44	18	68.3
B-1; S-9	57	40	17	74.4
B-1; S-11	59	40	19	70.0
B-1; S-14	53	32	21	46.3
B-1; S16	23	13	10	46.3

¹AASHTO re:source – American Association of State Highway & Transportation Officials (AASHTO) Materials Reference Laboratory, a Federal Agency having jurisdiction to assess laboratory competency according to the Standards of the United States of America. CME East Syracuse accreditation includes testing of Portland Cement Concrete, Aggregate and Soil Materials. www.AASHTOresource.org.

III. Organic Content (ASTM D2974)

Sample ID	Organic Content (%)
B-1; S-6	2.7
B-1; S-10	3.4

IV. Void Ratio (ASTM D7263 Appendix X1)

Sample ID	Void Ratio	Wet Unit Weight (lb/ft ³)	Dry Unit Weight (lb/ft ³)	Water Content (%)	Specific Gravity
B-1; S-8	2.33	91.29	49.23	85.42	2.628
B-1; S-12	1.58	103.9	63.50	63.66	2.627

If you have any questions regarding this report, please contact our office

A handwritten signature in blue ink, appearing to read "R. Ghadimi", is written over the name "Michael Curry".

for:

Michael Curry
Laboratory Supervisor



ASCE 7 Hazards Report

Address:

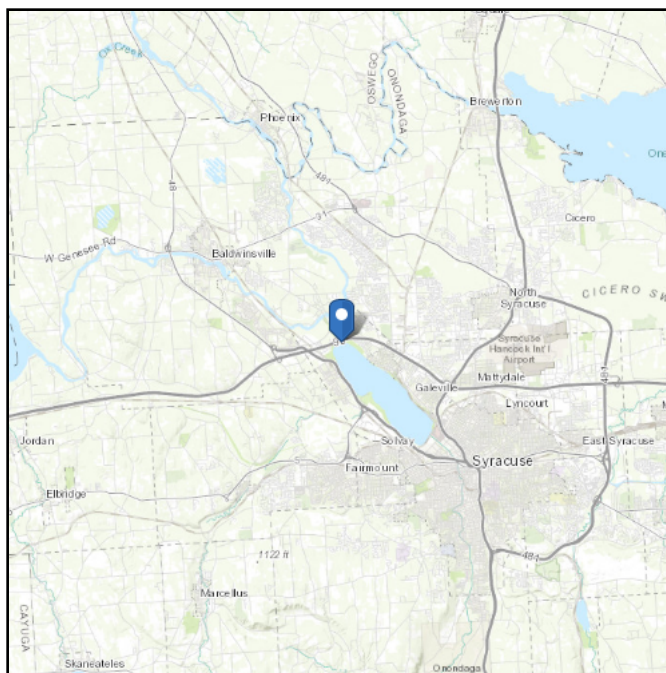
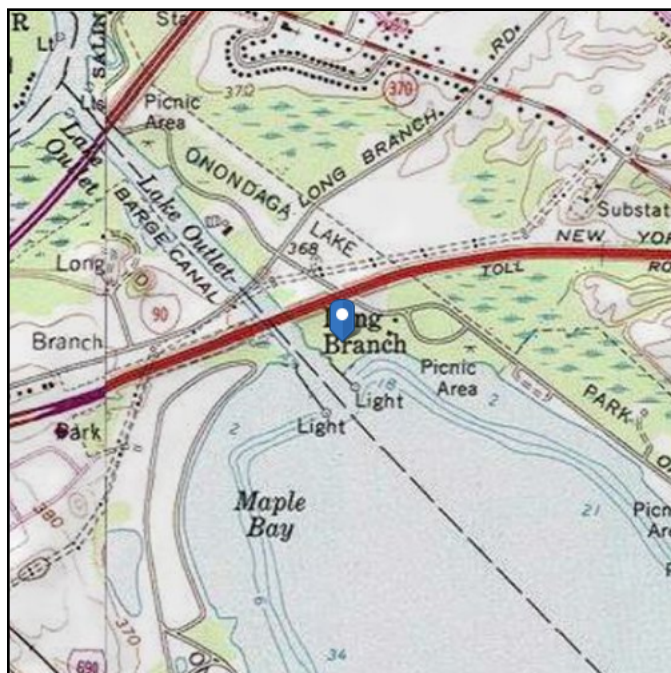
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Location

Standard:

ASCE/SEI 7-10

Risk Category: II**Soil Class:**

E - Soft Clay Soil

Elevation: 364.51 ft (NAVD 88)**Latitude:** 43.115757**Longitude:** -76.241245

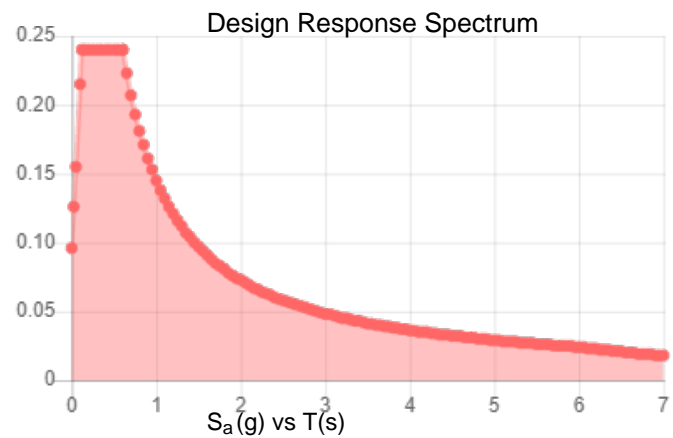
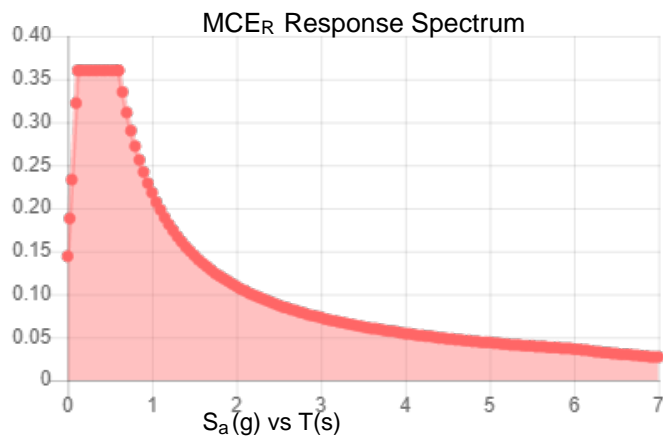


Site Soil Class: E - Soft Clay Soil

Results:

S_S :	0.144	S_{DS} :	0.24
S_1 :	0.062	S_{D1} :	0.145
F_a :	2.5	T_L :	6
F_v :	3.5	PGA :	0.064
S_{MS} :	0.36	PGA_M :	0.161
S_{M1} :	0.218	F_{PGA} :	2.5
		I_e :	1

Seismic Design Category C



Data Accessed:

Mon Feb 10 2020

Date Source:

USGS Seismic Design Maps based on ASCE/SEI 7-10, incorporating Supplement 1 and errata of March 31, 2013, and ASCE/SEI 7-10 Table 1.5-2. Additional data for site-specific ground motion procedures in accordance with ASCE/SEI 7-10 Ch. 21 are available from USGS.



The ASCE 7 Hazard Tool is provided for your convenience, for informational purposes only, and is provided “as is” and without warranties of any kind. The location data included herein has been obtained from information developed, produced, and maintained by third party providers; or has been extrapolated from maps incorporated in the ASCE 7 standard. While ASCE has made every effort to use data obtained from reliable sources or methodologies, ASCE does not make any representations or warranties as to the accuracy, completeness, reliability, currency, or quality of any data provided herein. Any third-party links provided by this Tool should not be construed as an endorsement, affiliation, relationship, or sponsorship of such third-party content by or from ASCE.

ASCE does not intend, nor should anyone interpret, the results provided by this Tool to replace the sound judgment of a competent professional, having knowledge and experience in the appropriate field(s) of practice, nor to substitute for the standard of care required of such professionals in interpreting and applying the contents of this Tool or the ASCE 7 standard.

In using this Tool, you expressly assume all risks associated with your use. Under no circumstances shall ASCE or its officers, directors, employees, members, affiliates, or agents be liable to you or any other person for any direct, indirect, special, incidental, or consequential damages arising from or related to your use of, or reliance on, the Tool or any information obtained therein. To the fullest extent permitted by law, you agree to release and hold harmless ASCE from any and all liability of any nature arising out of or resulting from any use of data provided by the ASCE 7 Hazard Tool.

GENERAL INFORMATION & KEY TO TEST BORING LOGS

The **Subsurface Exploration – Test Boring Logs** produced by **CME Associates, Inc.** present the observations and mechanical data collected by the driller while at the site, supplemented, at times, by classification of the materials removed from the borings determined through visual identification by technicians in the laboratory. It is cautioned that the materials removed from the borings represent only a fraction of the total volume of the deposits at the site and may not necessarily be representative of the subsurface conditions between adjacent borings or between the sampled intervals. The data presented on the Exploration Logs together with the recovered samples will provide a basis for evaluating the character of the subsurface conditions relative to the proposed construction. The evaluation must consider all the recorded details and their significance relative to each other. Often, analyses of standard boring data indicate the need for additional testing and sampling procedures to more accurately evaluate the subsurface conditions. Any evaluations of the contents of CME's report and the recovered samples must be performed by Licensed Professionals having experience in Soil Mechanics and Foundation Engineering. The information presented in this Key defines some of the procedures and terms used on the CME Exploration Logs to describe the conditions encountered. Refer to the Log on page 4 for key number.

Key No.

Description

1. The figures in the **DEPTH SCALE** column define the vertical scale of the Boring Log.
2. **CASING BLOWS/FOOT** – shows the number of blows required to advance the casing a distance of 12 inches. The casing size, the hammer weight and the length of drop are noted under the **Methods of Investigation**. If the casing is advanced by means other than driving, the method of advancement will be indicated under **Methods of Investigation** at the top of the Log. If Hollow Stem Augers or Coring is used, it will be so noted in this column.
3. The **SAMPLE I.D.** is used for identification on the sample containers and in the Laboratory Test Report or Summary.
4. The **DEPTH OF SAMPLE** column gives the exact depth range from which a sample was recovered.
5. The **SAMPLE TYPE/RECOVERY** column is used to signify the various type of sample attempt. "SS is Split Spoon, "P" is Piston tube, "U" is Undisturbed tube. For soil samples, the recovered length of the sample is also indicated, in inches. If a rock core sample is taken, the core bit size designation is given here.
6. **BLOWS ON SAMPLER** – shows the results of the "Standard Penetration Test (SPT) ASTM D1586", recording the number of blows required to drive a split spoon sampler into the soil beneath the casing. The number of blows required for each six inches of penetration is recorded. The total number of blows required for the 6 inch to 18 inch interval is summarized in the **SPT "N"** column and represents the "Standard Penetration Number". The outside diameter of the sampler, the hammer weight and the length of drop are noted in the **Methods of Investigation** portion of the log. A "WH" or "WR" in this column indicates that the sample spoon advanced the 6 inch interval under **Weight of Hammer** or **Weight of Rods**, respectively.
7. The **DEPTH OF CHANGE** column designates the depth (in feet) that the driller noted a compactness or stratum change. In soft materials or soil strata exhibiting a consistent relative density, it is difficult for the driller to determine the exact change from one stratum to the next. In addition, a grading or gradual change may exist. In such cases the depth noted is approximate or estimated only and may be represented by a dashed line.
8. **CLASSIFICATION OF MATERIAL – Soil materials** encountered and sampled are described by the driller on the original log. Notes of the driller observations are also placed in this column. Recovered samples may also be visually classified by a Soil Technician upon receipt in the Laboratory. Visual sample classification is by Burmister System and strata may be classified additionally by the Unified System. The Burmister System is a type of visual-manual textural classification estimated by the Driller or Technician on the basis of weight-fraction of the recovered soil. See Table 1 "**Classification of Materials**". The description of the relative soil compactness or consistency is based upon the standard penetration number as defined in Table 2. The description of the soil moisture condition is described as dry, moist, wet, or saturated. Water used to advance the boring may have affected the in-situ moisture content of the sample. Special terms are used as required to describe materials in greater detail, such terms are listed in ASTM D653. When sampling gravelly soils with a standard two-inch O.D. Split Spoon, the true percentage of gravel is often not recovered due to the relatively small sampler diameter. The presence of boulders, cobbles, and large gravel is sometimes, but not necessarily, detected by an evaluation of the casing and sampler blows or through the "action" of the drill rig as reported by the driller.

The Description of **Rock** is based upon the recovered rock core. Terms frequently used in the description are included in Table 3. The length of core run is defined as length of penetration between retrievals of the core barrel from the bore hole, expressed in inches. The core recovery expressed the length of core recovered from the core barrel per core run, in percent. The size core barrel used is noted in **Column 5**. The more commonly used sizes of core barrels are denoted "AX" and "NX". An "NX" core, being larger in diameter than "AX" core, often produces better recovery, and is frequently utilized where accurate information regarding the geologic conditions and engineering

properties is needed. A better estimate of in-situ rock quality is provided by a modified core recovery ratio known as the “**Rock Quality Designation**” (**RQD**). This ratio is determined by considering only pieces of core that are at least 4 inches long and are hard and sound. Breaks obviously caused by drilling are ignored. The diameter of the core should preferably be not less than 2 inches (NX). The percentage ratio between the total length of such core recovered and the length of core drilled on a given run is the RQD. Table 4 gives the rock quality description as related to the **RQD**.

9. The **SPT “N”** or **RQD** is given in this column as applicable to the specific sample taken. In Very Compact coarse grained soils the N-value may be indicated as 50+, and in Hard fine-grained soils the N-value may be indicated as 30+. This typically means that the blow count was achieved prior to driving the sampler the entire 6 inch interval or the sampler refused further penetration. For the “NX” rock cores, the RQD is reported here, expressed in percent.
10. **GROUND WATER OBSERVATIONS** and timing noted by the driller are shown in this section. It is important to realize that the reliability of the water level observations depend upon the soil type (water does not readily stabilize in a hole through fine grained soils), and that drill water used to advance the borings may have influenced the observations. Ground water levels typically fluctuate seasonally so those noted on the log are only representative of that exhibited during the period of time noted on the log. One or more perched or trapped water levels may exist in the ground seasonally. All the available readings should be evaluated. If definite conclusions cannot be made, it is often prudent to examine the conditions more thoroughly through test pit excavations or ground water observation well installations.

TABLE 1 - VISUAL CLASSIFICATION OF MATERIALS (BURMISTER)	
GROUP	TEXTURAL CLASSIFICATION SIZES
BOULDERS	larger than 12" diameter
COBBLES	12" diameter to 3" sieve
GRAVEL	3" - coarse - 1" - medium - 1/2" - fine - #4 sieve
SAND	#4 - coarse - #10 - medium - #40 - fine - #200 sieve
SILT	#200 sieve (0.074mm) to 0.005mm size (see below *)
CLAY	0.005mm size to 0.001 mm size (see below *)

ABBREVIATIONS	PERCENT OF TOTAL SAMPLE BY WEIGHT	
f - fine	and	35 to 50%
m - medium	some	20 to 35%
c - coarse	little	10 to 20%
	trace	0 to 10%

*PLASTICITY DESCRIPTIONS			
TERM	PLASTICITY INDEX	DRY STRENGTH	FIELD TEST
Non-plastic	0-3	Very low	falls apart easily
Slightly plastic	4 - 15	Slight	easily crushed by fingers
Plastic	15 - 30	Medium	difficult to crush
Highly plastic	31 or more	High	impossible to crush with fingers

TABLE 2 - DESCRIPTION OF SOIL COMPACTNESS OR CONSISTENCY based on SPT "N"*		
Primary Soil Type	Descriptive Term of Compactness	Range of Standard Penetration Resistance (N)
COARSE GRAINED SOILS	Very loose	less than 4 blows per foot
(More than half of Material is larger than No. 200 sieve size.)	Loose	4 to 10
	Medium compact	10 to 30
	Compact	30 to 50
	Very compact	Greater than 50
FINE GRAINED SOILS	Descriptive Term of Consistency	Range of Standard Penetration Resistance (N)
(more than half of material is smaller than No. 200 sieve size)	Very soft	less than 2 blows per foot
	Soft	2 to 4
	Medium stiff	4 to 8
	Stiff	8 to 15
	Very Stiff	15 to 30
	Hard	Greater than 30
*The number of blows of 140 pound weight falling 30 inches to drive 2 inch O.D., 1-3/8 inch I.D. sampler 12 inches is defined as the Standard Penetration Resistance designated "N".		

TABLE 3 - ROCK CLASSIFICATION TERMS		
Rock Classification Terms		Field Test or Meaning of Term
Hardness	Soft	Scratched by fingernail
	Medium Hard	Scratched easily by penknife
	Hard	Scratched with difficulty by penknife
	Very Hard	Cannot be scratched by penknife
Weathering	Very Weathered Weathered Sound	Judged from the relative amounts of disintegration, iron staining, core recovery, clay seams, etc.
Bedding (Natural Breaks in Rock Layers)	Laminated Thinly bedded Bedded Thickly bedded Massive	less than 1 inch 1 inch to 4 inches 4 inches to 12 inches 12 inches to 36 inches greater than 36 inches

TABLE 4	
Relation OF Rock Quality Designation (RQD) and in-situ Rock Quality	
RQD %	Rock Quality Term Used
90 to 100	Excellent
75 to 90	Good
50 to 75	Fair
25 to 50	Poor
0 to 25	Very Poor

SUBSURFACE EXPLORATION – TEST BORING LOG

Project:						Report No.:				
Client:						Date Started:		Finished:		
Location of Boring: See Exploration Location Plan						Elevation of Surface of Boring:				
METHODS OF INVESTIGATION						GROUND WATER OBSERVATIONS				
Casing: 3-1/4" ID H. Stem Auger Driller: Casing Hammer: Driller: Other: Inspector: Soil Sampler: 2" OD Split Barrel Rod Size: AWJ Sampler Hammer: Wt. 140 lbs. Fall: 30 in. Make & Model of Drill Rig:						Date	Time	Depth	Casing At	
							While drilling			
							Before casing removed			
							After casing removed			
							After casing removed			
LOG OF BORING SAMPLES						CLASSIFICATION OF MATERIAL				
Depth Scale (Feet)	Casing Blows/ Foot	Sample I.D.	Depth of Sample (Feet)		Sample Type/ Recovery (Inches)	Blows On Sampler Per 6 inches	Depth Of Change (feet)	c – coarse m – medium f – fine	and – 35 to 50 % some – 20 to 35 % little – 10 to 20 % trace – 0 to 10 %	SPT "N" or RQD
			From	To						
1	2	3	4	4	5	6	7	8		9
5										
10										
15										
20										

SS – Split Spoon, U – Undisturbed Tube, C – Core, WH – Weight of Hammer, WR – Weight of Rod

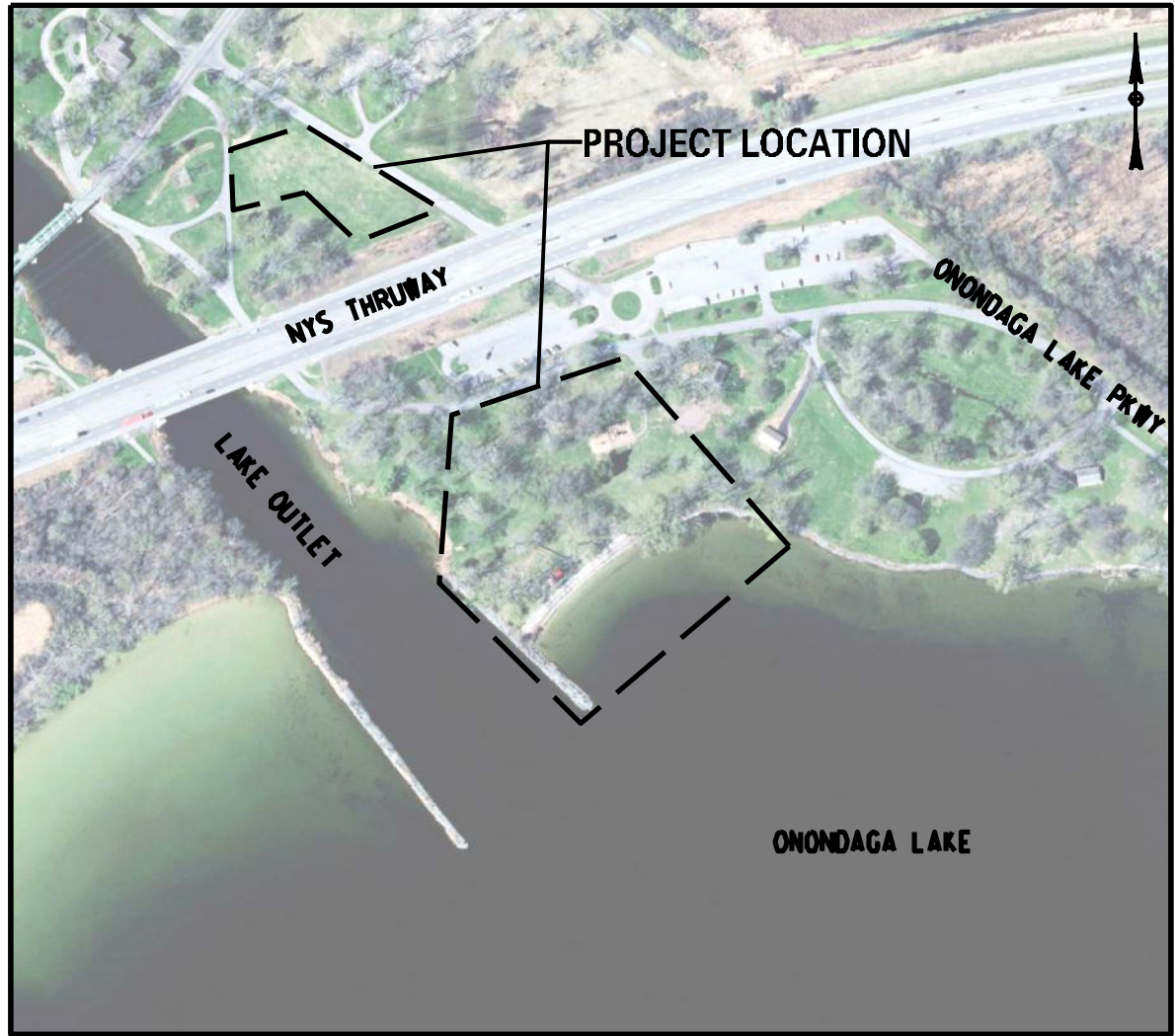
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APPENDIX 7

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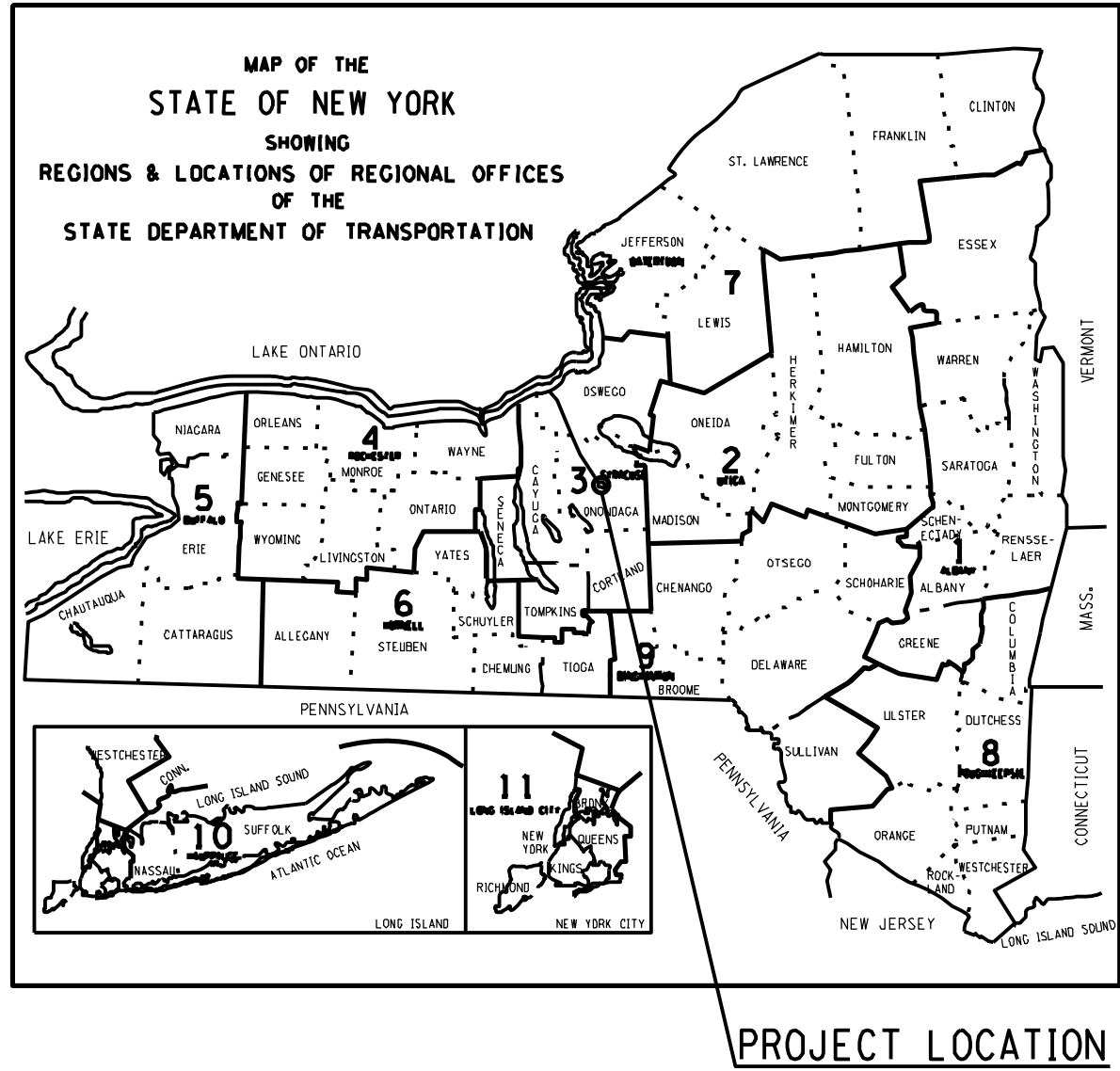
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IN CHARGE OF _____ DESIGNED BY _____ CHECKED BY _____ ESTIMATED BY _____ CHECKED BY _____ DRAFTED BY _____ CHECKED BY _____



PROJECT LOCATION:

THIS PROJECT IS LOCATED IN WILLOW BAY AT ONONDAGA LAKE PARK AT THE NORTHWEST END OF ONONDAGA LAKE IN THE OF THE TOWN OF SALINA, ONONDAGA COUNTY, N.Y.



WILLOW BAY BEACH PROJECT ONONDAGA BEACH FEASIBILITY STUDY & DESIGN SERVICES

ONONDAGA LAKE PARK ONONDAGA COUNTY, N.Y.

NOVEMBER 2020

CONTRACT DRAWINGS



STANDARD SHEETS:

THE LATEST REVISIONS OF THE STANDARD SHEETS MAINTAINED BY THE NYS DEPARTMENT OF TRANSPORTATION, WHICH ARE CURRENT ON THE DATE OF ADVERTISEMENT FOR BIDS, SHALL BE CONSIDERED TO BE IN EFFECT. ALL PAY ITEMS AND WORK CONTAINED IN THE CONTRACT AND ANY ADDITIONAL PAY ITEMS AND WORK ENCOUNTERED DURING THE COURSE OF THE CONTRACT SHALL BE SUBJECT TO THE APPLICABLE STANDARD SHEET(S) UNLESS OTHERWISE SPECIFIED IN THE CONTRACT DOCUMENTS.

ALL WORK CONTEMPLATED UNDER THIS CONTRACT IS TO BE COVERED BY AND IN CONFORMITY WITH THE NYS DOT STANDARD SPECIFICATIONS (US CUSTOMARY/METRIC) REFERENCED IN THE CONTRACT PROJECT "PROPOSAL" EXCEPT AS MODIFIED BY THESE PLANS OR BY CHANGES SET FORTH IN THE CONTRACT PROJECT "PROPOSAL".

IT IS A VIOLATION OF LAW FOR ANY PERSON, UNLESS THEY ARE ACTING UNDER THE DIRECTION OF A LICENSED PROFESSIONAL ENGINEER, ARCHITECT, LANDSCAPE ARCHITECT, OR LAND SURVEYOR, TO ALTER AN ITEM IN ANY WAY. IF AN ITEM BEARING THE STAMP OF A LICENSED PROFESSIONAL IS ALTERED, THE ALTERING ENGINEER, ARCHITECT, LANDSCAPE ARCHITECT, OR LAND SURVEYOR SHALL STAMP THE DOCUMENT AND INCLUDE THE NOTATION "ALTERED BY" FOLLOWED BY THEIR SIGNATURE, THE DATE OF SUCH ALTERATION, AND A SPECIFIC DESCRIPTION OF THE ALTERATION.

APPROVED BY

NAME

DATE



PREPARED AND RECOMMENDED BY

CHARLES A. WHITE, P.E. DATE:
NYS PROFESSIONAL ENGINEERS LICENSE NO. 081958



IN CHARGE OF

DESIGNED BY

CHECKED BY

DRAFTED BY

CHECKED BY

EXISTING DRAINAGE FACILITIES

1. THE WORDS "SHALL", "SHOULD", AND "MAY", AS USED IN THE CONTRACT DOCUMENTS, HAVE THE FOLLOWING MEANINGS:

SHALL - A MANDATORY CONDITION. IN THE DESIGN, APPLICATION, OR LOCATION OF DEVICES REQUIREMENTS HAVING "SHALL" STIPULATIONS ARE MANDATORY. NO DISCRETION IN FOLLOWING THEM IS ALLOWED.

SHOULD - AN ADVISORY CONDITION. WHERE "SHOULD" IS USED IN RELATION TO A PROVISION, THAT PROVISION IS RECOMMENDED, AND NORMALLY IS TO BE ALLOWED, BUT IS NOT MANDATORY. DEVIATION FROM SUCH PROVISIONS IS PERMISSIBLE IF, AND TO THE EXTENT, THERE IS JUSTIFIABLE CAUSE TO DO SO.

MAY - A PERMISSIVE CONDITION. NO REQUIREMENT FOR DESIGN OR APPLICATION IS INTENDED.
2. THE COST OF WATER USED FOR COMPACTION OF SELECT STRUCTURE FILL ITEMS SHALL BE INCLUDED IN THE UNIT PRICE FOR ITEM 203.21.
3. ALL PLACEMENTS OF TRAIL EMBANKMENT MATERIAL, AND/OR SELECT STRUCTURE FILL, ITEM 203.21 SHALL BE COMPACTED TO 95 PERCENT OF STANDARD PROCTOR MAXIMUM DENSITY.
4. TRAILS IN THE PROJECT SITE WILL BE CLOSED TO ALL TRAFFIC DURING CONSTRUCTION.
5. THE CONTRACTOR IS TO VISIT THE SITE BEFORE BIDDING. A SITE TOUR SHALL BE ARRANGED TO FAMILIARIZE THEMSELVES WITH THE FIELD CONDITIONS AND TO JUDGE FOR THEMSELVES THE EXTENT AND NATURE OF THE WORK TO BE DONE UNDER THIS CONTRACT. NO EXTRA COMPENSATION WILL BE ALLOWED THEM BECAUSE OF THEIR FAILURE TO INCLUDE IN THEIR BID ALL ITEMS AND MATERIALS WHICH THEY ARE REQUIRED TO FURNISH IN ACCORDANCE WITH THE CONTRACT DOCUMENTS.
6. SHOP DRAWINGS SHALL BE SUBMITTED IN US CUSTOMARY UNITS TO THE ENGINEER FOR REVIEW AS INDICATED IN THE SPECIFICATIONS. THE CONTRACTOR SHALL REVIEW AND APPROVE SHOP DRAWINGS BEFORE THEY ARE FORWARDED TO THE ENGINEER FOR REVIEW AND CONSIDERATION.
7. DETAILS ON THE DRAWINGS LABELED AS "NOT TO SCALE" ARE INTENTIONALLY DRAWN NOT TO SCALE FOR VISUAL CLARITY. ALL OTHER DETAILS FOR WHICH NO SCALE IS SHOWN ARE DRAWN PROPORTIONAL AND ARE FULLY DIMENSIONED.

EXISTING DRAINAGE FACILITIES

1. THE CONTRACTOR SHALL BECOME ACQUAINTED WITH THE DRAINAGE CHARACTERISTICS OF THE PROJECT AREA IN ORDER TO PROGRESS WORK EFFICIENTLY WITH FULL KNOWLEDGE OF THE POTENTIAL DRAINAGE PROBLEMS.
2. ALL EXISTING DRAINAGE SYSTEMS, INCLUDING DITCHES AND CULVERTS WITHIN THE CONTRACT LIMITS SHALL BE CLEANED AND KEPT CLEAN AND FREE FLOWING FOR THE DURATION OF THE CONTRACT. THIS WORK SHALL BE PAID FOR UNDER ITEM 203.02, UNCLASSIFIED EXCAVATION AND DISPOSAL.

UTILITIES

1. LOCATIONS OF UNDERGROUND UTILITIES SHOWN ARE APPROXIMATE. THE CONTRACTOR SHALL VERIFY THE TRUE LOCATION BEFORE COMMENCING WORK. BEFORE ANY PIPE OR UTILITY IS PLACED, THE CONTRACTOR SHALL UNCOVER ALL UTILITIES AT CROSSINGS TO ENABLE THE ENGINEER TO VERIFY THE PROPOSED PIPE WITH GRADES SHOWN ON THE PLANS IS NOT OBSTRUCTED BY EXISTING UTILITIES. THE COST OF THIS WORK SHALL BE INCLUDED IN THE LUMP SUM BID FOR THE CONTRACT.
2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION OF ALL UTILITIES ENCOUNTERED IN THIS WORK. WHERE NECESSARY, THE CONTRACTOR SHALL PROVIDE TIMBER, OR OTHER APPROVED MATERIALS AND SECURELY BRACE AND PROTECT THESE UTILITIES. THE COST OF THIS WORK SHALL BE INCLUDED IN THE LUMP SUM BID FOR THE CONTRACT.
3. DURING ANY UTILITY RELOCATION WORK REQUIRED FOR THIS CONTRACT, THE CONTRACTOR SHALL COOPERATE IN EVERY WAY WITH THE UTILITY OWNER, AND WILL SCHEDULE WORK IN SUCH A WAY AS TO COMPLY WITH SHUTDOWN TIMES AND ANY OTHER REQUIREMENTS OF THE UTILITY OWNER. NO ADDITIONAL PAYMENTS WILL BE MADE FOR ANY COST INCURRED DUE TO COMPLYING WITH OTHERS REQUIREMENTS. SUCH COSTS WILL BE INCLUDED IN LUMP SUM BID FOR THE CONTRACT.
4. THE FOLLOWING UTILITIES MAY BE ENCOUNTERED IN THE FIELD:

ELECTRIC - NATIONAL GRID
GAS - NATIONAL GRID
WATER - OCWA
SANITARY/STORM SEWER - ONONDAGA COUNTY
TELEPHONE - VERIZON
CABLE TELEVISION - SPECTRUM OR COMCAST
5. THE DEGREE OF ACCURACY FOR ALL UNDERGROUND UTILITIES WITHIN THE DETAILED MAPPING LIMITS IS QUALITY LEVEL C.
6. ALL WORK SHALL BE IN COMPLIANCE WITH NYSDOT STANDARD SPECIFICATION SECTION 107-07.

SURVEY

1. UNITS OF MEASURE: US SURVEY FEET
HORIZONTAL COORDINATE SYSTEM: N.A.D. '83 (2011) NYSPCS CENTRAL ZONE
VERTICAL COORDINATE SYSTEM: N.A.V.D. '88
2. EXISTING BOUNDARY, SITE TOPOGRAPHY, AND UTILITY INFORMATION IS BASED ON A FIELD SURVEY PROVIDED BY POPLI DESIGN GROUP, COMPLETED IN MAY 2019.
3. CONTRACTOR SHALL VERIFY EXISTING CONDITIONS, LOCATIONS AND ELEVATIONS OF ALL UTILITIES PRIOR TO STARTING WORK AND NOTIFY THE OWNER IMMEDIATELY OF ANY DISCREPANCIES OR CONFLICTS.
4. ALL RIGHT-OF-WAY MONUMENTS AND PROPERTY CORNERS ARE TO BE SAFEGUARDED AND PRESERVED. ALL PROPERTY CORNERS THAT ARE DISTURBED BY THE CONTRACTOR DURING CONSTRUCTION ARE TO BE REPLACED AND CERTIFIED BY A N.Y.S. LICENSED SURVEYOR AT THE CONTRACTOR'S EXPENSE.

EROSION AND SEDIMENT CONTROL

1. THIS PROJECT WILL REQUIRE A NYSDEC SPDES CONSTRUCTION PERMIT FOR STORMWATER DISCHARGES ASSOCIATED WITH CONSTRUCTION ACTIVITY (GP-Q-15-002). A STORMWATER POLLUTION PREVENTION PLAN (SWPPP) WAS NOT PREPARED AT THE TIME OF DESIGN, BUT IS ANTICIPATED TO BE COMPLETED BY BID ADVERTISEMENT. SPECIFIC STORMWATER MANAGEMENT FACILITIES WERE DESIGNED INTO THIS PROJECT IN ADVANCE OF THE SWPPP AND IN ACCORDANCE WITH APPROVED MEASURES UNDER GP-Q-15-002.
2. ALL NECESSARY PRECAUTIONS SHALL BE TAKEN TO PREVENT CONTAMINATION OF ANY STREAMS OR WATERWAYS BY SILT, SEDIMENTS, FUEL SOLVENTS, LUBRIANTS, EPOXY COATINGS, CONCRETE LEACHATE, OR ANY OTHER POLLUTANT ASSOCIATED WITH CONSTRUCTION AND CONSTRUCTION PROCEDURES.
3. DURING CONSTRUCTION, NO WET OR FRESH CONCRETE SHALL BE ALLOWED TO ESCAPE INTO ANY WATERS, NOR SHALL ANY WASHINGS FROM CONCRETE TRUCKS, MIXERS, OR OTHER DEVICES BE ALLOWED TO ENTER ANY WATERS.
4. ANY DEBRIS OR EXCESS MATERIAL FROM CONSTRUCTION SHALL BE IMMEDIATELY AND COMPLETELY REMOVED FROM THE BED AND BANKS OF ALL WATER AREAS TO APPROPRAITE UPLAND AREAS FOR DISPOSAL.
5. ALL DREDGED AND EXCAVATED MATERIALS SHALL BE DISPOSED OF ON AN UPLAND SITE AND BE SUITABLY STABILIZED SO THAT IT CANNOT REASONABLY RE-ENTER ANY BODY OF WATER OR WETLAND.
6. INSPECTION, PERIODIC CLEANING AND MAINTENANCE OF TEMPORARY SOIL EROSION AND WATER POLLUTION CONTROL DEVICES SHALL BE CONDUCTED ONCE PER 7 CALENDAR DAYS.
7. ALL CONTROLS SHALL BE PLACED PRIOR TO STARTING EARTHWORK OPERATIONS AND SHALL REMAIN IN PLACE UNTIL THE NEW SLOPES ARE STABILIZED WITH SEEDING AND/OR SLOPE PROTECTIONS, OR AS DIRECTED BY OWNERS REPRESENTATIVE.
8. HEAVY EQUIPMENT SHALL NOT BE DRIVEN IN THE WATER.
9. SILT FENCE SHALL NOT BE USED IN AREAS OF CONCENTRATED FLOW. STONE CHECK DAMS MAY BE INSTALLED IN THESE AREAS AS DIRECTED BY THE OWNERS REPRESENTATIVE.
10. ALL AREAS OF SOIL DISTURBANCES RESULTING FROM THIS PROJECT SHALL BE SEEDED WITH AN APPROPRIATE PERENNIAL GRASS SEED AND MULCHED WITH STRAW WITHIN ONE WEEK OF FINAL GRADING. MULCH SHALL BE MAINTAINED UNTIL A SUITABLE COVER IS ESTABLISHED.
11. IN THE EVENT A DEWATERING OPERATION BECOMES NECESSARY, A SETTLING BASIN WILL BE REQUIRED UNLESS THE PUMP DISCHARGE IS AS CLEAN AND FREE OF SEDIMENT AS THE FLOWING STREAM. ALL EFFORTS SHALL BE COORDINATED THRU THE ENGINEER AND NYSDOT REGIONAL PERMIT ADMINISTRATOR. DELAYS OR EXTRA COSTS ASSOCIATED WITH SECURING APPROVALS OR ADDITIONAL PERMITS FOR DEWATERING OPERATIONS WILL BE THE RESPONSIBILITY OF THE CONTRACTOR.
12. NO DISCHARGE OF TEMPORARY FILL MATERIAL INTO THE WATERWAY IS PERMITTED. SHOULD THE CONTRACTOR WISH TO CONSTRUCT A TEMPORARY ACCESS OR CAUSEWAY IN THE WATER TO FACILITATE REMOVALS OR NEW CONSTRUCTION, ADDITIONAL PERMITS FROM THE US ARMY CORP OR ENGINEERS AND NYS DEC MAY BE REQUIRED. ALL EFFORTS SHALL BE COORDINATED THROUGH THE ENGINEER AND NYSDOT PERMIT ADMINISTRATOR. DELAYS OR EXTRA COSTS ASSOCIATED WITH SECURING APPROVALS OR ADDITIONAL PERMITS FOR DEWATERING OPERATIONS WILL BE THE RESPONSIBILITY OF THE CONTRACTOR.
13. SAND BAGS APPROVED FOR USE SHALL BE OF A REINFORCED GEOTEXTILE TYPE WITH TIES. NO BURLAP BAGS SHALL BE USED. SAND OR GRAVEL MAY BE USED AS THE FILL MATERIAL WITH THIS TYPE OF BAG IF MATERIAL IS DOUBLE BAGGED AND INDIVIDUALLY TIED TO PREVENT LEAKAGE. GRAVEL AMTERIAL USED TO FILL THE BAGS SHALL MEET THE SIZE DESIGNATION #1 OF TABLE 703-4 OF THE NYSDOT STANDARD SPECIFICATIONS.

U.S. ARMY CORPS OF ENGINEERS

1. SECTION 404 OF THE CLEAN WATER ACT (33 USC 1344) PROHIBITS THE DISCHARGE OF DREDGED OR FILL MATERIALS INTO THE WATERS OF THE UNITED STATES WITHOUT A PERMIT FROM THE U.S. ARMY CORPS OF ENGINEERS. THE CONTRACTOR SHALL COMPLY WITH ALL PROVISIONS OF THE U.S. ARMY CORPS OF ENGINEERS' SECTION 404/10 NATIONWIDE PERMIT(S).

NYS DEPARTMENT OF ENVIRONMENTAL CONSERVATION

1. THE CONTRACTOR SHALL COMPLY WITH ALL PROVISIONS OF THE DEPARTMENT OF ENVIRONMENTAL CONSERVATION SECTION 401 WATER QUALITY CERTIFICATION PERMIT. ANY PENALTIES OR VIOLATIONS FROM FAILURE TO FOLLOW CLEAN WATER REGULATIONS SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR.

DISPOSAL OF CONSTRUCTION AND DEMOLITION DEBRIS

1. THERE ARE NO AREAS WITHIN THE CONTRACT LIMITS AVAILABLE FOR DISPOSAL OF DEBRIS.

SALVAGE ITEMS

1. CONTRACTOR SHALL STOCKPILE ITEMS TO BE PICKED UP BY ONONDAGA COUNTY PARKS DEPT., INCLUDING BUT NOT LIMITED TO BENCHES, REMOVED SIGNS, GRILLS, AND STORAGE SHEDS.

CONCRETE SIDEWALKS AND PAVEMENTS

1. PRIOR TO PLACEMENT OF CONCRETE SIDEWALKS AND DRIVEWAYS, CONTRACTOR SHALL SUBMIT A JOINT PLACEMENT AND SCORING PATTERN FOR APPROVAL BY THE OWNER'S REPRESENTATIVE. ALL WORK TO BE INCLUDED IN THE LUMP SUM BID PRICE.
2. CONCRETE SIDEWALKS SHALL BE 4" DEPTH FOR ON-GRADE PEDESTRIAN AREAS, PATIOS AND RAMPS AND 6" DEPTH FOR THE BEACH WALK, UNLESS INDICATED OTHERWISE IN PLANS OR DETAILS.
3. CONCRETE SHALL CONFORM TO NYSDOT SPECIFICATION ITEM 608.0101. NYSDOT MATERIAL SPECIFICATION 709-02 WIRE FABRIC FOR CONCRETE REINFORCEMENT SHALL BE USED FOR ALL CONCRETE SIDEWALKS AND DRIVEWAYS.

CONSTRUCTION MILESTONES

1. SEE BID BOOK FOR SUBSTANTIAL COMPLETION AND COMPLETION DATES AND SCHEDULE REQUIREMENTS.
2. THE CONTRACTOR WILL BE REQUIRED TO SUBMIT A SCHEDULE TO MEET CONTRACT REQUIREMENTS.
3. WORK ZONE AND ACCESS TO BE COORDINATED WITH OWNERS REPRESENTATIVE
4. CONTRACTOR SHALL COORDINATE SITE CONSTRUCTION WITH ARCHITECTURAL CONTRACTOR FOR NEW BEACH HOUSE.

SITE PROTECTION NOTES

1. THE CONTRACTOR SHALL PROVIDE AND MAINTAIN AT ALL TIMES A SAFE AND ADEQUATE ACCESS TO ALL PARK FEATURES THAT WILL REMAIN IN OPERATOIN DURING CONSTRUCTION.
2. THE CONTRACTOR SHALL BE PERMITTED TO REMOVE SUCH PORTIONS OF EXISTING FENCING AS MAY BE REQUIRED FOR THEIR OPERATIONS DURING WORKING HOURS, PROVIDING THAT THE PUBLIC IS CONTINUOUSLY SAFEGUARDED BY OTHER SATISFACTORY MEANS DURING THESE OPERATIONS. IN ALL SUCH CASES THE FENCE MUST BE RESTORED AT THE END OF EACH WORK DAY.
3. CONSTRUCTION FENCING MAY BE USED WHERE EXISTING FENCING HAS BEEN REMOVED PRIOR TO THE INSTALLATION OF PERMANENT FENCING. FENCE SHALL INCLUDE STEEL OR WOOD TOP RAIL.
4. CONSTRUCTION FENCING SHALL NOT BE LESS THAN 6 FEET IN HEIGHT, MOUNTED ON STEEL ANGLE POST, WOOD POST OR OTHER SATISFACTORY MEANS OF SUPPORT SPACED AT INTERVALS OF NOT MORE THAN 10 FEET.
5. THE CONTRACTOR SHALL FURNISH, ERECT, RELOCATE, MAINTAIN AND REMOVE ALL TEMPORARY FENCE AND WARNING SIGNS REQUIRED.
6. THE CONTRACTOR SHALL COORDINATE WITH ANY AND ALL CONTRACTORS PERFORMING WORK ON THIS OR IMMEDIATELY ADJACENT TO THIS JOB SITE.
7. THE CONTRACTOR SHALL AT THEIR OWN EXPENSE, RESTORE LAWNS, DRIVEWAYS, CULVERTS, FENCES, GUIDERAILS, SIGNS AND OTHER PUBLIC AND PRIVATE PROPERTY DAMAGED OR REMOVED TO AT LEAST AS GOOD A CONDITION AS BEFORE BEING DISRUPTED.
8. EXCAVATED SPOILS NOT DESIGNATED FOR USE ON SITE SHALL BE REMOVED AT THE END OF EACH WORK DAY.
9. ALL BACKFILL MATERIAL STORED ON SITE SHALL BE COVERED TO PREVENT DUST AND MOISTURE INCREASE.
10. ALL TRUCKS ENTERING AND LEAVING THE SITE SHALL BE COVERED BY LAW TO REDUCE DUST AND ODOR. ALL MATERIALS (HAZARDOUS) SHALL BE LOCKED IN APPROPRIATE STORAGE UNITS.
11. CONTRACTOR SHALL MAINTAIN A CLEAN WORK SITE AT ALL TIMES. AT THE END OF THE WORK DAY ALL EQUIPMENT AND MATERIALS SHALL BE STORED IN THE DESIGNATED STAGING AREA. ALL SOIL, DUST AND MUD SHALL BE REMOVED FROM THE PROJECT AREA AND OUTSIDE THE PROJECT AREA. AT THE END OF THE DAY, TIRES OF CONSTRUCTION VEHICLES SHALL BE CLEANED OF SOIL AND MUD BEFORE BEING ALLOWED ON LOCAL STREETS.
12. CONTRACTOR SHALL REMOVE, OR PROPERLY CONTAINERIZE UNNECESSARY CONSTRUCTION DEBRIS AT THE END OF EACH WORK DAY.
13. NOTIFY DIG SAFELY NEW YORK TWO (2) WORKING DAYS PRIOR TO DIGGING, DRILLING OR BLASTING, CALL 811.

SPECIFICATIONS

1. THIS CONTRACT INCLUDES SPECIFICATIONS IN BOTH NYSDOT AND MASTERSPEC 48 DIVISION FORMATS
2. ALL NYSDOT ITEM NUMBERS AND SPECIFICATIONS ARE INCLUDED FOR MATERIALS REQUIREMENTS AND CONSTRUCTION METHODS ONLY. AS PART OF A LUMP SUM BID, MEASUREMENT AND PAYMENT IS NOT APPLICABLE TO THE NYSDOT SPECIFICATIONS.

PROJECT COORDINATION AND COUNTY CONTACTS

1. THE CONTRACTOR SHALL COORDINATE SITE WORK WITH OWNERS REPRESENTATIVE REGARDING ON-GOING BUSINESS OPERATIONS OF ONONDAGA LAKE PARK.
2. ONONDAGA COUNTY PROJECT CONTACT:

WILLIAM LANSLEY, COMMISSIONER
ONONDAGA COUNTY PARKS & RECREATION
106 LAKE DRIVE
LIVERPOOL, NY 13088
315.453.6712

BEACH SAND PLACEMENT

1. BEFORE INSTALLATION OF THE SAND, CONTRACTOR MUST CLEAR AND REMOVE VEGETATION AND DEBRIS FROM WITHIN THE SAND PLACEMENT AREA TO THE SATISFACTION OF THE OWNER'S REPRESENTATIVE. THIS MATERIAL SHALL BE DISPOSED OF BY THE CONTRACTOR IN ACCORDANCE WITH ALL LOCAL, STATE, AND FEDERAL REQUIREMENTS.
2. CONTRACTOR SHALL PLACE SAND MATERIAL IN SUCH A MANNER THAT PLACED MATERIAL FORMS A UNIFORM LAYER OF REQUIRED MINIMUM THICKNESS OF 12" AND A MAXIMUM OF 24".
3. CONTRACTOR MUST UTILIZE AN APPROPRIATE SAND PLACEMENT METHOD SUCH THAT PLACEMENT DOES NOT DISTURB THE UNDERLYING LAKE BOTTOM MATERIAL. MIXING OF SAND WITH EXISTING LAKE BOTTOM MATERIAL IS NOT ALLOWED.
4. CONTRACTOR MUST SUBMIT A POST-SAND PLACEMENT SURVEY FOR APPROVAL BY THE OWNERS REPRESENTATIVE. THE PRE-SAND PLACEMENT SURVEY AND POST-SAND PLACEMENT SURVEY MUST USE THE SAME SURVEY METHOD. IF THE POST-SAND PLACEMENT SURVEY SHOWS DEVIATIONS IN THE LAYER OF SAND FROM THE DRAWINGS AND SPECIFICATIONS, CONTRACTOR SHALL CONDUCT ADDITIONAL WORK AT NO COST TO THE OWNER, INCLUDING BUT NOT LIMITED TO ADDITIONAL MATERIAL PLACEMENT, OR EXCESS MATERIAL REMOVAL, TO CONFORM TO THE DESIGN THICKNESS. UPON COMPLETION OF THE ADDITIONAL WORK, CONTRACTOR SHALL CONDUCT A SECONDARY POST-SAND PLACEMENT SURVEY TO VERIFY THE ADEQUACY OF THE ADDITIONAL WORK AT NO ADDITIONAL COST TO THE OWNER.

NO. DATE BY REVISION



Barton & Loguidice

UNAUTHORIZED ALTERATION OR ADDITION TO THIS DRAWING IS A VIOLATION OF THE NEW YORK STATE EDUCATION LAW, ARTICLE 145, SECTION 7209

WILLOW BAY BEACH PROJECT	ONONDAGA COUNTY
ONONDAGA BEACH FEASIBILITY STUDY & DESIGN SERVICES	
ONONDAGA LAKE PARK	

GENERAL NOTES
SCALE: AS SHOWN
DATE ISSUED: 02/20/21
DRAWING G-001

DRAWING INDEX	
COV	COVER
GENERAL	
G-001	GENERAL NOTES
G-002	DRAWING INDEX, SYMBOLS & ABBREVIATIONS
G-003	OVERALL EXISTING SITE PLAN
SITE / CML	
C-001	DEMOLITION AND EROSION & SEDIMENT CONTROL PLAN
C-002	ESC & SITE PREP DETAILS - 1
C-003	ESC & SITE PREP DETAILS - 2
L-100	SITE PLAN - 1
L-101	SITE PLAN - 2
L-102	LAYOUT POINT TABLES
L-103	OVERFLOW PARKING AREA
L-200	GRADING AND LAYOUT PLAN
L-201	ENLARGED GRADING AND LAYOUT PLAN
L-300	TYPICAL SECTIONS
L-301	TYPICAL SECTIONS
L-302	PROFILES - 1
L-303	PROFILES - 2
U-100	UTILITY PLAN OVERALL
U-101	UTILITY PLAN ENLARGEMENT
U-500	UTILITY DETAILS
U-501	UTILITY DETAILS
U-502	UTILITY DETAILS
U-503	UTILITY DETAILS
D-500	SITE DETAILS
D-501	SITE DETAILS
D-502	SITE DETAILS
D-503	RAILING DETAILS
ARCH GENERAL	
G-004	FIRST FLOOR CODE COMPLIANCE PLAN
STRUCTURAL	
S-001	STRUCTURAL SYMBOLS, ABB., DRAWING LIST
S-002	GENERAL STRUCTURAL NOTES
S-003	SPECIAL INSPECTIONS
S-004	SCHEDULES & TYPICAL PIER WALL & SHEAR WALL DET.
S-201	FOUNDATION & FIRST FLOOR PLANS
S-202	ROOF FRAMING PLAN
S-501	TYPICAL FOUNDATION DETAILS
S-502	TYPICAL FRAMING DETAILS
S-601	FOUNDATION DETAILS
S-602	FRAMING DETAILS
ARCHITECTURAL	
A-001	GENERAL NOTES & PARTITION SCHEDULE
A-101	FIRST FLOOR PLAN
A-102	ROOF PLAN & ROOF DETAILS
A-131	FIRST FLOOR REFLECTED CEILING PLAN
A-201	EXTERIOR ELEVATIONS
A-202	INTERIOR ELEVATIONS
A-301	OVERALL BUILDING SECTIONS
A-302	INSULATED WALL SECTIONS
A-303	NON-INSULATED WALL SECTIONS
A-401	FIRST FLOOR ENLARGED FLOOR PLANS
A-402	ENLARGED TOILET ROOM PLANS & DETAILS
A-501	DETAILS
A-502	DETAILS
A-503	STOREFRONT DETAILS
A-504	WINDOW & OPENING DETAILS
A-505	DETAILS & CASEWORK ELEVATIONS
A-601	WINDOW TYPES, DOOR TYPES, AND DOOR SCHEDULE
MECHANICAL	
H-100	HVAC LEGEND AND SYMBOLS
H-101	FIRST FLOOR HVAC
H-200	HVAC SCHEDULES AND DETAILS
PLUMBING	
P-100	PLUMBING LEGEND AND SYMBOLS
P-101	FIRST FLOOR PLUMBING
P-102	FIRST FLOOR SANITARY/VENT
P-200	PLUMBING SCHEDULES AND DETAILS
P-201	PLUMBING SCHEDULES AND DETAILS
P-202	BACKFLOW PREVENTER DETAILS & SECTIONS
ELECTRICAL	
E-001	LEGEND, NOTES & SYMBOLS
E-100	POWER AND SPECIAL SYSTEMS PLAN
E-101	LIGHTING PLAN
E-200	DETAILS
E-201	SCHEDULES

DRAWING INDEX, ARCH SYMBOLS & ABBREVIATIONS		WILLOW BAY BEACH PROJECT			NO. DATE BY		REVISION	
ONONDAGA BEACH FEASIBILITY STUDY & DESIGN SERVICES		ONONDAGA LAKE PARK						
ONONDAGA COUNTY								
<p>Barton & Loguidice</p> <p>UNAUTHORIZED ALTERATION OR ADDITION TO THIS DRAWING IS A VIOLATION OF THE NEW YORK STATE EDUCATION LAW ARTICLE 145 SECTION 7239</p>								
SCALE: AS SHOWN		DATE ISSUED 02/20/21		DRAWING		G-002		

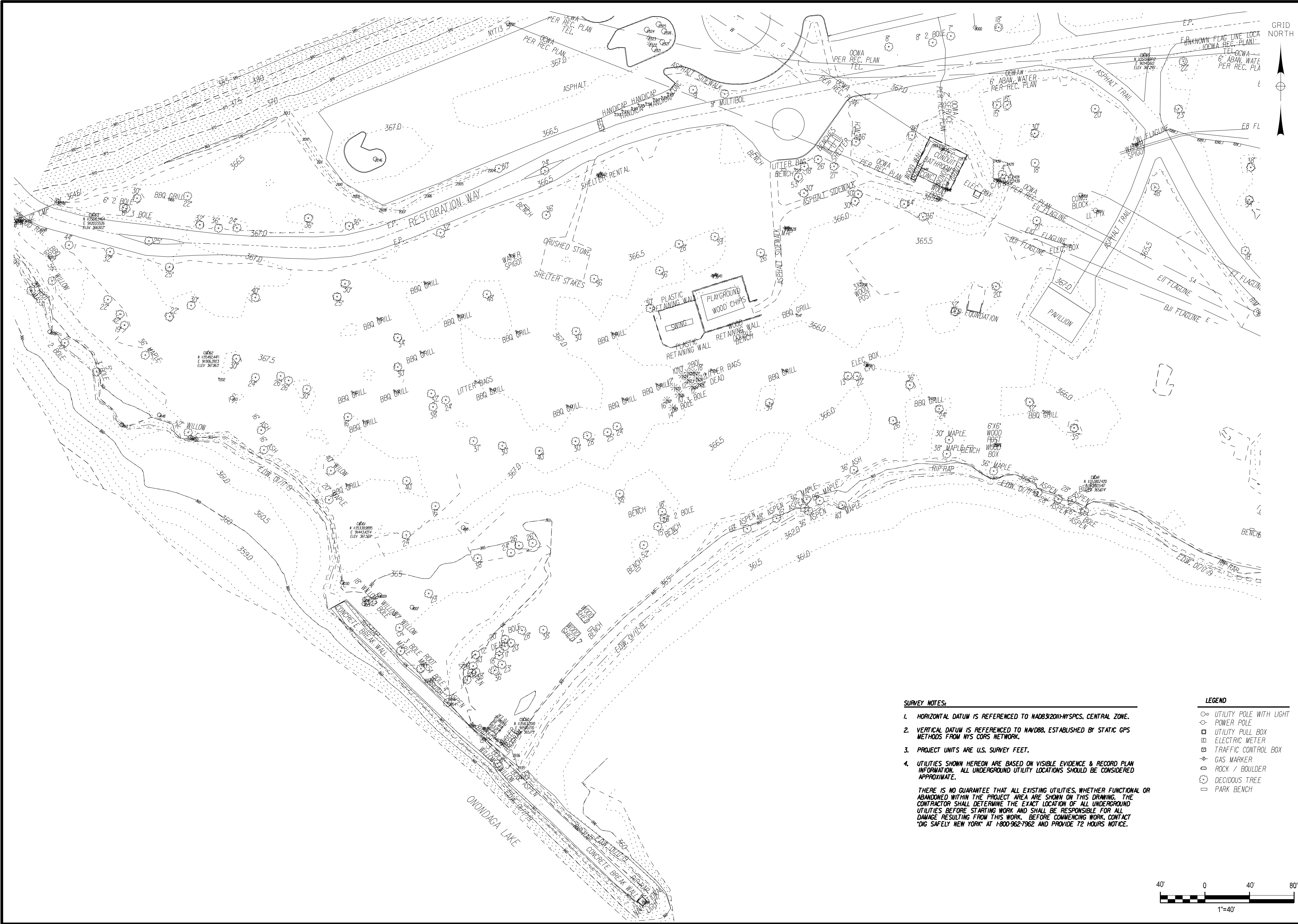
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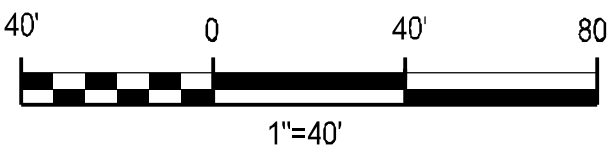
SURVEY NOTES:

1. HORIZONTAL DATUM IS REFERENCED TO NAD83(2011)-NYSPCS, CENTRAL ZONE.
2. VERTICAL DATUM IS REFERENCED TO NAVD83, ESTABLISHED BY STATIC GPS METHODS FROM NYS CORS NETWORK.
3. PROJECT UNITS ARE U.S. SURVEY FEET.
4. UTILITIES SHOWN HEREON ARE BASED ON VISIBLE EVIDENCE & RECORD PLAN INFORMATION. ALL UNDERGROUND UTILITY LOCATIONS SHOULD BE CONSIDERED APPROXIMATE.

THERE IS NO GUARANTEE THAT ALL EXISTING UTILITIES, WHETHER FUNCTIONAL OR ABANDONED WITHIN THE PROJECT AREA ARE SHOWN ON THIS DRAWING. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ALL UNDERGROUND UTILITIES BEFORE STARTING WORK AND SHALL BE RESPONSIBLE FOR ALL DAMAGE RESULTING FROM THIS WORK. BEFORE COMMENCING WORK, CONTACT "DIG SAFELY NEW YORK" AT 1-800-962-7962 AND PROVIDE 72 HOURS NOTICE.

LEGEND

- UTILITY POLE WITH LIGHT
- POWER POLE
- UTILITY PULL BOX
- ELECTRIC METER
- TRAFFIC CONTROL BOX
- GAS MARKER
- ROCK / BOULDER
- DECIDUOUS TREE
- PARK BENCH



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WILLOW BAY BEACH PROJECT
ONONDAGA BEACH FEASIBILITY STUDY
& DESIGN SERVICES

ONONDAGA LAKE PARK

ONONDAGA COUNTY

OVERALL EXISTING
SITE PLAN

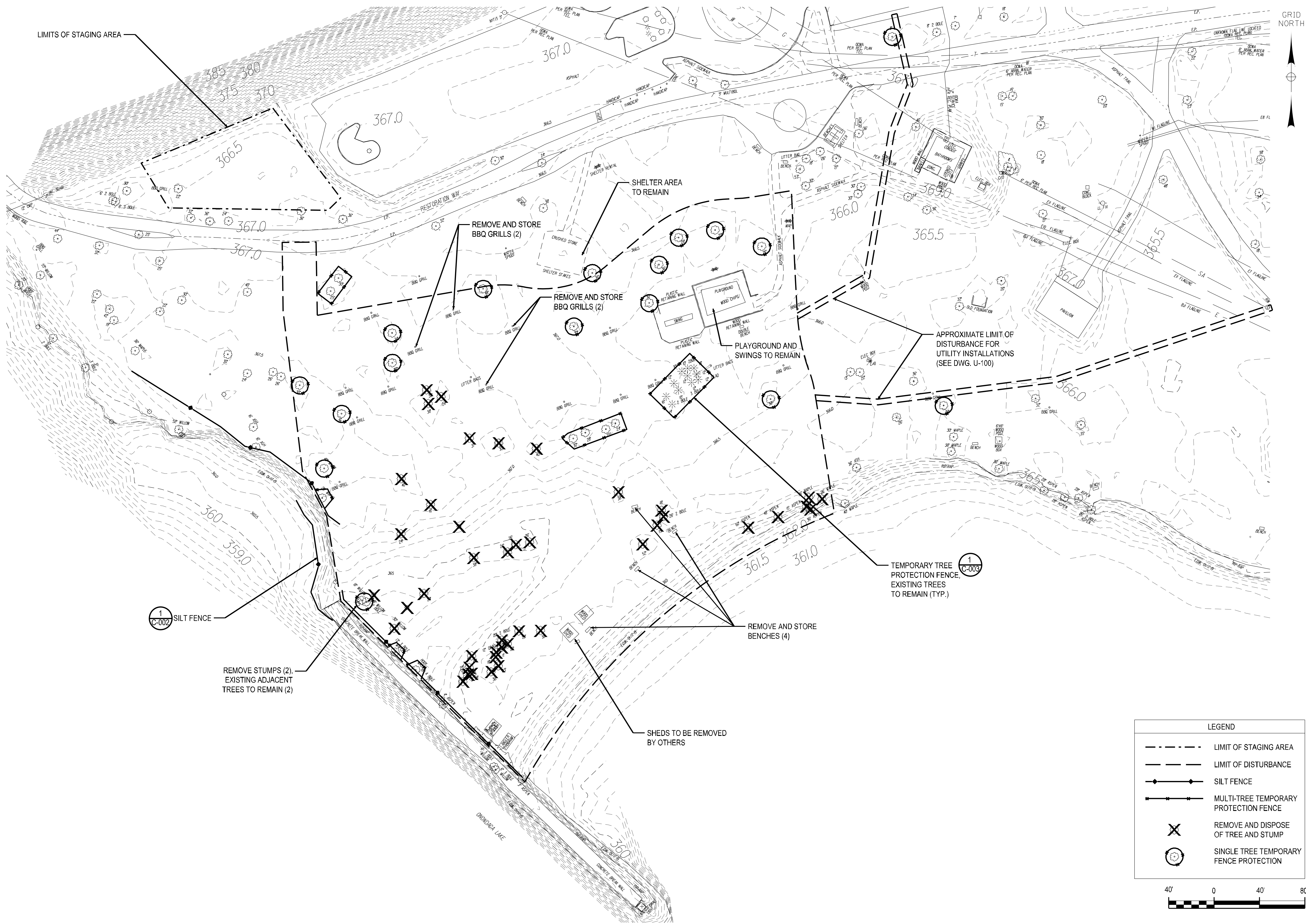
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WILLOW BAY BEACH PROJECT

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& DESIGN SERVICES

ONONDAGA LAKE PARK

ONONDAGA COUNTY

DEMOLITION AND EROSION & SEDIMENT CONTROL PLAN

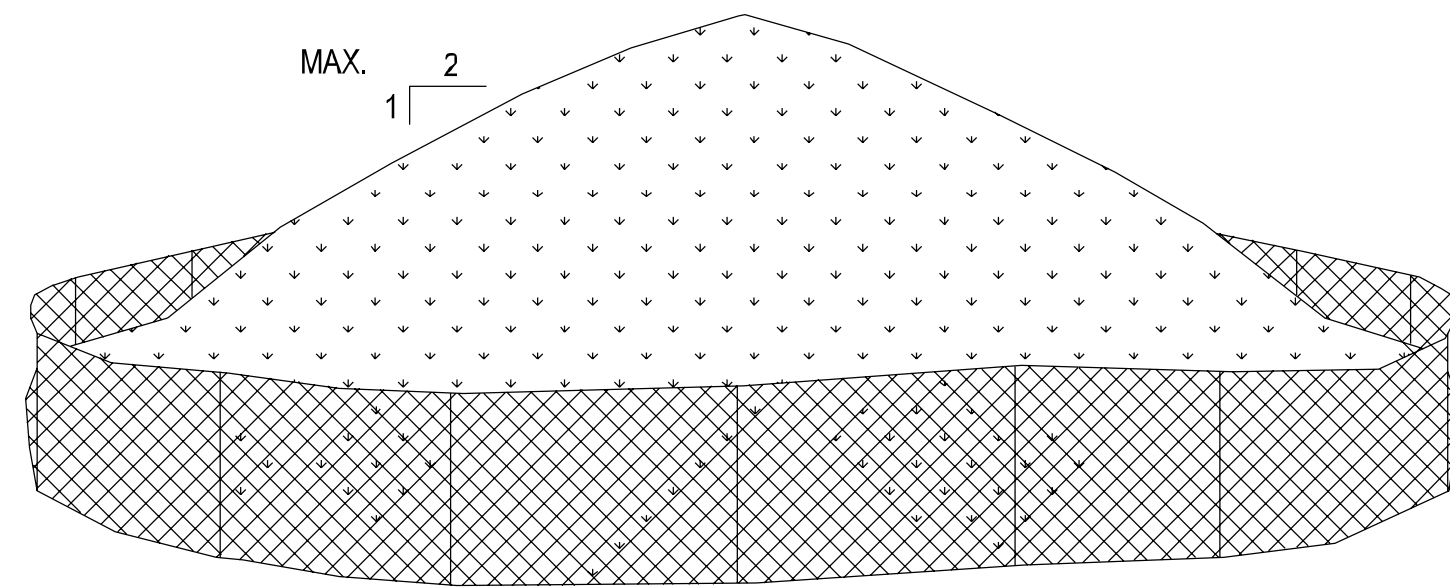
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1. WOVEN WIRE FENCE TO BE FASTENED SECURELY TO FENCE POSTS WITH WIRE TIES OR STAPLES.
2. FILTER CLOTH TO BE FASTENED SECURELY TO WOVEN WIRE FENCE WITH TIES SPACED EVERY 24" AT TOP AND MID SECTION.
3. WHEN TWO SECTIONS OF FILTER CLOTH ADJOIN EACH OTHER THEY SHALL BE OVERLAPPED BY SIX INCHES AND FOLDED.
4. MAINTENANCE SHALL BE PERFORMED AS NEEDED AND MATERIAL/DEBRIS REMOVED WHEN 'BULGES' DEVELOP IN THE SILT FENCE.
5. POSTS: STEEL EITHER "T" OR "U" TYPE OR 2" HARDWOOD. DRIVEN MIN. 16" INTO GROUND.
6. FENCE: WOVEN WIRE 14½ GA. 6" MAX. MESH OPENING.
7. FILTER FABRIC: FILTER X, MIRAFI 100X, STABLINKA T140N OR APPROVED EQUAL.
8. PREFABRICATED UNIT: GEOFAB, ENVIROFENCE, OR APPROVED EQUAL.



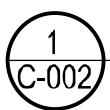
INSTALLATION NOTES:

1. AREA CHOSEN FOR STOCKPILING OPERATIONS SHALL BE DRY AND STABLE. LOCATION FOR STOCKPILING TO BE DETERMINED AND APPROVED BY THE OWNER'S REPRESENTATIVE.
2. MAXIMUM SLOPE OF STOCKPILE SHALL BE 2:1. MAXIMUM HEIGHT SHALL BE 12 FEET.
3. EACH PILE SHALL BE SURROUNDED BY SILT FENCE, INSTALLED PER CORRESPONDING DETAIL THEN STABILIZED WITH ANNUAL GRAIN WITHIN 3 DAYS.
4. A PERIMETER DIKE/SWALE SHALL BE LOCATED UP-SLOPE OF THE TOPSOIL STOCKPILE.
5. INLET PROTECTION SHALL BE PROVIDED ON ALL EXISTING STRUCTURES WITHIN THE PROJECT LIMITS OR DOWN SLOPE OF WORK BEING PERFORMED.



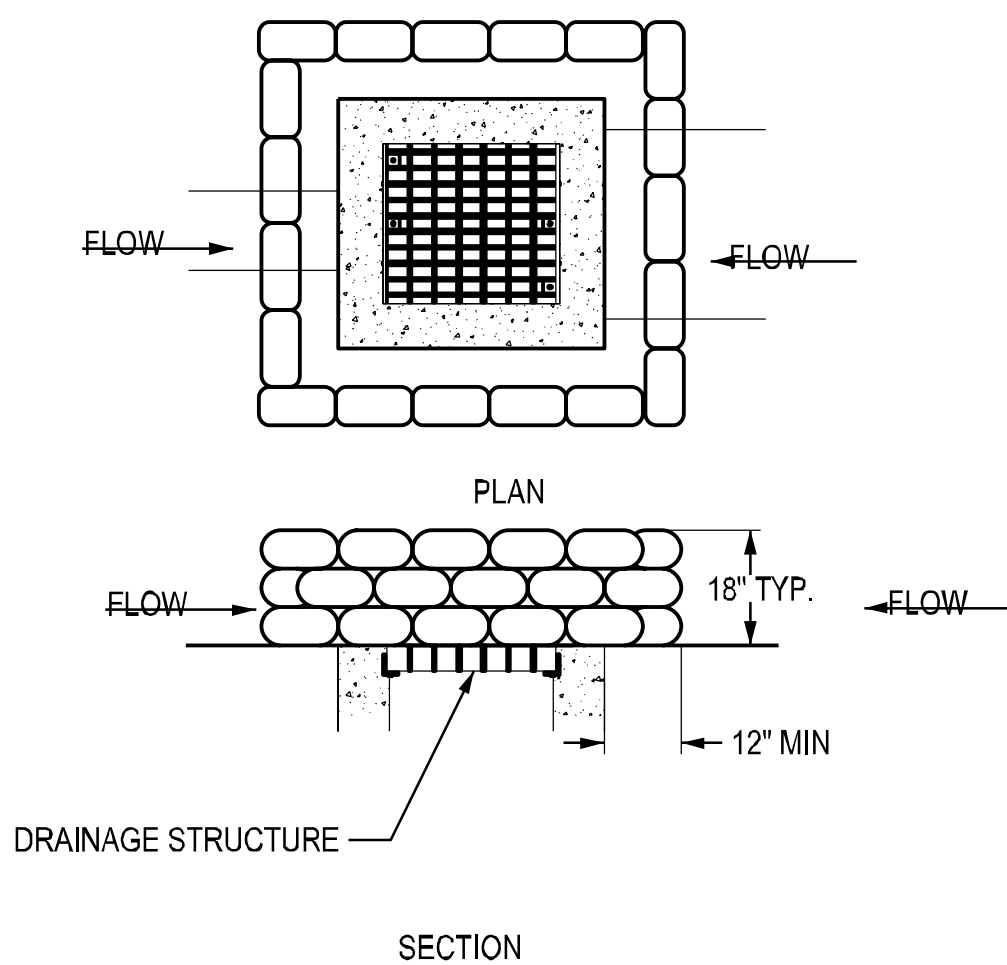
STABILIZED TOPSOIL STOCKPILE

NOT TO SCALE



SILT FENCE - ITEM 209.13

NOT TO SCALE



SECTION

NOTES:

1. GRAVEL BAGS SHALL BE INDIVIDUALLY TIED, DOUBLE BAGGED AND INVERSELY INSERTED. GRAVEL BAGS SHALL LAP THE JOINTS BETWEEN THE BAGS IN THE LAYER BELOW.
2. GRAVEL BAGS ARE FILLED WITH CLEAN STONE RATHER THAN SAND TO PREVENT SEDIMENT FROM ENTERING A DRAINAGE SYSTEM IF BAGS ARE DAMAGED DURING USE.
3. SEDIMENT SHALL BE REMOVED WHEN ACCUMULATION REACHES ONE-HALF OF THE MEASURE HEIGHT, SEDIMENT SHALL BE DISPOSED OF AS UNSUITABLE MATERIAL.
4. INLET PROTECTION SHALL BE PROVIDED ON ALL NEW STRUCTURES.
5. INLET PROTECTION SHALL BE PROVIDED ON ALL EXISTING STRUCTURES WITHIN THE PROJECT LIMITS OR DOWN SLOPE OF WORK BEING PERFORMED.

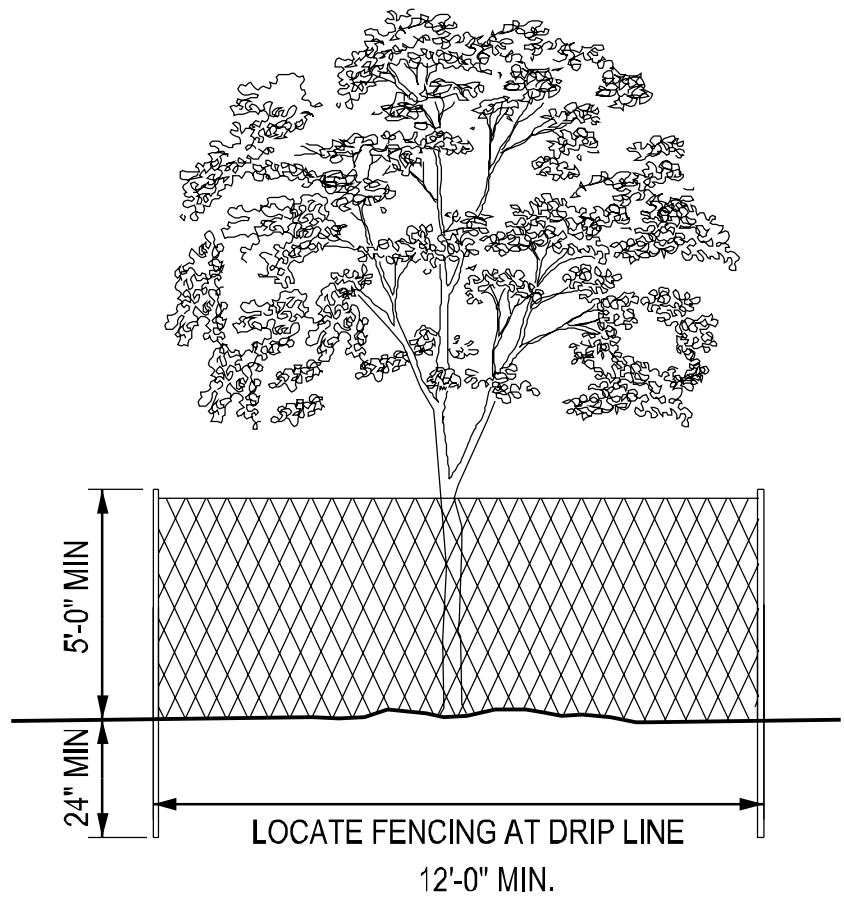


CATCH BASIN INLET PROTECTION - ITEM 209.1702

NOT TO SCALE

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| 1. ALL CONTROLS SHALL BE PLACED PRIOR TO STARTING EARTHWORK OPERATIONS AND SHALL REMAIN IN PLACE UNTIL THE DISTURBED AREAS ARE STABILIZED WITH SEEDING AND/OR SLOPE PROTECTION. | 13. DURING DEWATERING OPERATIONS, SETTLING BASIN OR FILTRATION SYSTEM SHALL BE REQUIRED UNLESS THE PUMP DISCHARGE IS AS CLEAN AND FREE OF SEDIMENT AS THE RECEIVING WATER. THE CONTRACTOR SHALL PROVIDE SEDIMENT BASINS, TEMPORARY SEDIMENT TANKS OR FILTRATION SYSTEMS FOR ALL DEWATERING OPERATIONS IN ACCORDANCE WITH THE NY STANDARDS AND SPECIFICATIONS FOR EROSION AND SEDIMENT CONTROL. |
| 2. DISTURBED AREAS THAT WILL REMAIN INACTIVE FOR GREATER THAN 14 DAYS SHALL BE STABILIZED WITH TEMPORARY SEED AND MULCH WITHIN 7 DAYS OF WORK STOPPAGE. | 14. THE COST OF INSTALLING, CLEANING, AND REMOVING TEMPORARY SOIL EROSION AND WATER POLLUTION CONTROL DEVICES SHALL BE INCLUDED UNDER THE CONTRACT. ANY FINES AND/OR PENALTIES LEVIED DUE TO NONCOMPLIANCE WITH THE SWPPP AND/OR SPDES GP-0-10-001 SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR. |
| 3. TEMPORARY EROSION AND SEDIMENT CONTROL DEVICES SHALL BE REMOVED AFTER ESTABLISHMENT OF A DURABLE AND MAINTAINABLE VEGETATIVE COVER OF 80 PERCENT OVER ALL AREAS OF THE SITE. | 15. CONTRACTOR AND ALL SUBCONTRACTORS ARE REQUIRED TO SIGN AND CERTIFY SWPPP PRIOR TO COMMENCING EARTHWORK. |
| 4. ALL ACCESS WAYS OR DETOURS SHALL BE COMPLETELY ISOLATED WITH EROSION CONTROL TREATMENTS. | 16. REFER TO SPECIFICATION SECTION 015713 FOR DETAILS REGARDING SEDIMENT AND EROSION CONTROL PLAN. THE CONTRACTOR'S ATTENTION IS ALSO DIRECTED TO THE REQUIREMENTS OF THE STORMWATER POLLUTION PREVENTION PLAN AS DESCRIBED IN THE SPECIAL PROJECT CONDITIONS SECTION OF THE CONTRACT DOCUMENTS. |
| 5. A STABILIZED CONSTRUCTION ENTRANCE AND GRAVEL WASH AREAS SHALL BE USED AT ALL POINTS OF INGRESS TO AND EGRESS FROM THE SITE. | 17. EROSION AND SEDIMENT CONTROL FACILITIES SHALL BE INSTALLED, INSPECTED AND MAINTAINED IN ACCORDANCE WITH THE NEW YORK STATE GUIDELINES FOR EROSION AND SEDIMENT CONTROL. |
| 6. SILT FENCE SHALL BE INSTALLED AND MAINTAINED DOWNGRADE OF ALL ACTIVE CONSTRUCTION AREAS THROUGHOUT THE DURATION OF CONSTRUCTION. | 18. SOIL EROSION AND SEDIMENT CONTROL FACILITIES SHALL BE INSTALLED AND FULLY FUNCTIONAL PRIOR TO ANY SITE DISTURBANCE. FACILITIES SHALL BE FULLY MAINTAINED DURING CONSTRUCTION. |
| 7. DROP INLET PROTECTION SHALL BE INSTALLED AT ALL CATCH BASIN DROP INLETS AT OR BELOW GRADE AND ADJACENT TO OPEN SOIL AREAS. | 19. ALL ROADWAYS SHALL BE KEPT CLEAN. FILL SHALL NOT BE SPILLED ONTO THE ROADWAY. ALL SPILLED MATERIALS SHALL BE PROMPTLY REMOVED. |
| 8. ALL NECESSARY PRECAUTIONS SHALL BE TAKEN TO PREVENT CONTAMINATION OF ANY STREAMS OR WATERWAYS BY SILT, SEDIMENTS, FUEL SOLVENTS, LUBRICANTS, EPOXY COATINGS, CONCRETE LEACHATE, OR ANY OTHER POLLUTANT ASSOCIATED WITH CONSTRUCTION AND CONSTRUCTION PROCEDURES. | 20. SOIL EROSION AND SEDIMENT CONTROL FACILITIES ARE TO BE MAINTAINED DURING CONSTRUCTION AND REMOVED (WHERE NECESSARY OR APPLICABLE) UPON COMPLETION OF CONSTRUCTION. |
| 9. DURING CONSTRUCTION, NO WET OR FRESH CONCRETE SHALL BE ALLOWED TO ESCAPE INTO ANY WATERS, NOR SHALL WASHINGS FROM CONCRETE TRUCKS, MIXERS, OR OTHER DEVICES BE ALLOWED TO ENTER ANY WATERS. | 21. THE AREAS OF CONSTRUCTION SHALL REMAIN IN STABLE CONDITION AT THE CLOSE OF EACH CONSTRUCTION DAY. EROSION CONTROL FACILITIES SHALL BE MONITORED AND MAINTAINED, REPAIRED OR REPLACED IF NECESSARY. |
| 10. ALL DREDGED AND EXCAVATED MATERIAL SHALL BE DISPOSED OF ON AN UPLAND SITE AND BE SUITABLY STABILIZED SO THAT IT CANNOT RE-ENTER ANY BODY OF WATER. SUITABLE STABILIZATION SHALL CONSIST OF APPLICATION OF TEMPORARY GRASS SEED AND BLOWN STRAW MULCH AND SILT FENCE INSTALLATION AROUND THE PERIMETER OF EACH STOCKPILE. | 22. STORM INLETS TO BE PROTECTED FROM SEDIMENTATION DURING CONSTRUCTION BY USE OF INLET PROTECTION OR OTHER APPROVED MEANS. |
| 11. INSPECTION, PERIODIC CLEANING AND MAINTENANCE OF TEMPORARY SOIL EROSION AND WATER POLLUTION CONTROL DEVICES SHALL BE CONDUCTED IN ACCORDANCE WITH THE NYSDEC SPDES GENERAL PERMIT GP-0-10-001. ADDITIONAL PRACTICES WILL BE ADDED IF DETERMINED TO BE NEEDED BY ON-SITE INSPECTIONS. FAILURE TO PROPERLY INSTALL, MAINTAIN, AND OPERATE EROSION AND SEDIMENT CONTROL MEASURES MAY RESULT IN WORK STOPPAGE UNTIL MEASURES ARE ACCEPTABLE. | 23. SOIL STOCKPILE AREAS ARE TO BE SURROUNDED WITH SILT FENCING, OR OTHER EROSION CONTROL MEASURES OR AS ORDERED BY THE DIRECTOR'S REPRESENTATIVE. |
| 12. ALL DRAINAGE DITCHES AND/OR PIPES DISTURBED BY CONSTRUCTION ON OR ADJACENT TO THIS SITE SHALL BE CLEANED AND FUNCTIONING PROPERLY AT COMPLETION OF GRADING AND CONSTRUCTION. | 24. CONTRACTOR TO PROVIDE APPROVED DUST CONTROL MEASURES. THE CONTRACTOR SHALL HAVE A WATER TRUCK OR OTHER ACCEPTABLE MEANS OF CONTROLLING DUST AVAILABLE AT ALL TIMES. |

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TREE PROTECTION NOTES:

1. PRUNE EXISTING TREES TO REMAIN, BUT ONLY TO REMOVE DEAD AND DYING BRANCHES AND POORLY ATTACHED BRANCHES, OR THOSE WHICH WILL BE AFFECTED BY CONSTRUCTION.
2. ALL TREE WORK SHALL BE PERFORMED BY A CERTIFIED ARBORIST IN ACCORDANCE WITH THE BEST MANAGEMENT PRACTICES FOR PRUNING (INTERNATIONAL SOCIETY OF ARBORICULTURE 2008) AND DONE IN ACCORDANCE WITH THE MOST RECENT EDITIONS OF THE AMERICAN NATIONAL STANDARDS INSTITUTE (ANSI) FOR TREE CARE OPERATIONS (Z133.1) AND PRUNING (A300).

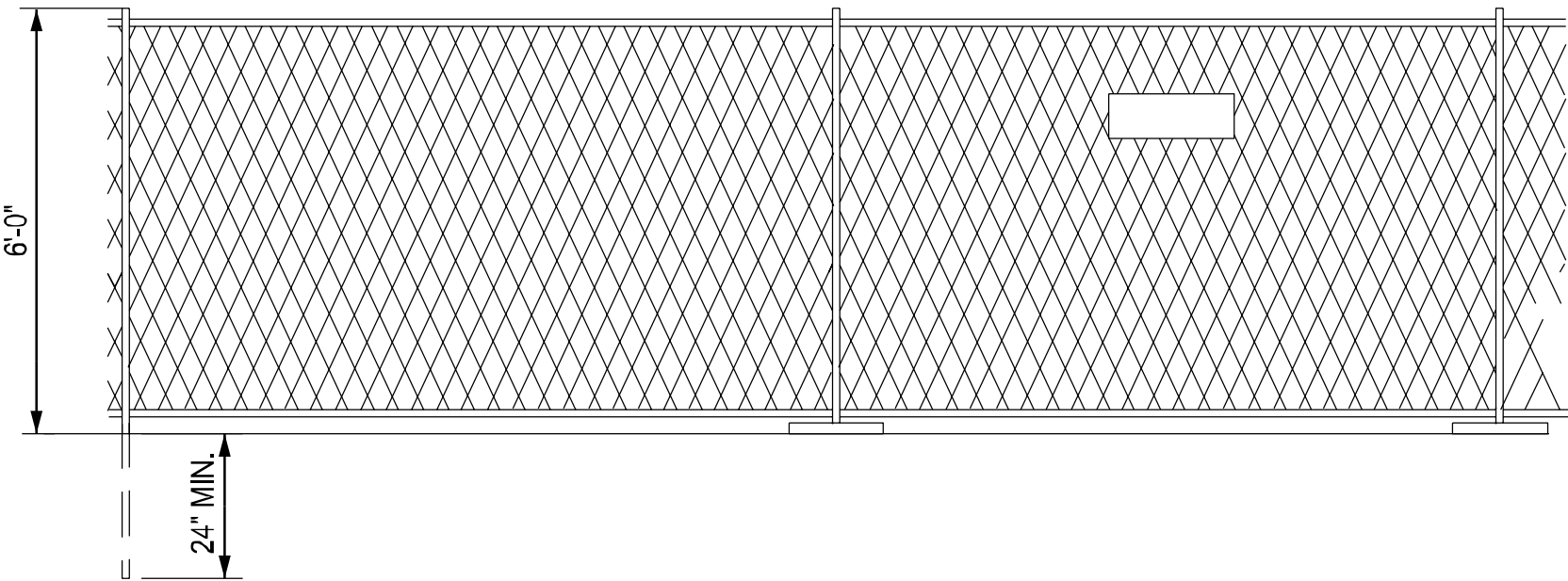
PRIOR TO AND DURING CONSTRUCTION:

1. TREE REMOVALS SHALL BE PERFORMED PRIOR TO CONSTRUCTION ACTIVITIES, AND SHALL BE PERFORMED IN A MANNER THAT DOES NOT DAMAGE PROTECTED TREES. REFER TO DWG. C-001 FOR TREE PROTECTION AND REMOVAL LOCATIONS.
2. PRIOR TO DEMOLITION, INSTALL TREE PROTECTION FENCE AS SHOWN ON PLANS.
3. THE ENTIRE AREA WITHIN THE FENCE IS THE TREE PROTECTION ZONE (TPZ). NO CONSTRUCTION, TRAVEL OR STORAGE IS ALLOWED IN THE TPZ. DO NOT ALLOW SPILLS, DUMPING, OR RUNOFF OF DAMAGED MATERIALS WITHIN THE TPZ. THE CONFIGURATION OF THE TREE PROTECTION FENCING CANNOT BE CHANGED WITHOUT AUTHORIZATION OF THE PROJECT LANDSCAPE ARCHITECT. ACCESS WITHIN THE TPZ SHALL BE ALLOWED FOR WATERING.
4. IRRIGATE THE AREA WITHIN THE TPZ ONCE PER MONTH OR AS DIRECTED BY THE OWNER'S REPRESENTATIVE UNTIL THE GROUND IS SATURATED TO A DEPTH OF 6". DO NOT WATER TRUNK.
5. ROOT PRUNING: PRIOR TO EXCAVATING, A COMPRESSED AIR EXCAVATION DEVICE SHALL BE USED ALONG THE CUT LINE OF THE PROPOSED EXCAVATION TO DETERMINE THE LOCATION OF THE TREE ROOTS. ROOTS SHALL BE CUT CLEANLY WITH A HAND SAW OR LOPPERS.

1
C-003

TEMPORARY TREE PROTECTION FENCE - 611.21050009

NOT TO SCALE



2
C-003

CONSTRUCTION FENCE - ITEM 619.02300039

NOT TO SCALE



CONSTRUCTION SIGNAGE

NOTES:

1. INSTALL CONSTRUCTION SIGNAGE EVERY 15'-20' OR AT POINTS OF SITE ACCESS.

ESC & SITE PREP
DETAILS - 2

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WILLOW BAY BEACH PROJECT

ONONDAGA BEACH FEASIBILITY STUDY
& DESIGN SERVICES

ONONDAGA LAKE PARK

ONONDAGA COUNTY

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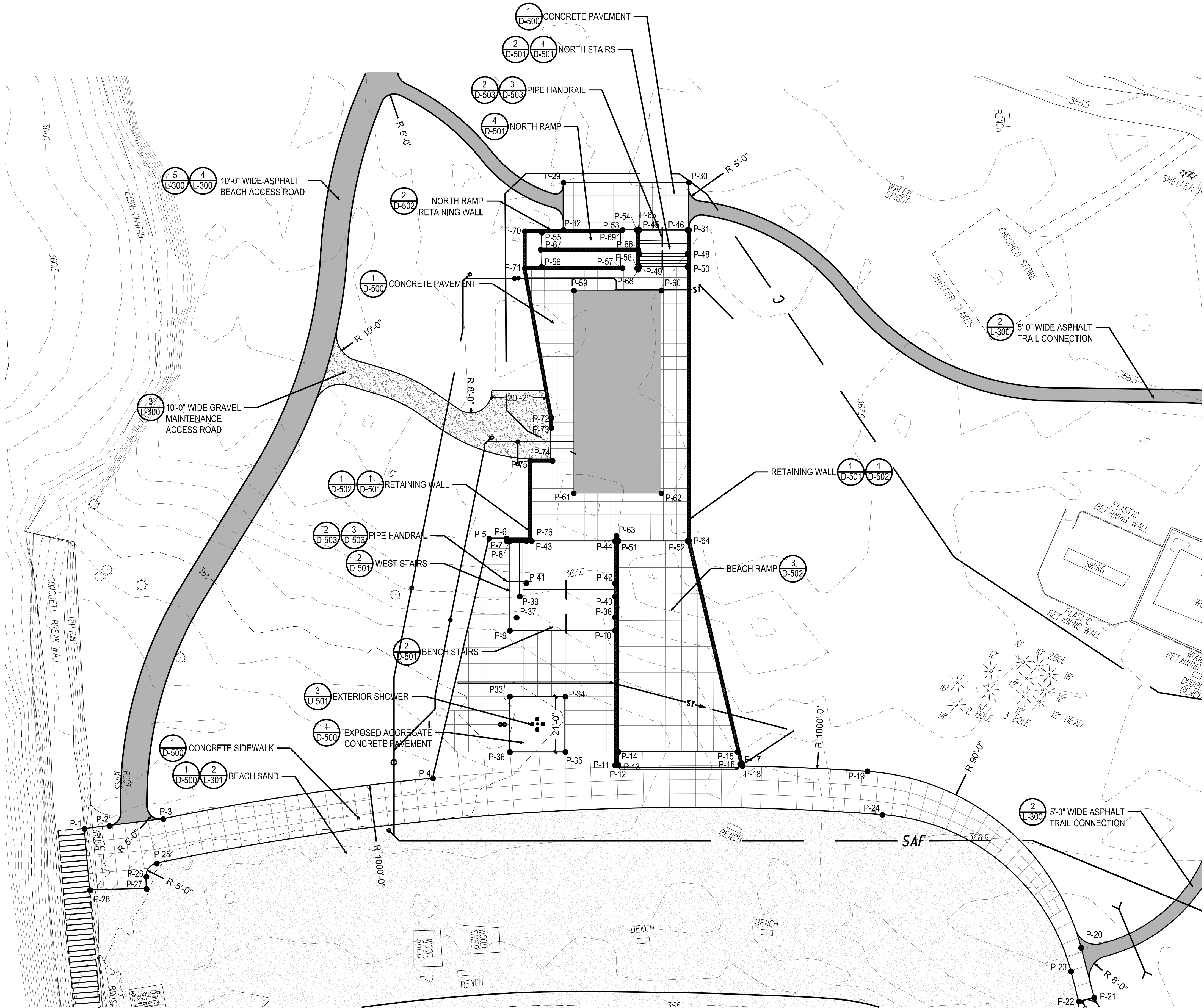
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- LEGEND
- DRAINAGE
 - HDPE WATER LINE
 - SANITARY SEWER
 - FORCE MAIN CLEANOUT
 - GRINDER PUMP STATION
 - GRINDER PUMP STATION
 - CONCRETE
 - ASPHALT
 - GRAVEL
 - SAND

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WILLOW BAY BEACH PROJECT

ONONDAGA BEACH FEASIBILITY STUDY
& DESIGN SERVICES

ONONDAGA LAKE PARK

ONONDAGA COUNTY

SITE PLAN - 2

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OVERFLOW PARKING LOT LAYOUT TABLE

POINT	NORTHING	EASTING	DESCRIPTION
L-1	911121.63	1136163.28	NW LOT CORNER
L-2	911338.76	1136029.57	NE LOT CORNER
L-3	911267.45	1135913.77	SE LOT CORNER
L-4	911050.31	1136047.48	SW LOT CORNER
L-5	911206.87	1136081.43	DWY APRON
L-6	911227.30	1136068.85	DWY APRON

LONG BRANCH ROAD
ONONDAGA LAKE PARKWAY
RESTORATION WAY
LAKE OUTLET
NEW YORK STATE THRUWAY
WILLOW BAY PARK PARKING LOT

MEET LINE AND GRADE OF EXISTING PARKWAY
24'-0" WIDE STONE DRIVEWAY APRON
REINFORCED TURF PARKING LOT, 255 LF x 136 LF
5'-0" STONE DUST SIDEWALK
EXISTING GUIDE RAIL
END OF CONCRETE
5'-0" CONCRETE SIDEWALK
ADA RAMP, MEET LINE & GRADE OF EXISTING PARKING LOT CURB RAMP TYPE 1, GRADED EARTH OPTIO. B.

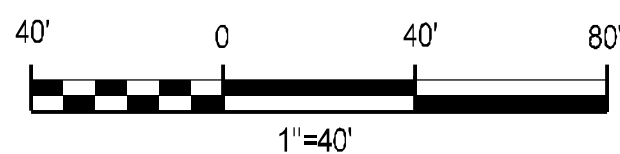
L-1
L-2
L-3
L-4
L-5
L-6
R = 20'
R = 25'

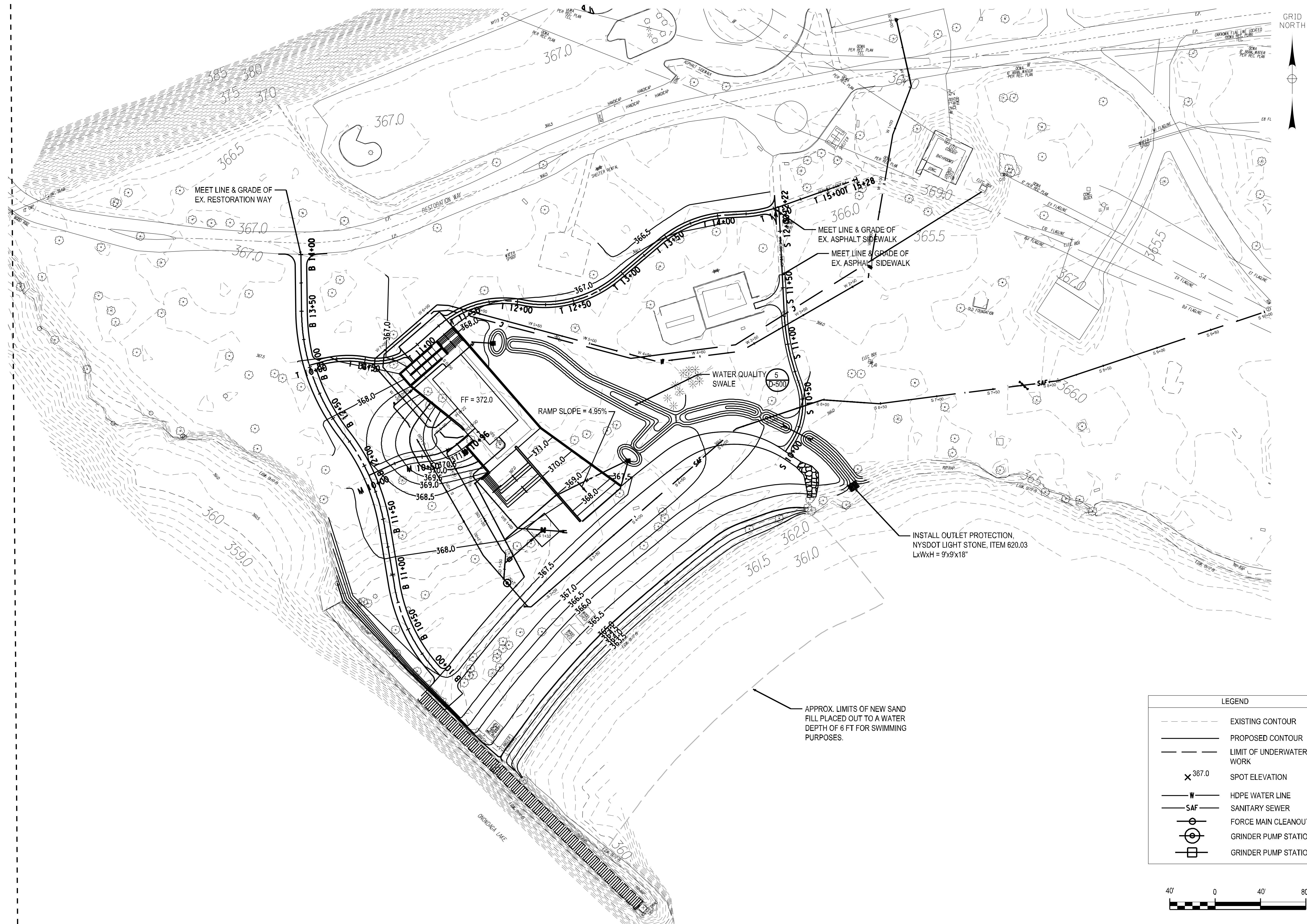
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D-500
3
D-500
2
D-500

1"=40'

40' 0 40' 80'

GRID NORTH

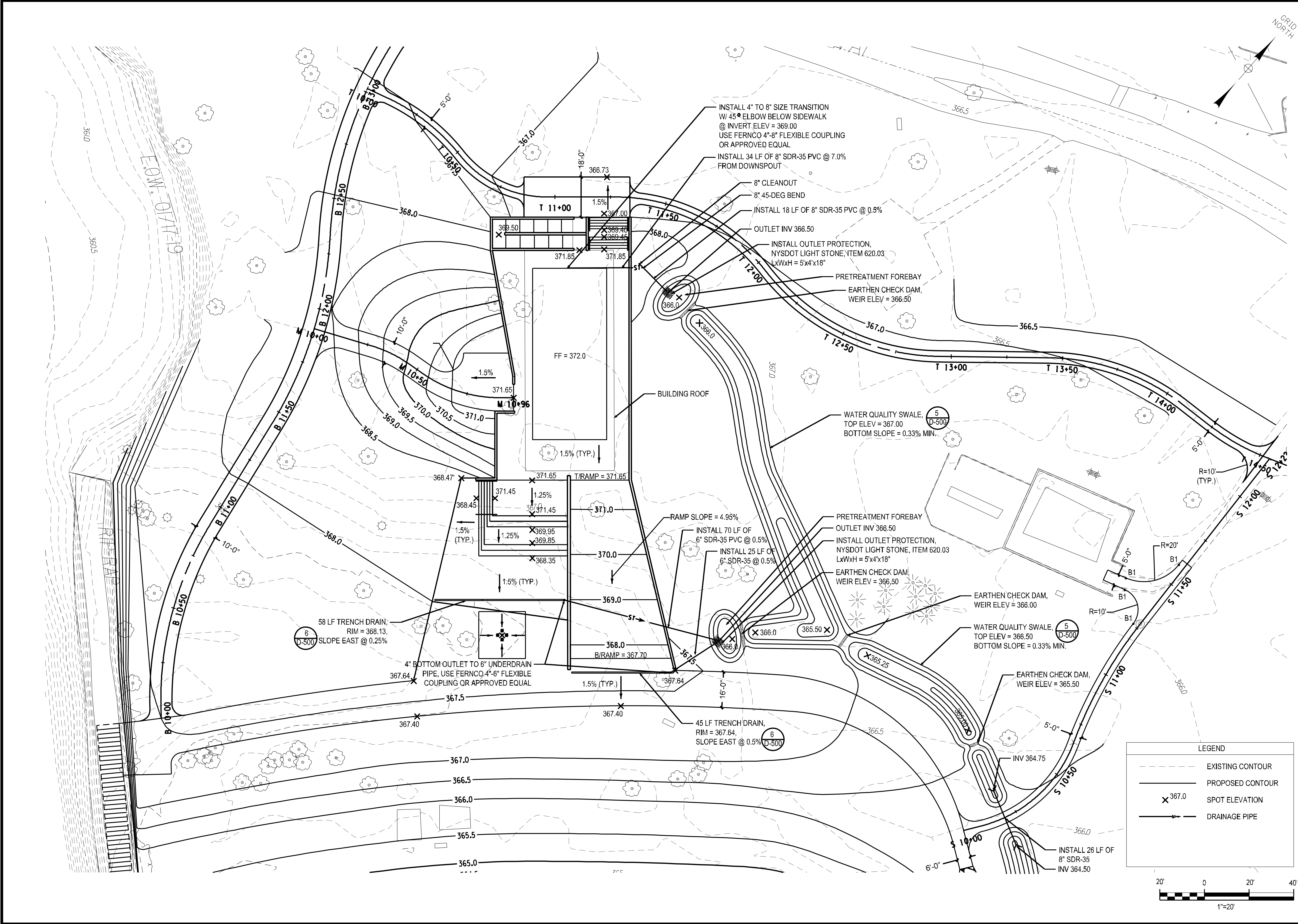


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WILLOW BAY BEACH PROJECT
ONONDAGA BEACH FEASIBILITY STUDY
& DESIGN SERVICES

ONONDAGA LAKE PARK

ONONDAGA COUNTY

ENLARGED
GRADING AND
LAYOUT PLAN

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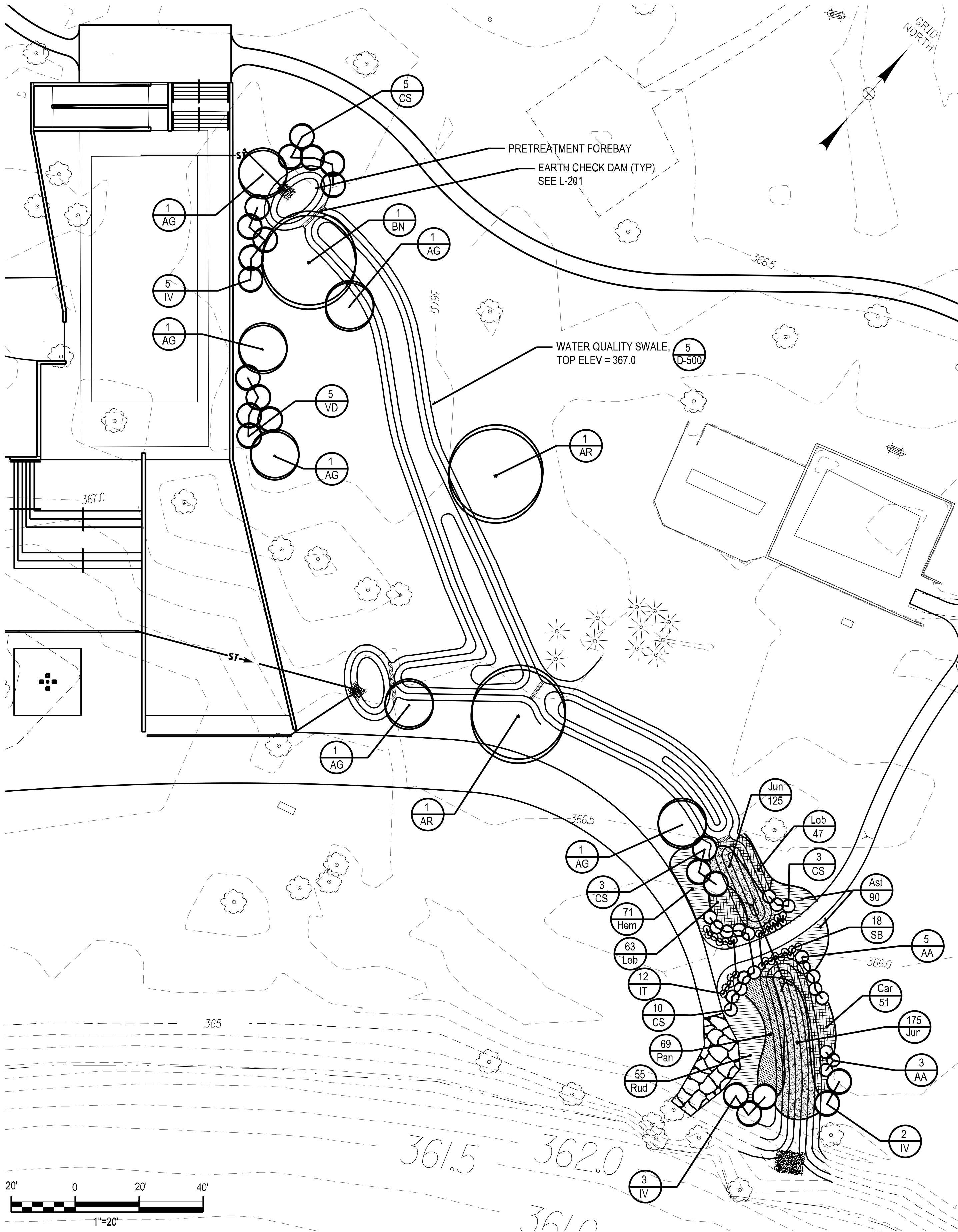
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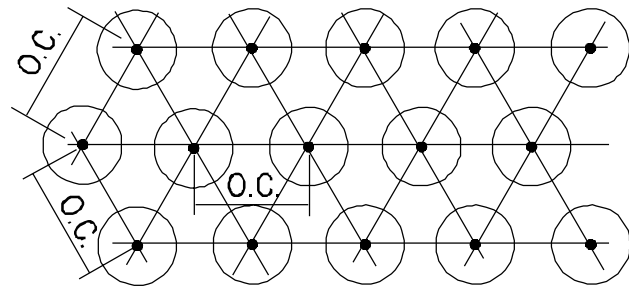
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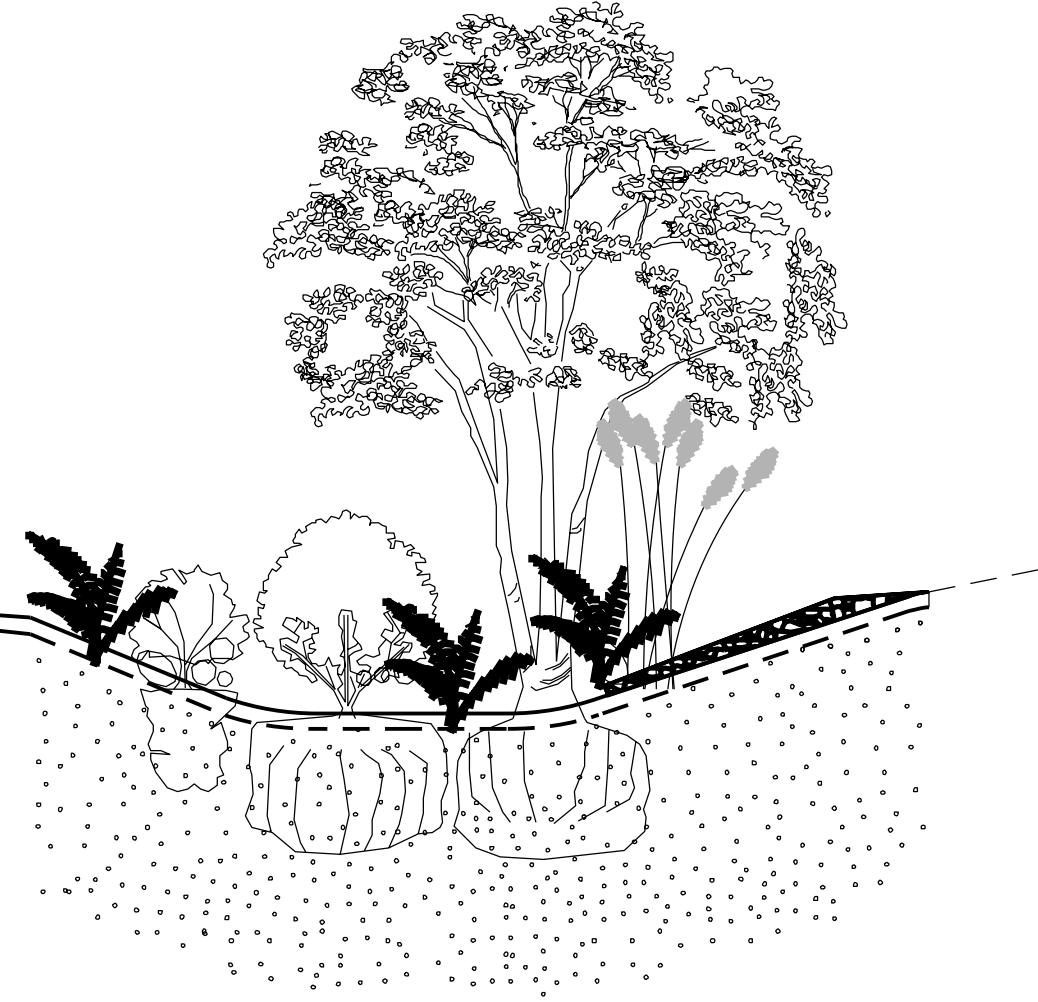
PLANTING NOTES

1. CONTRACTOR SHALL VERIFY LOCATIONS OF ALL EXISTING AND PROPOSED UTILITY LOCATIONS PRIOR TO INSTALLING ANY PLANT MATERIAL.
2. ALL PLANT MATERIALS SHALL CONFORM THE THE GUIDELINES ESTABLISHED BY THE CURRENT 'AMERICAN STANDARD FOR NURSERY STOCK,' PUBLISHED BY THE AMERICAN NURSERY AND LANDSCAPE ASSOCIATION.
3. ALL PLANTS SHALL BE DELIVERED AS SPECIFIED IN THE PLANT LIST. NO CONTAINER BOUND STOCK WILL BE ACCEPTED IF IT IS ROOT BOUND. ALL ROOT WRAPPING MATERIAL MADE OF SYNTHETICS OR PLASTICS SHALL BE REMOVED ENTIRELY AT TIME OF PLANTING.
4. WITH CONTAINER GROWN STOCK, THE CONTAINER SHALL BE REMOVED AND THE CONTAINER BALL SHALL BE LOOSENEED BY SCARIFYING THE SURFACE OF THE BALL VERTICALLY IN THREE LOCATIONS TO ENCOURAGE IMMEDIATE ROOT GROWTH.
5. ALL LOCATION OF TREES AND SHRUBS SHALL BE STAKED OUT ONE DAY PRIOR TO PLANTING INSTALLATIONS, FOR APPROVAL BY THE PROJECT LANDSCAPE ARCHITECT.
6. ALL PLANTS SHALL BE SET PLUMB UNLESS DIRECTED OTHERWISE.
7. DO NOT HEAVILY PRUNE TREES AT PLANTING. INTERIOR TWIGS AND LATERAL BRANCHES MAY BE PRUNED; HOWEVER, DO NOT REMOVE THE TERMINAL BUDS OF BRANCHES THAT EXTEND TO THE EDGE OF THE CROWN.
8. ALL PLANTS SHALL BE WATERED THOROUGHLY TWICE DURING THE FIRST 24 HOUR PERIOD AFTER PLANTING. ALL PLANTS (INCLUDING PORTABLE DRIP IRRIGATION SYSTEMS AROUND TREES) SHALL THEN BE WATERED WEEKLY, AT A MINIMUM, DURING THE FIRST GROWING SEASON.
9. ALL TREES SHALL RECEIVE A PORTABLE DRIP IRRIGATION SYSTEM DURING THE FIRST GROWING SEASON.
10. THE CONTRACTOR SHALL INSTALL TREE AND BACKFILL THE HOLE WITH NATIVE MATERIAL COMPACTING IN 8" LIFTS TO ENSURE THE SOIL IS FIRM AND PROVIDES SUPPORT FOR THE TREE.

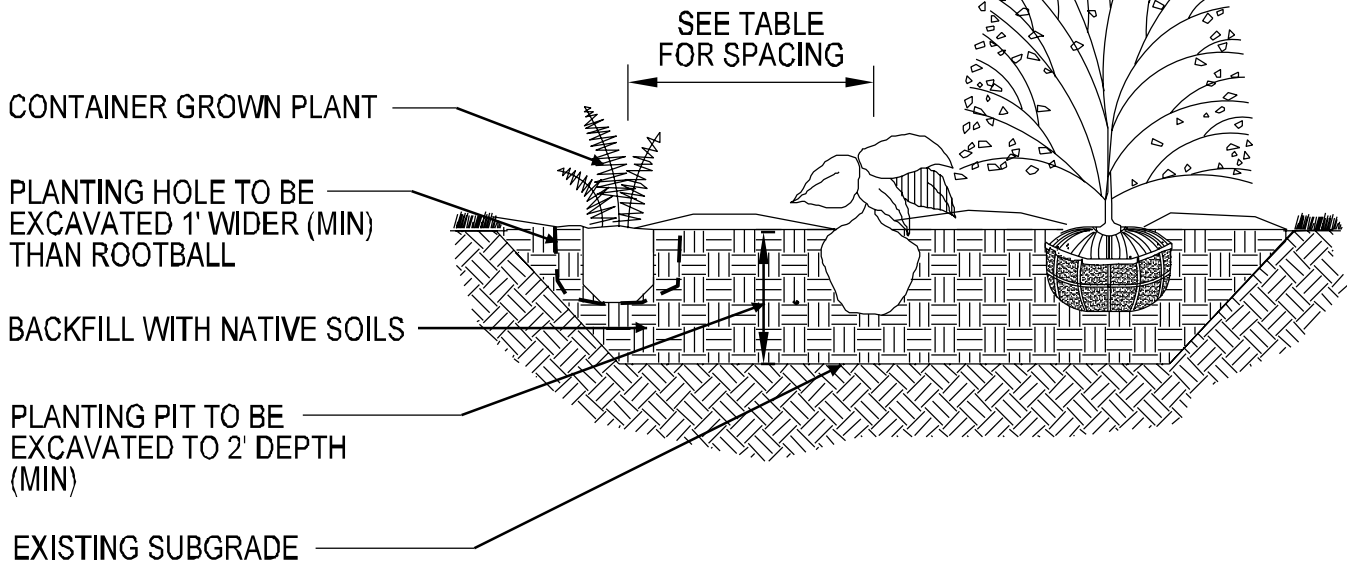
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PLANTING PATTERN



1 WET SWALE PLANTING
L-202



2 PERENNIAL / SHRUB PLANTING
L-202

PLANT LIST						
PLANTING DECIDUOUS TREES - MAJOR (ITEM 611.0151)						
QUANT.	KEY	LATIN NAME	COMMON NAME	SIZE	ROOTS	COMMENTS
2	AR	Acer rubrum 'October Glory'	October Glory Red Maple	2" 1/2"	B&B	
1	BN	Betula nigra 'Cully'	Heritage River Birch	2" 1/2"	B&B	MULTI-STEM
PLANTING DECIDUOUS TREES - MINOR (ITEM 611.0281)						
7	AG	Amelanchier x grandiflora 'Autumn Brilliance'	Autumn Brilliance Serviceberry	1 1/2"	B&B	TREE FORM
PLANTING DECIDUOUS SHRUBS - (ITEM 611.0432)						
8	AA	Aronia arbutifolia 'Brilliantissima'	Brilliantissima Chokeberry	3 GAL.	CONT.	
16	CS	Cornus sericea 'Arctic Fire'	Arctic Fire Red Twig Dogwood	3 GAL.	CONT.	
12	IT	Itea virginica 'Little Henry'	Little Henry Virginia Sweetspire	3 GAL.	CONT.	
10	IV	Ilex verticillata	Winterberry	48" HT	B&B	incl. pollinator
18	SB	Spiraea x bumalda 'Anthony Waterer'	Anthony Waterer Spiraea	3 GAL.	CONT.	
5	VD	Viburnum dentatum	Arrowwood	36" HT	B&B	
PLANTING HERBACEOUS PLANTS - (ITEM 611.0721)						
90	Ast	Aster cordifolius 'Blue Wood'	Blue Wood Aster	QUART	CONT.	15" O.C.
51	Car	Carex vulpinoidea	Fox Sedge	1 GAL.	CONT.	24" O.C.
71	Hem	Hemerocallis 'Happy Returns'	Happy Returns Daylily	1 GAL.	CONT.	18" O.C.
300	Jun	Juncus gerardi	Blackgrass	QUART	CONT.	15" O.C.
110	Lob	Lobelia siphatica	Great Blue Lobelia	QUART	CONT.	15" O.C.
69	Pan	Panicum virgatum 'Heavy Metal'	Switch Grass	1 GAL.	CONT.	24" O.C.
55	Rud	Rudbeckia hirta 'Rustic Colors'	Black Eyed Susan	1 GAL.	CONT.	18" O.C.

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WILLOW BAY BEACH PROJECT

ONONDAGA BEACH FEASIBILITY STUDY
& DESIGN SERVICES

ONONDAGA LAKE PARK

ONONDAGA COUNTY

PLANTING PLANS
AND DETAILS

SCALE: AS SHOWN

DATE ISSUED: 02/20/2021

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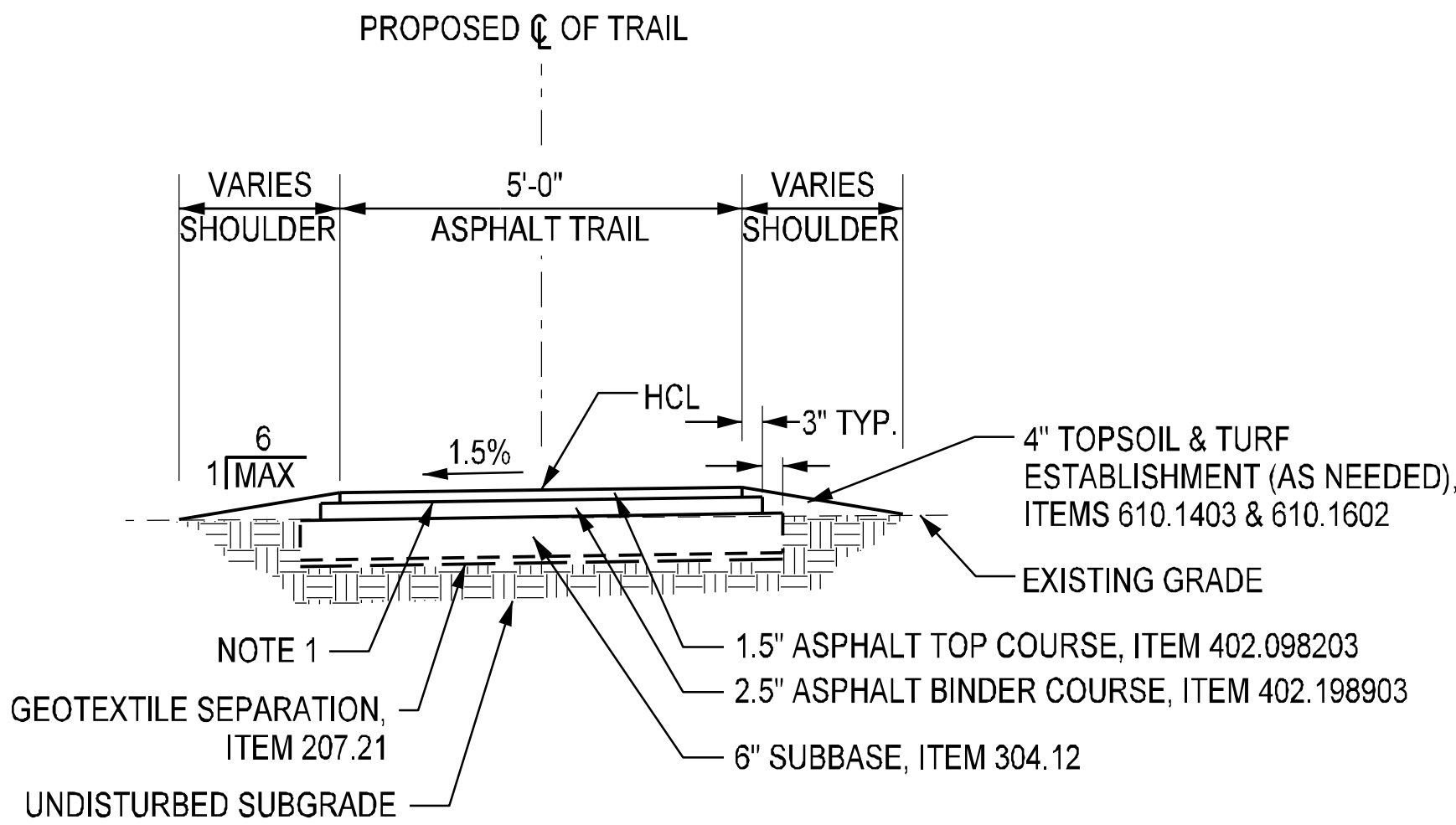
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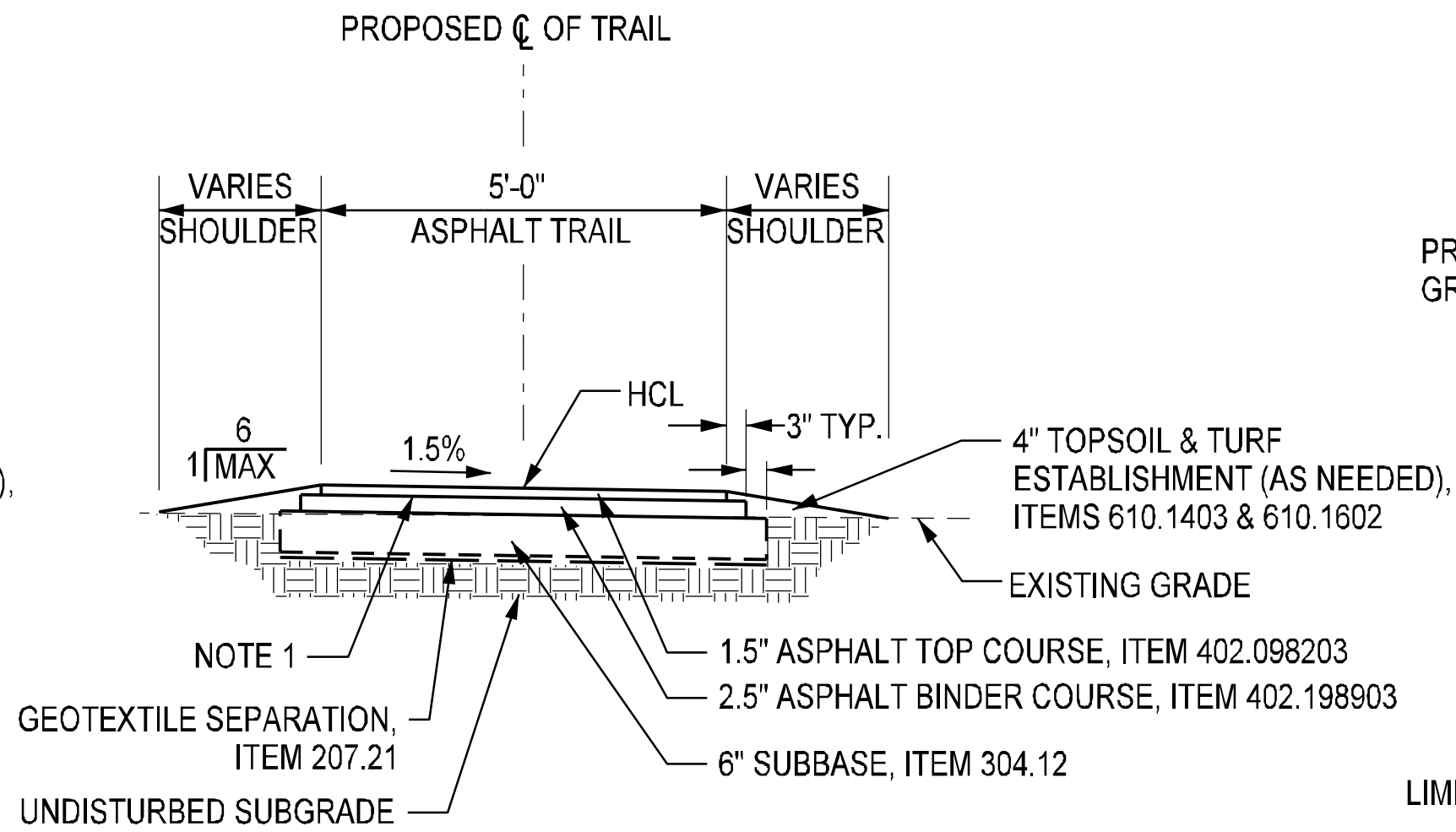
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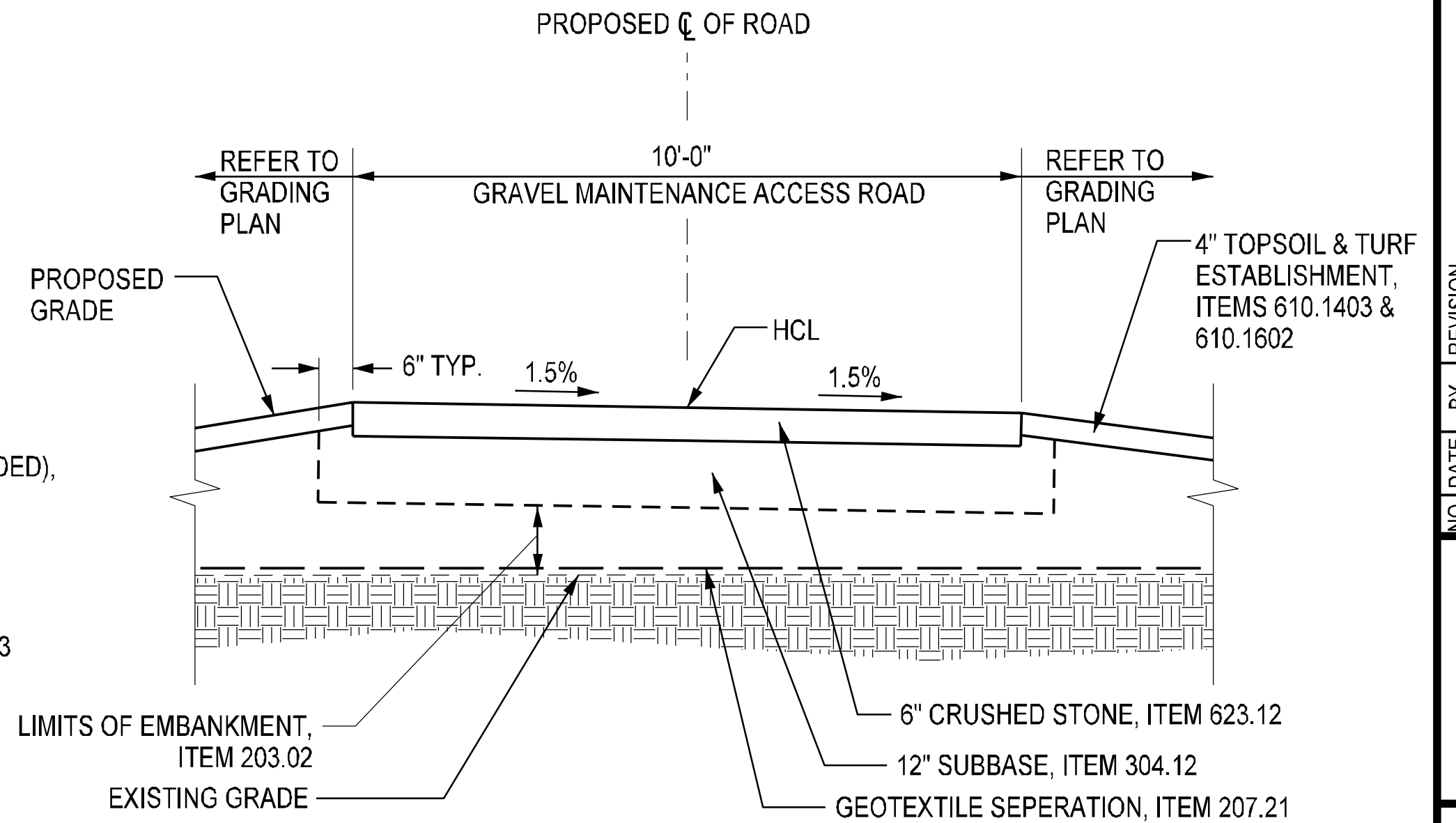
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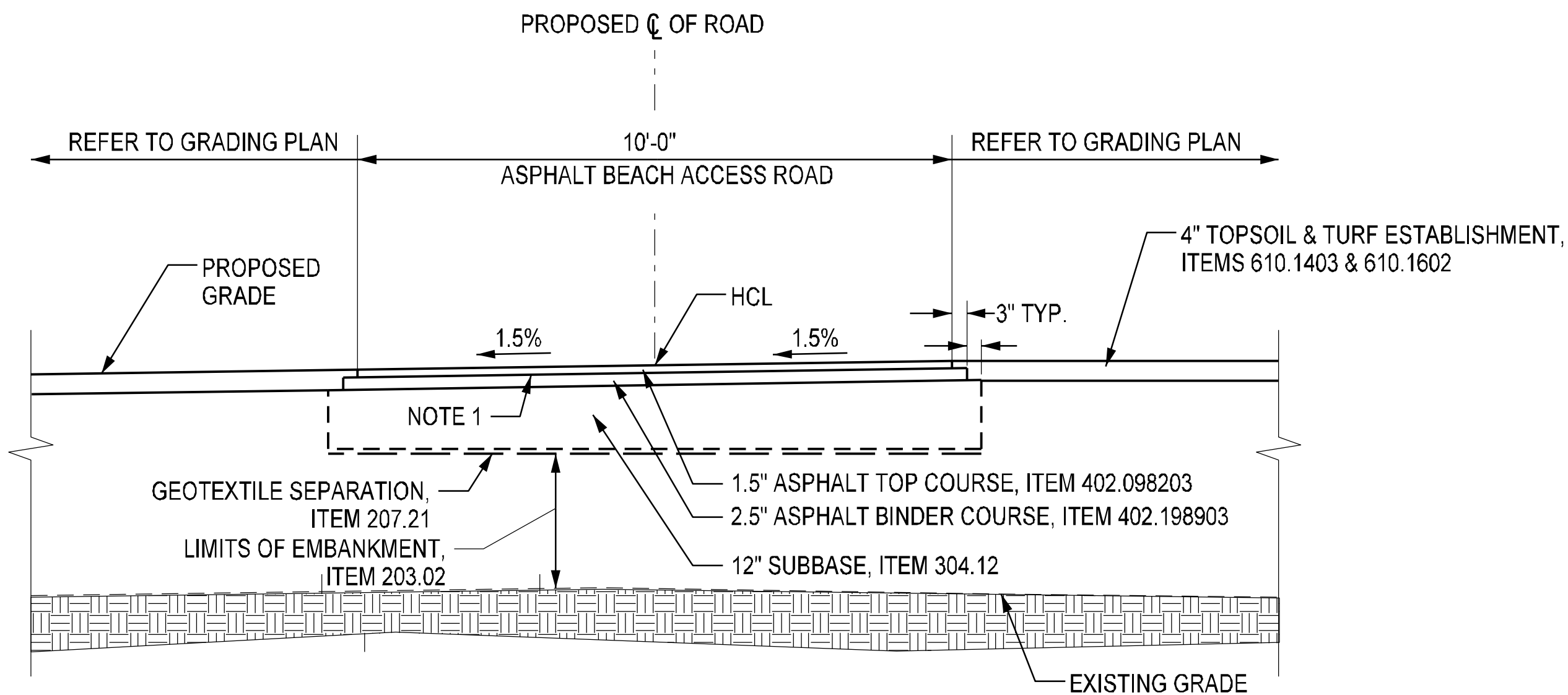
1 5'-0" WIDE ASPHALT TRAIL CONNECTION
NOT TO SCALE
LOCATIONS: STA. T 10+00.00 TO STA. T 14+51.41



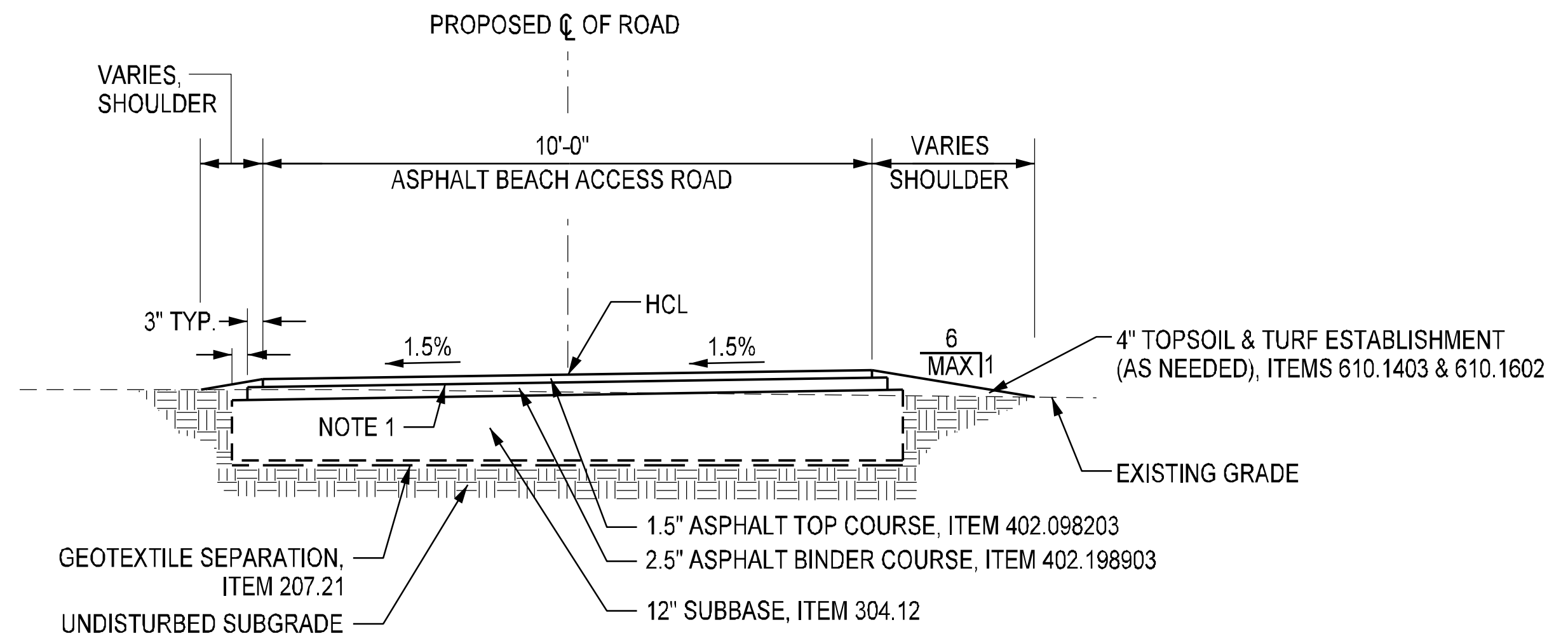
2 5'-0" WIDE ASPHALT TRAIL CONNECTION
NOT TO SCALE
LOCATIONS: STA. S 10+00.00 TO STA. S 11+61.61



3 10'-0" WIDE MAINTENANCE ACCESS ROAD
NOT TO SCALE
LOCATIONS: STA. M 10+00.00 TO STA. M 10+96.00



4 10'-0" WIDE BEACH ACCESS ROAD
NOT TO SCALE
LOCATIONS: STA. B 10+00.00 TO STA. B 12+07.00



5 10'-0" WIDE BEACH ACCESS ROAD
NOT TO SCALE
LOCATIONS: STA. B 12+07.00 TO STA. B 14+00.00

NOTES:

- TACK COAT (ITEM 407.0102) SHALL BE APPLIED BETWEEN ALL LIFTS OF ASPHALT.

NO DATE BY REVISION



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WILLOW BAY BEACH PROJECT
ONONDAGA BEACH FEASIBILITY STUDY
& DESIGN SERVICES

ONONDAGA LAKE PARK

ONONDAGA COUNTY

TYPICAL SECTIONS

SCALE: AS SHOWN

DATE ISSUED: 02/20/2021

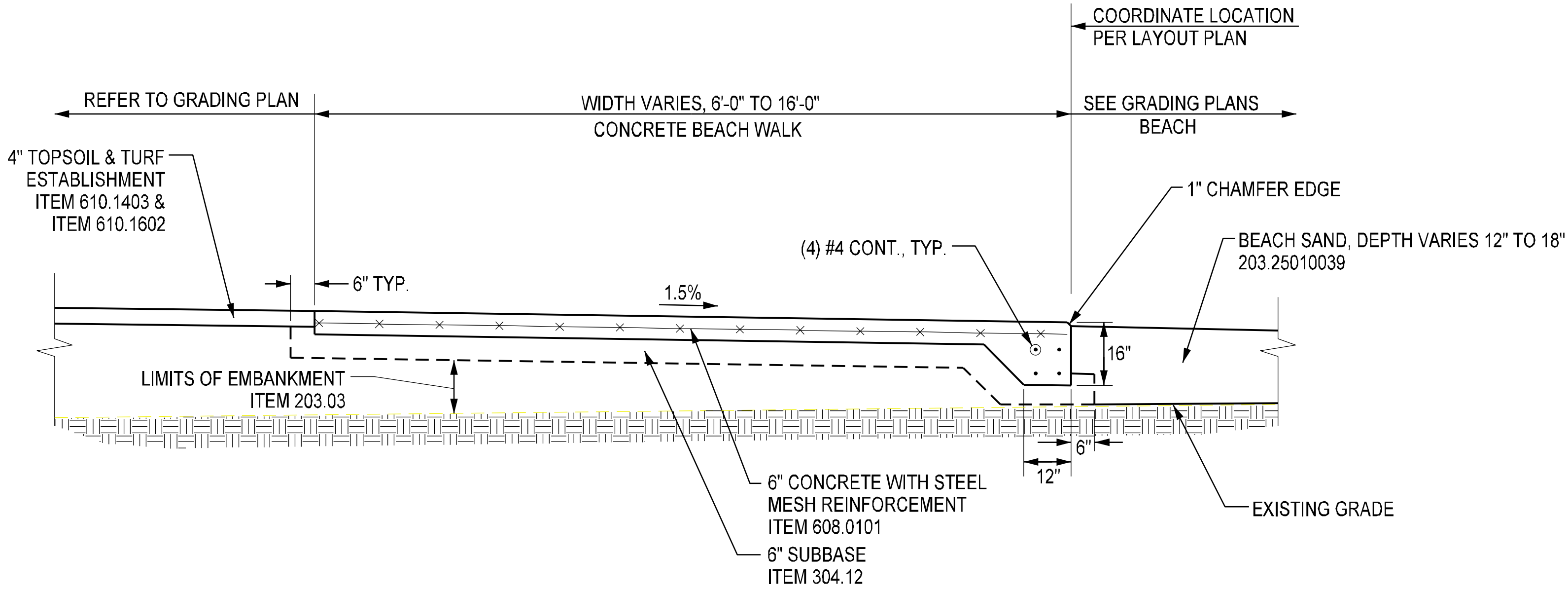
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L-300

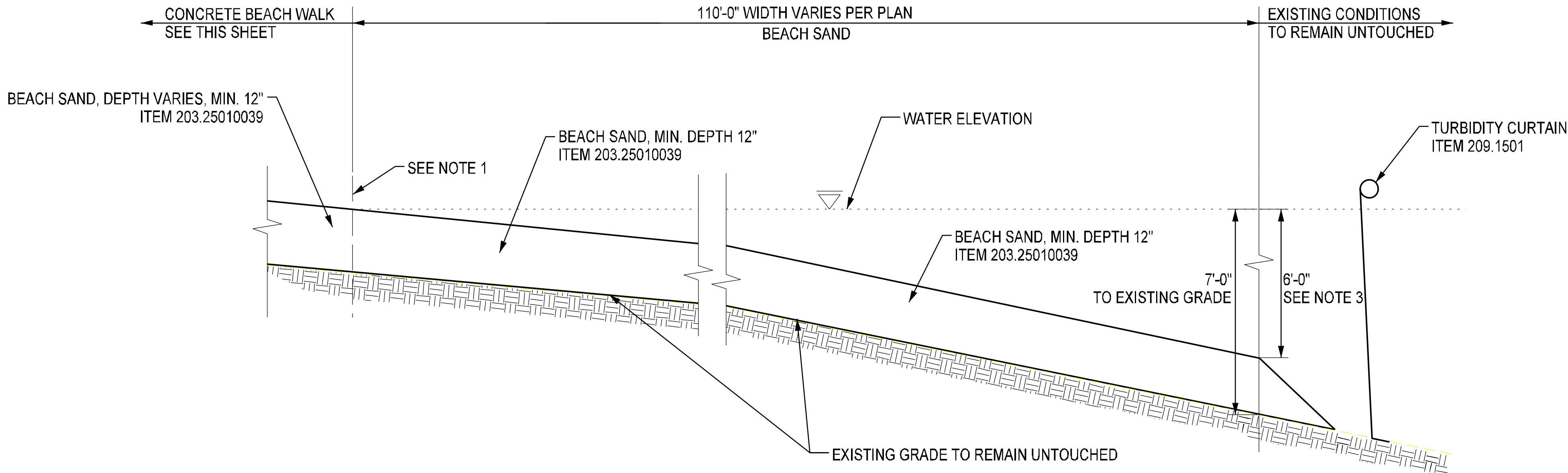
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1
L-301
CONCRETE BEACH WALK
NOT TO SCALE



2
L-301
BEACH SAND DETAIL
NOT TO SCALE

NOTES:

1. BEACH SAND SHALL BE MECHANICALLY PLACED ON TOP OF EXISTING GRADE WITHOUT DISTURBANCE TO LAKE BOTTOM.
2. CONTRACTOR SHALL SUBMIT METHOD OF PLACEMENT TO COUNTY FOR REVIEW AND APPROVAL PRIOR TO INSTALLING.
3. CONTRACTOR SHALL PLACE SAND BETWEEN 12" (MIN.) -24" (MAX.) DEPTH, TO A DEPTH OF 6' BELOW WATER ELEVATION.
4. REFER TO G-001 FOR ADDITIONAL NOTES ON BEACH SAND PLACEMENT.

NO.	DATE	BY	REVISION



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WILLOW BAY BEACH PROJECT	ONONDAGA COUNTY
ONONDAGA BEACH FEASIBILITY STUDY & DESIGN SERVICES	ONONDAGA LAKE PARK

TYPICAL SECTIONS

SCALE	AS SHOWN
DATE	ISSUED 02/2021
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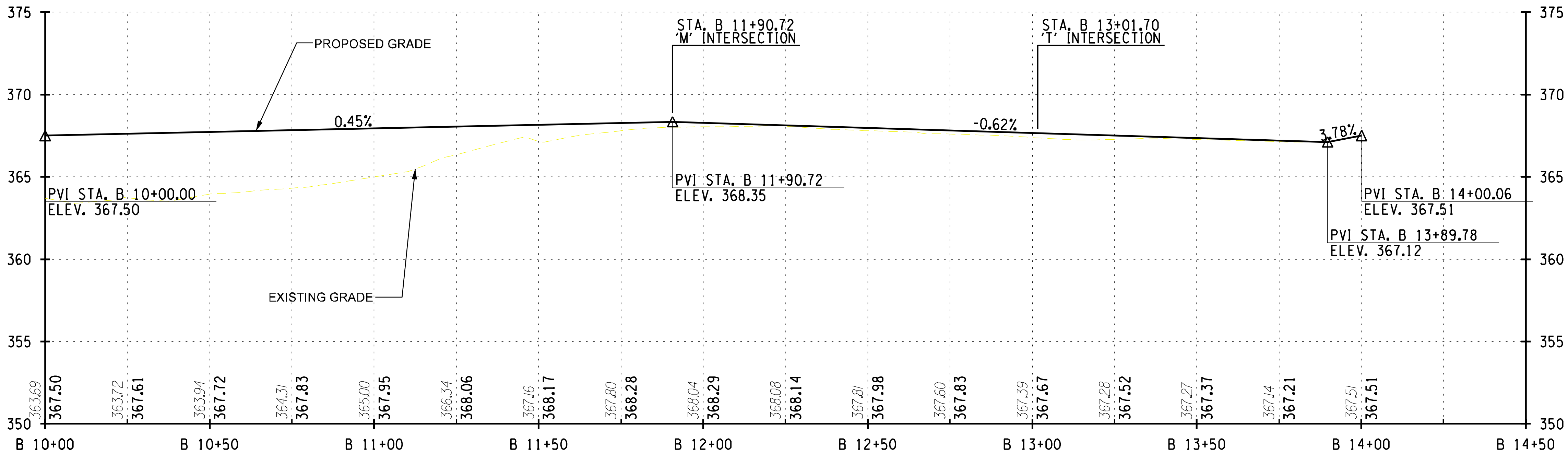
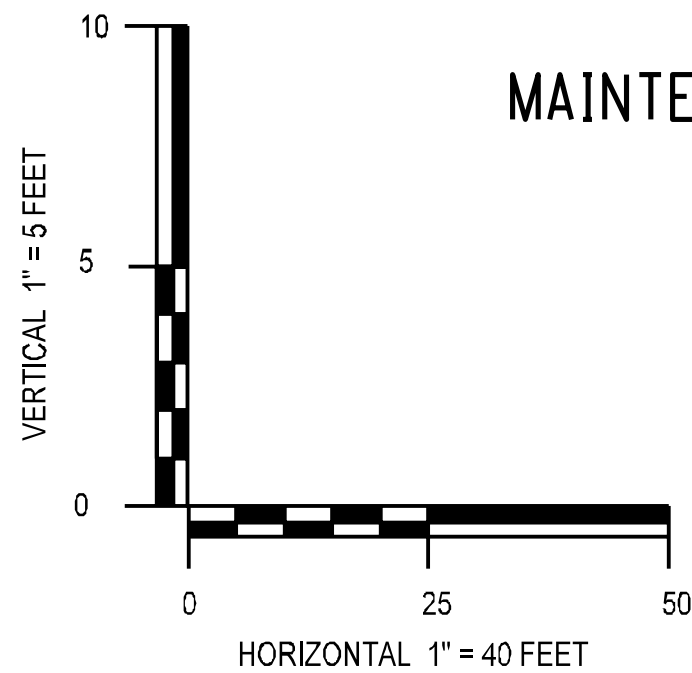
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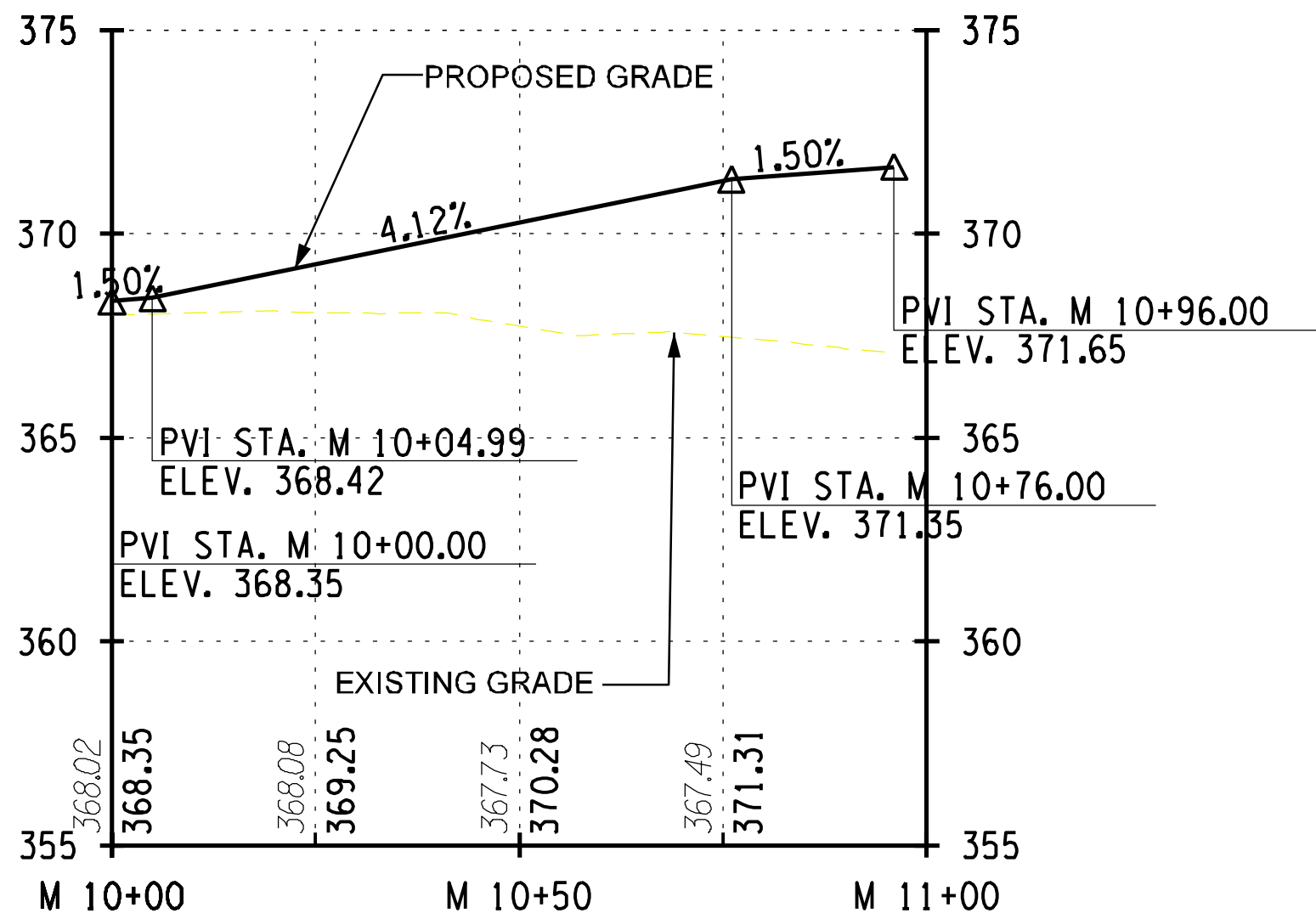
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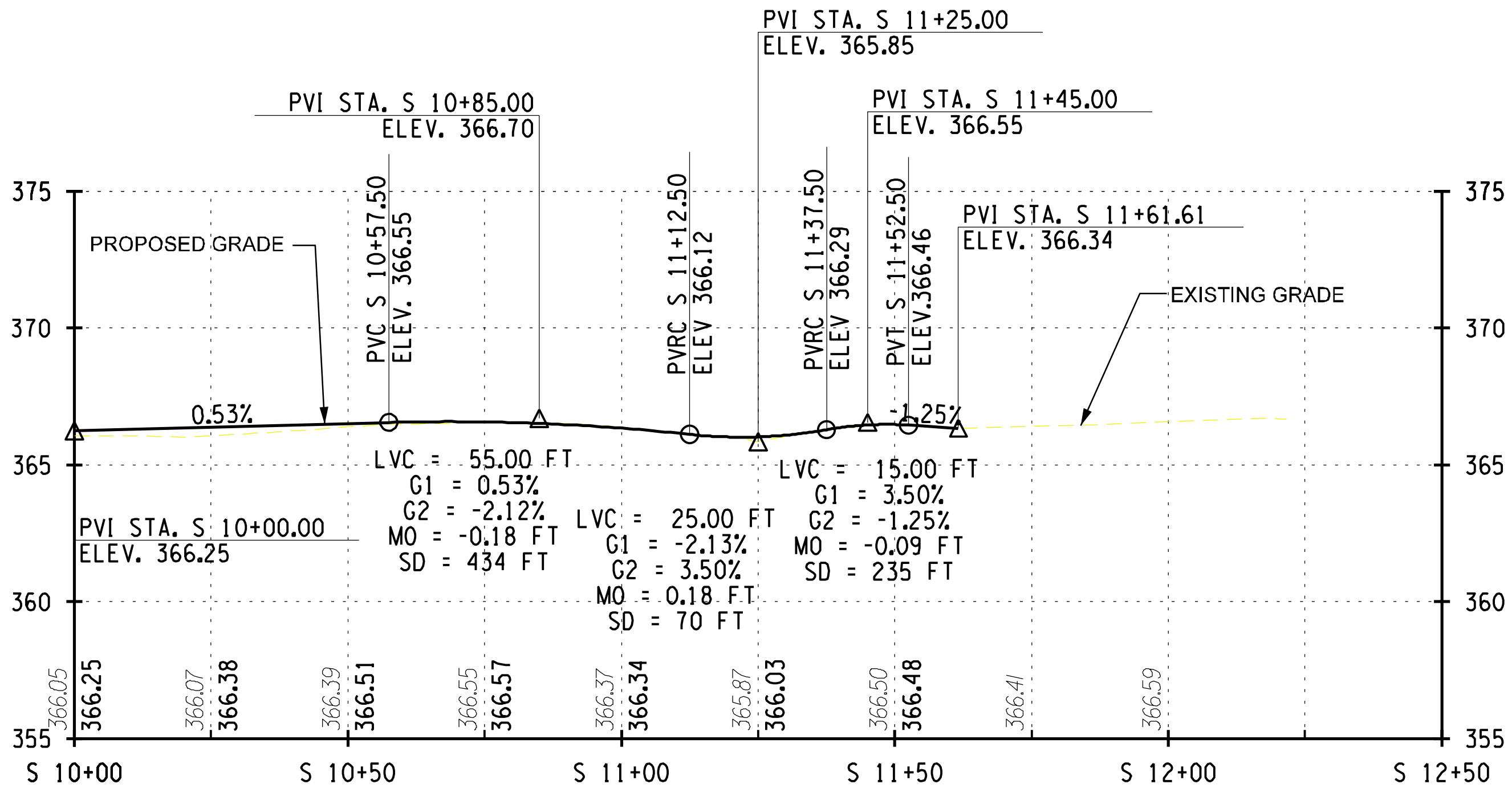
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BEACH ACCESS ROAD PROFILE



MAINTENANCE ACCESS ROAD PROFILE



"S" TRAIL CONNECTION PROFILE



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WILLOW BAY BEACH PROJECT
ONONDAGA BEACH FEASIBILITY STUDY
& DESIGN SERVICES

ONONDAGA LAKE PARK

ONONDAGA COUNTY

PROFILES - 1

SCALE: AS SHOWN

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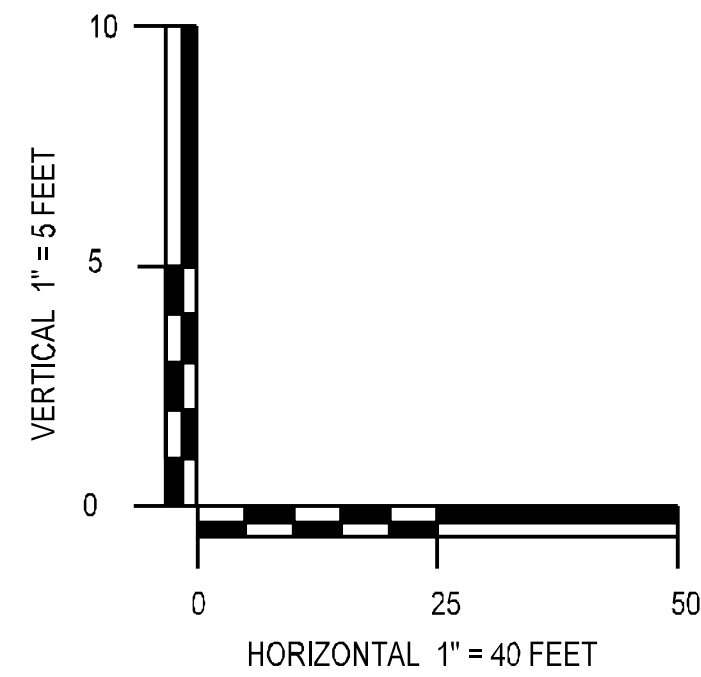
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IN CHARGE OF



"T" TRAIL CONNECTION PROFILE

PROFILES - 2

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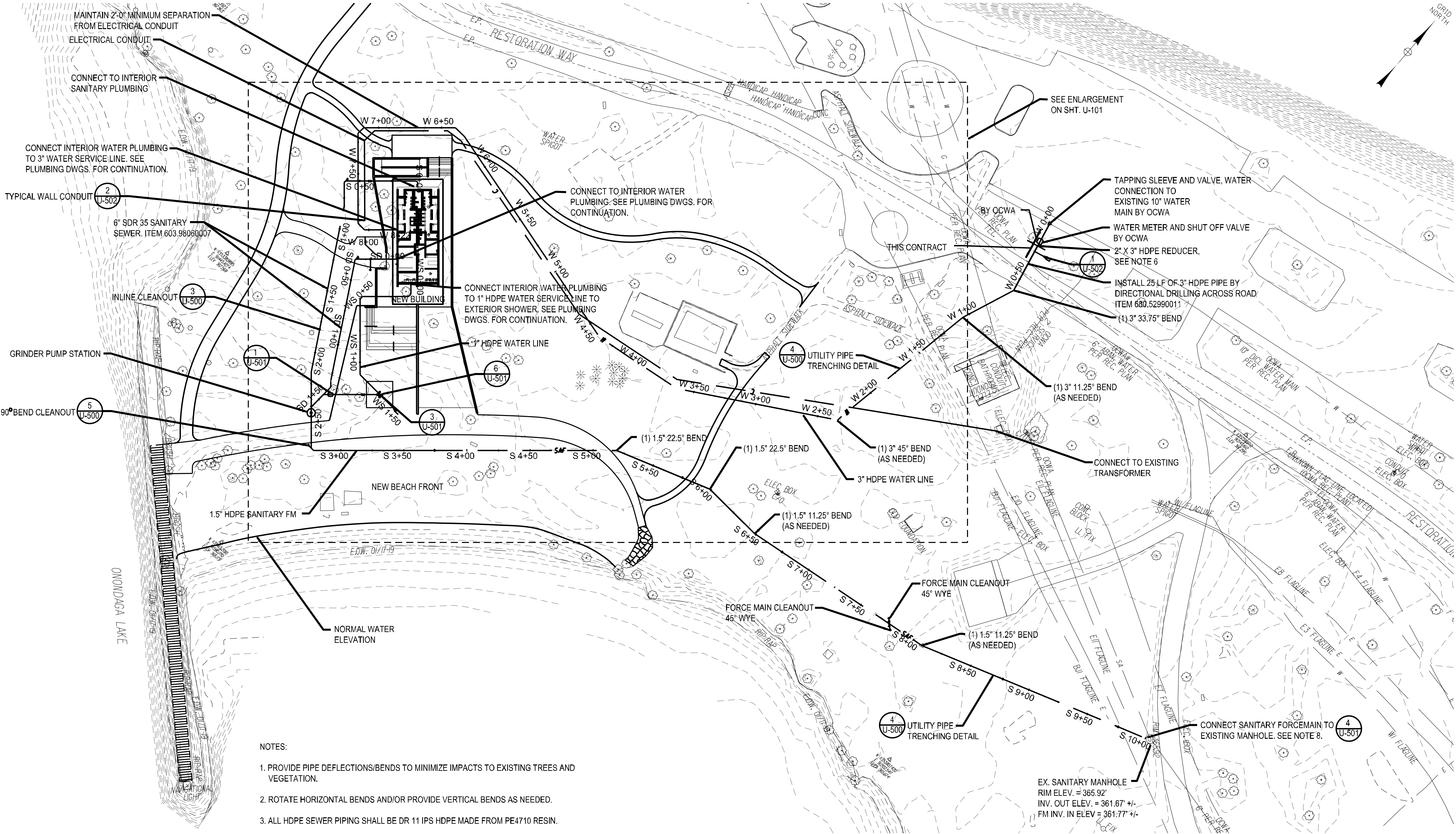
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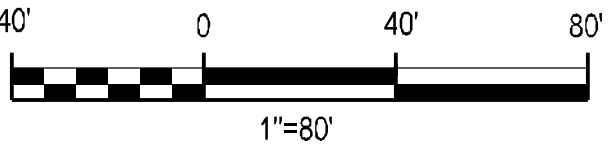
IN CHARGE OF



NOTES:

1. PROVIDE PIPE DEFLECTIONS/BENDS TO MINIMIZE IMPACTS TO EXISTING TREES AND VEGETATION.
2. ROTATE HORIZONTAL BENDS AND/OR PROVIDE VERTICAL BENDS AS NEEDED.
3. ALL HDPE SEWER PIPING SHALL BE DR 11 IPS HDPE MADE FROM PE4710 RESIN.
4. ALL HDPE WATER TUBING 2" AND LESS SHALL BE DR9 CTS HDPE MADE FROM PE4710 RESIN AND NSF 61 CERTIFIED.
5. ALL HDPE WATER PIPING 3" OR LARGER SHALL DR9 IPS HDPE MADE FROM PE4710 RESIN AND NSF 61 CERTIFIED.
6. COORDINATE CONNECTION TO EX. 10" WATER MAIN WITH OCWA. OCWA TO PROVIDE 2" THREADED CONNECTION PORT AT METER.
7. GRINDER PUMP TO BE EONE, DUPLEX MODEL DH502-104 OR APPROVED EQUAL. INLET TO ACCEPT 6" SDR 35 PVC PIPING. LEVEL CONTROLS TO BE HARD WIRED.
8. COORDINATE CONNECTION TO EX. SANITARY MANHOLE WITH OCDWEP.

LEGEND	
	ENLARGEMENT ON SHT. U-101
	HDPE WATER LINE
	SANITARY SEWER
	FORCE MAIN CLEANOUT
	GRINDER PUMP STATION
	GRINDER PUMP STATION



NO	DATE	BY	REVISION



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WILLOW BAY BEACH PROJECT	ONONDAGA COUNTY
ONONDAGA BEACH FEASIBILITY STUDY & DESIGN SERVICES	ONONDAGA LAKE PARK
ONONDAGA COUNTY	ONONDAGA COUNTY

UTILITY PLAN OVERALL
SCALE: AS SHOWN
DATE ISSUED: 02/20/2021
DRAWING U-100

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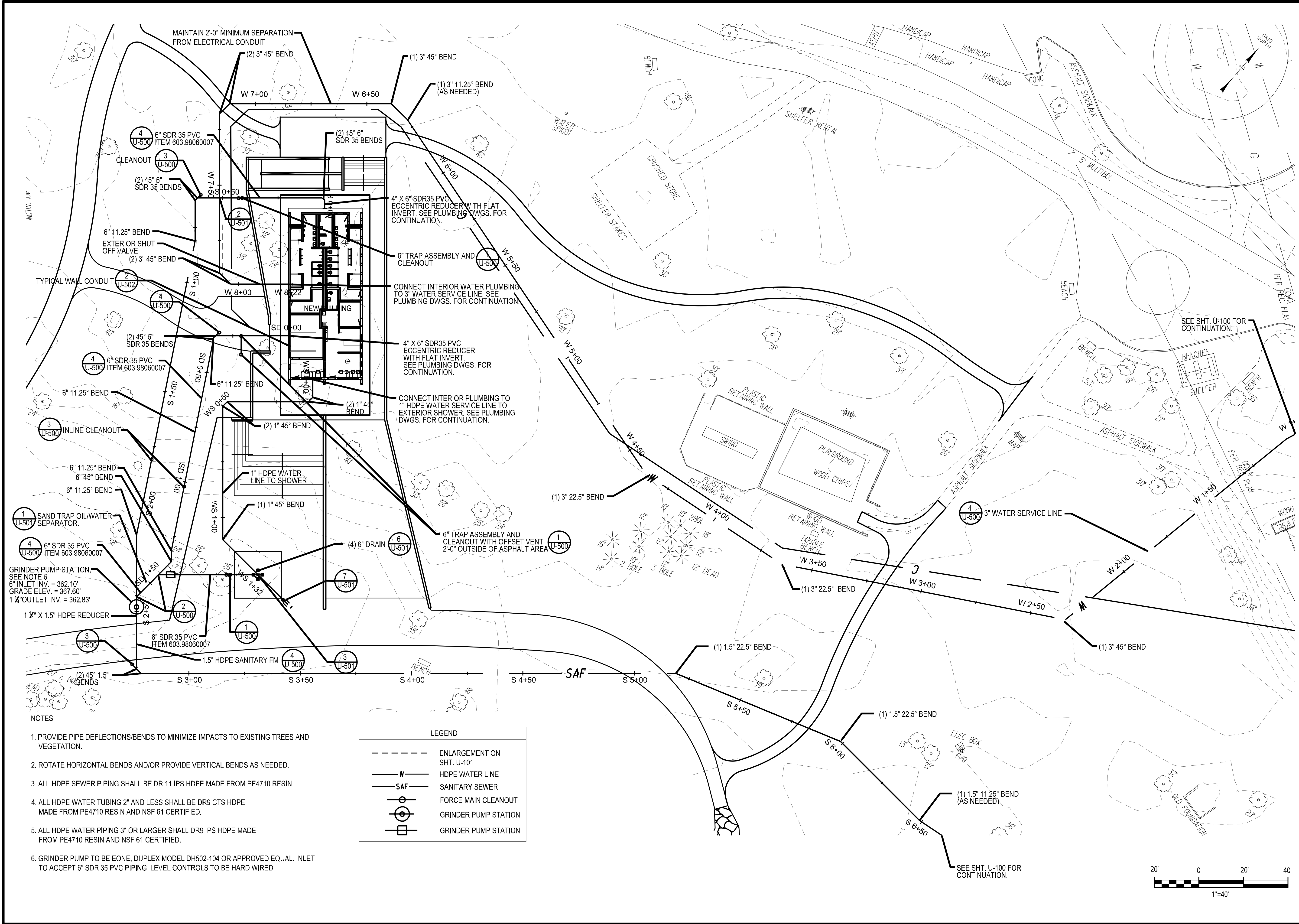
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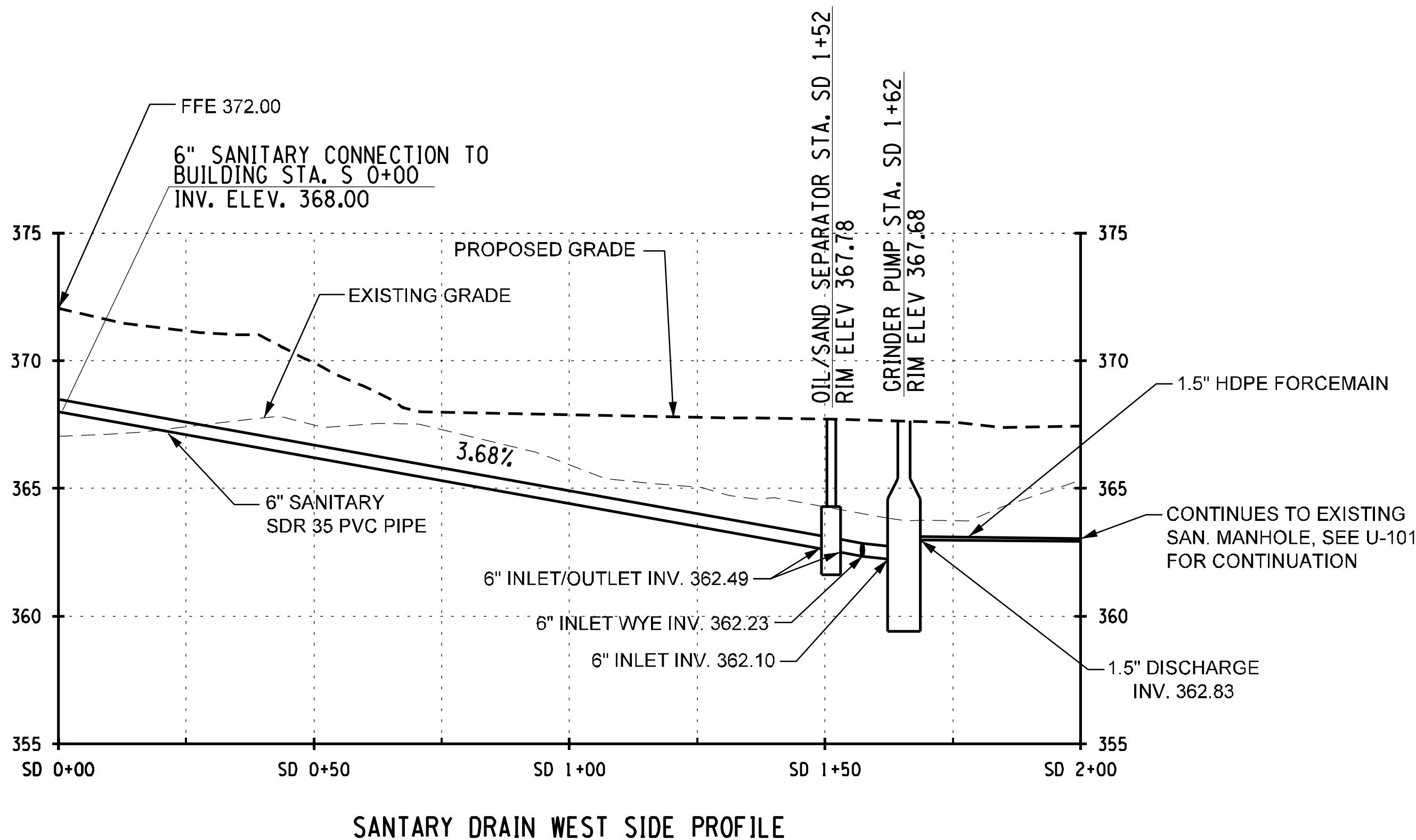
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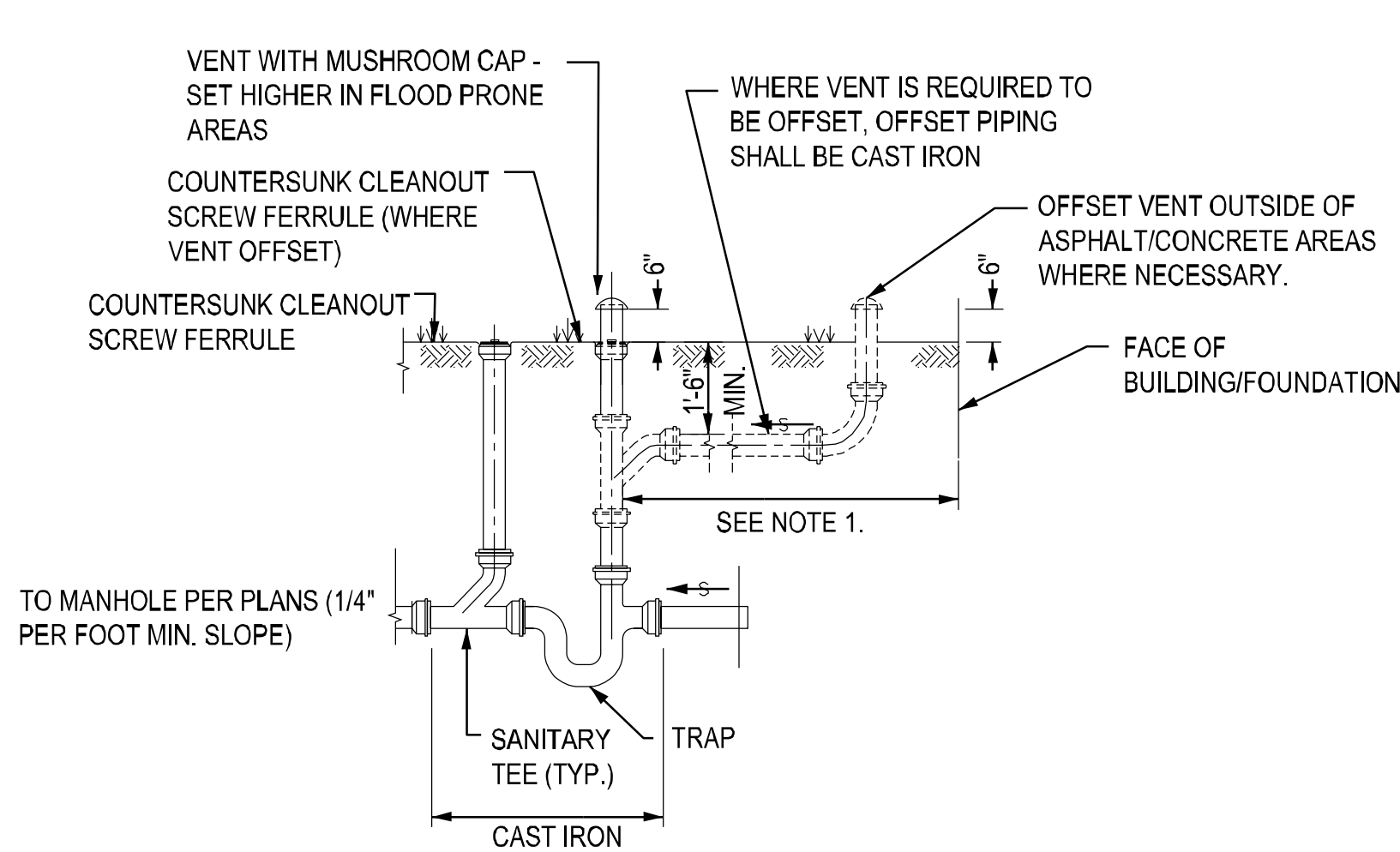
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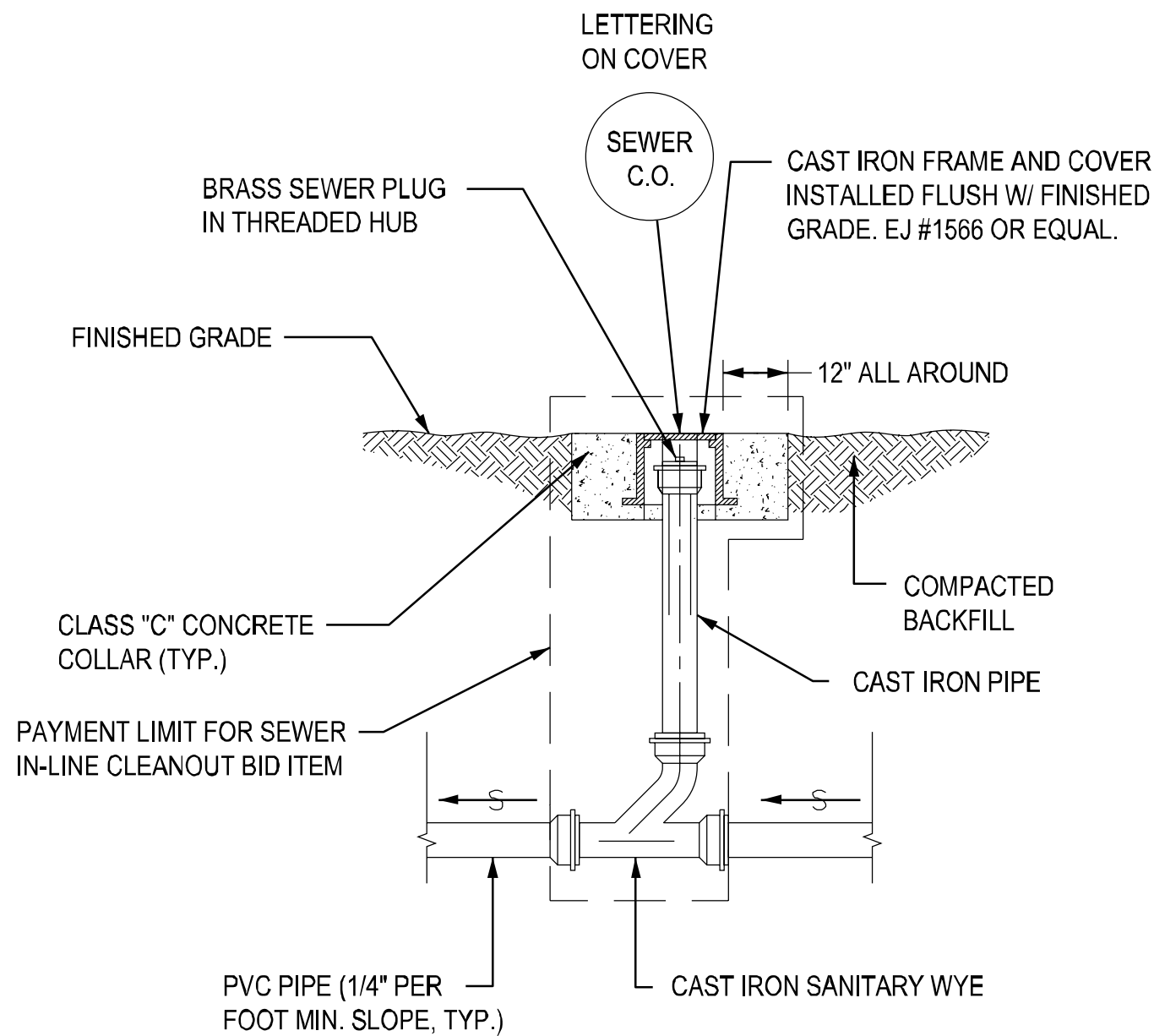
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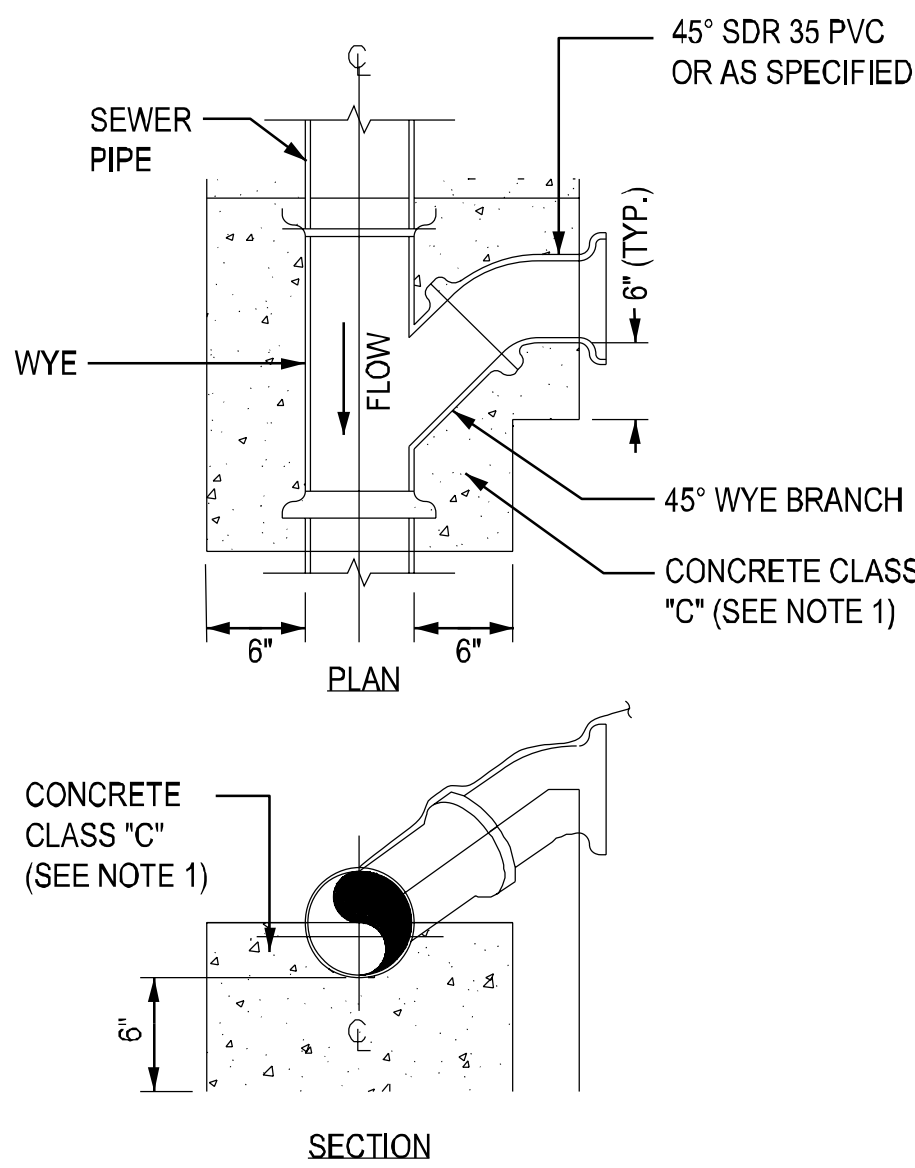
NOTES:

1. CONNECTION TO EXISTING BUILDING SEWER SHALL BE MINIMUM 10 FEET FROM FACE OF BUILDING, BUT VENT SHALL BE INSTALLED OUTSIDE OF ASPHALT/CONCRETE FACILITY ENTRANCE AREAS UNLESS OTHERWISE DIRECTED.
2. TRAP DETAIL IS TYPICAL FOR EACH BUILDING SEWER.
3. MATCH PVC AND CAST-IRON PIPE TO SIZE SHOWN ON PLANS.
4. BED ALL ASSEMBLY PIPING, FITTINGS, AND APPURTENANCES IN MINIMUM 6" LINING ALL AROUND.

1 TRAP ASSEMBLY AND CLEANOUT DETAIL
NOT TO SCALE



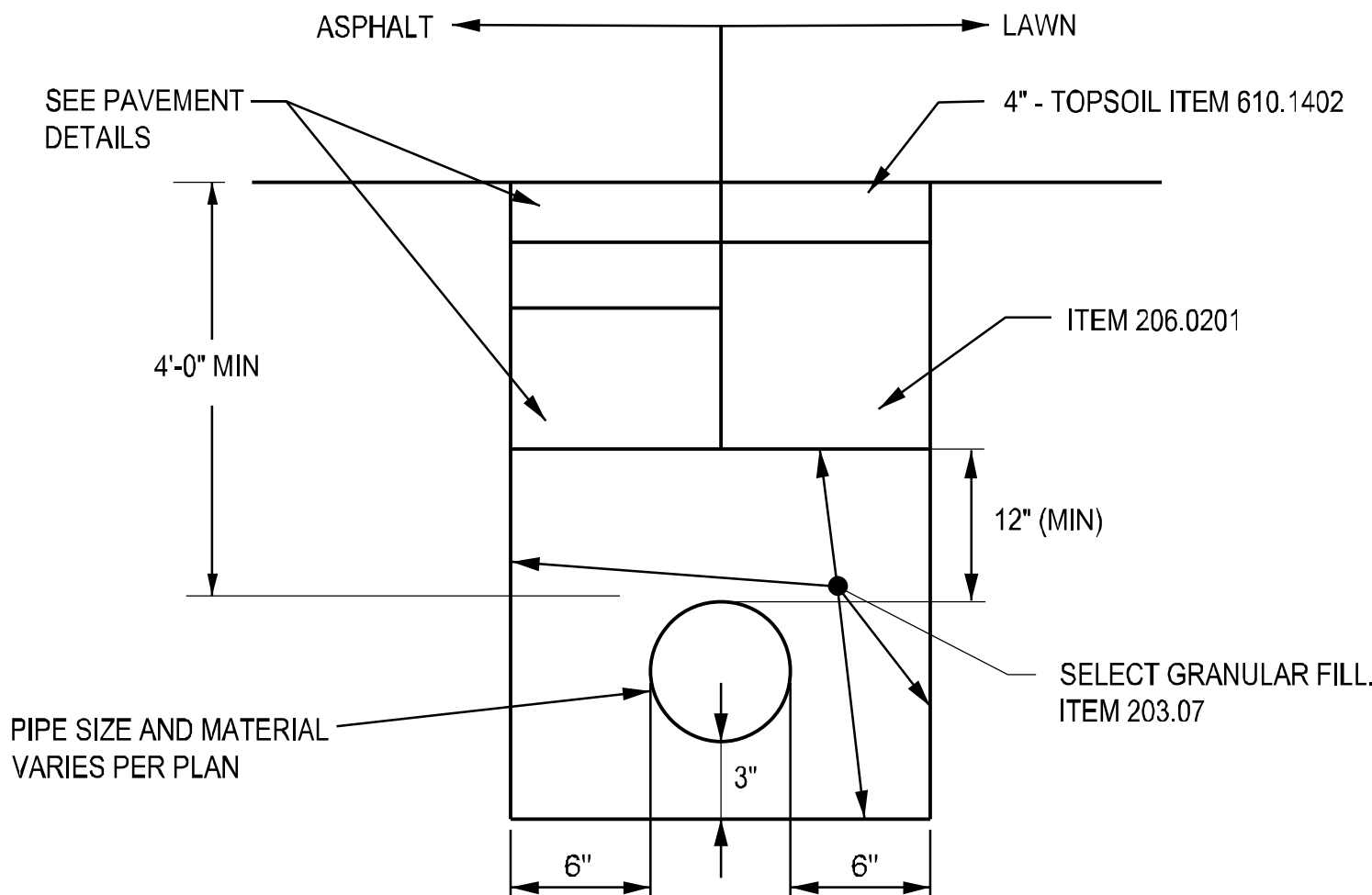
3 TYPICAL SEWER INLINE CLEANOUT DETAIL
NOT TO SCALE



NOTES:

1. CONCRETE CRADLE TO BE PROVIDED ONLY FOR RIGID PIPE. LINING TO BE PROVIDED FOR FLEXIBLE PIPE.
2. CONTRACTOR TO DETERMINE SAFE EMBEDMENT FOR SHEETING.
3. ALL MARKERS SHALL INDICATE THE DEPTH TO INVERT.

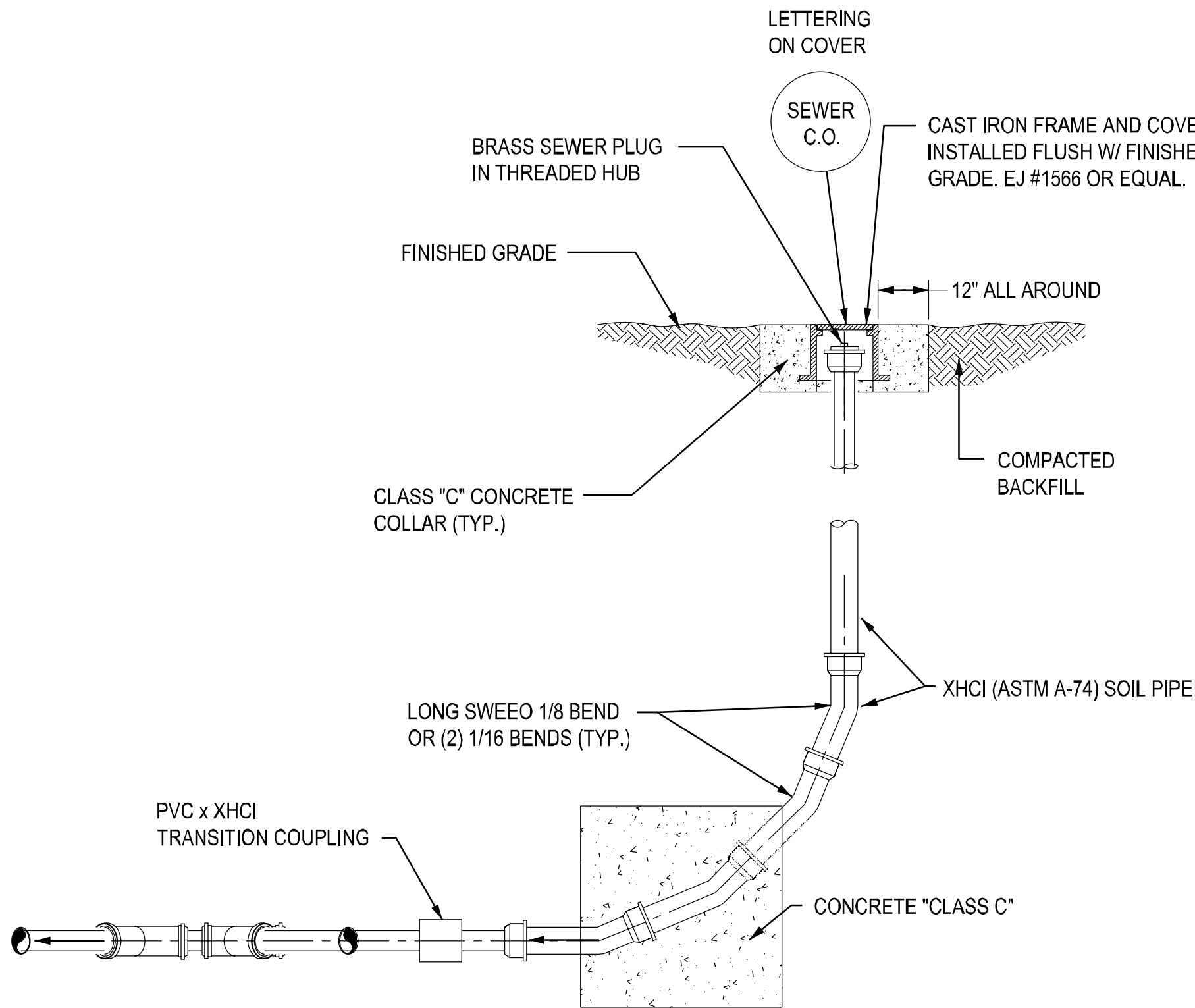
2 TYPICAL WYE CONNECTION LATERAL DETAIL
NOT TO SCALE



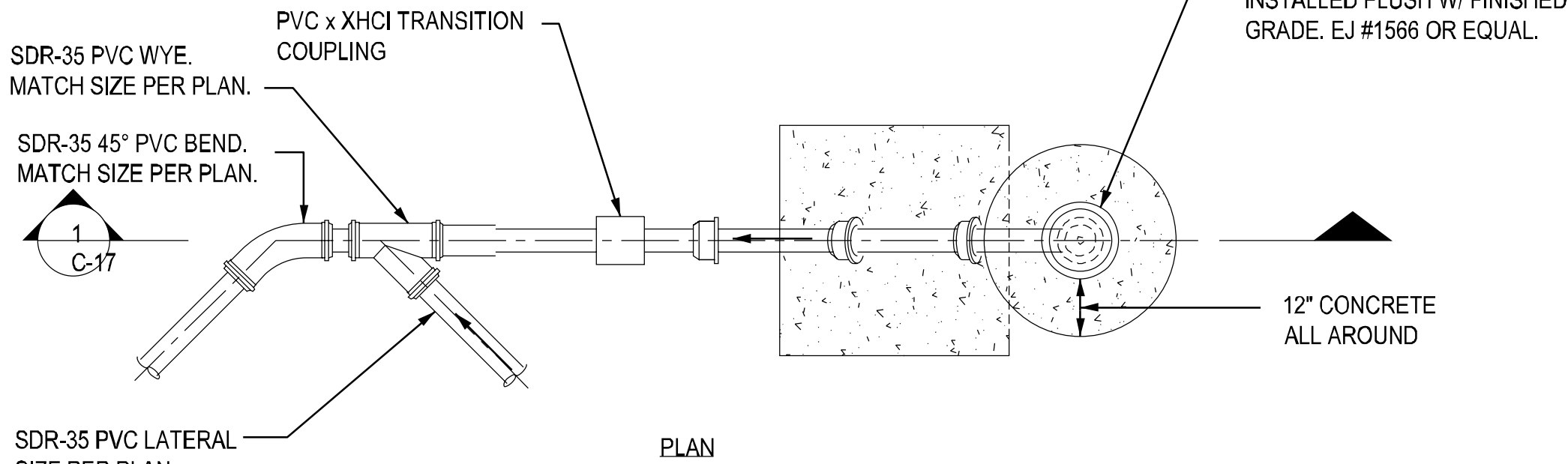
NOTES:

1. WATER AND SEWER UTILITY LINES TO BE BURIED WITH 4'-0" COVER ABOVE PIPE MINIMUM.

4 UTILITY PIPE TRENCHING DETAIL
NOT TO SCALE



1 SECTION
SCALE: NOT TO SCALE



NOTES:

1. WHERE CALLED FOR ON THE PLANS, CONTRACTOR SHALL INSTALL A 45° WYE WITH CLEANOUT, FOLLOWED BY A 45° BEND.

5 SEWER 90° BEND CLEANOUT DETAIL
NOT TO SCALE



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WILLOW BAY BEACH PROJECT

ONONDAGA BEACH FEASIBILITY STUDY
& DESIGN SERVICES

ONONDAGA LAKE PARK

ONONDAGA COUNTY

UTILITY
DETAILS

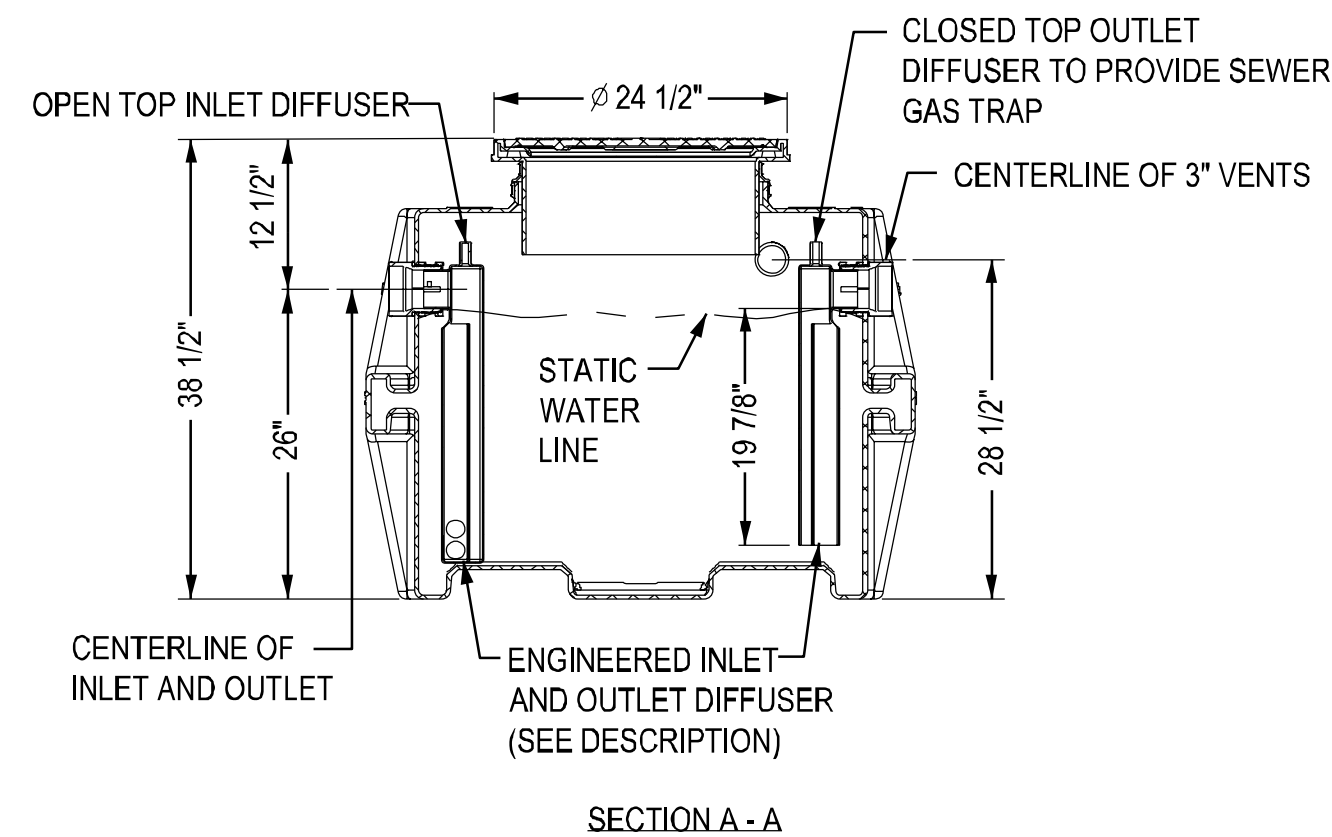
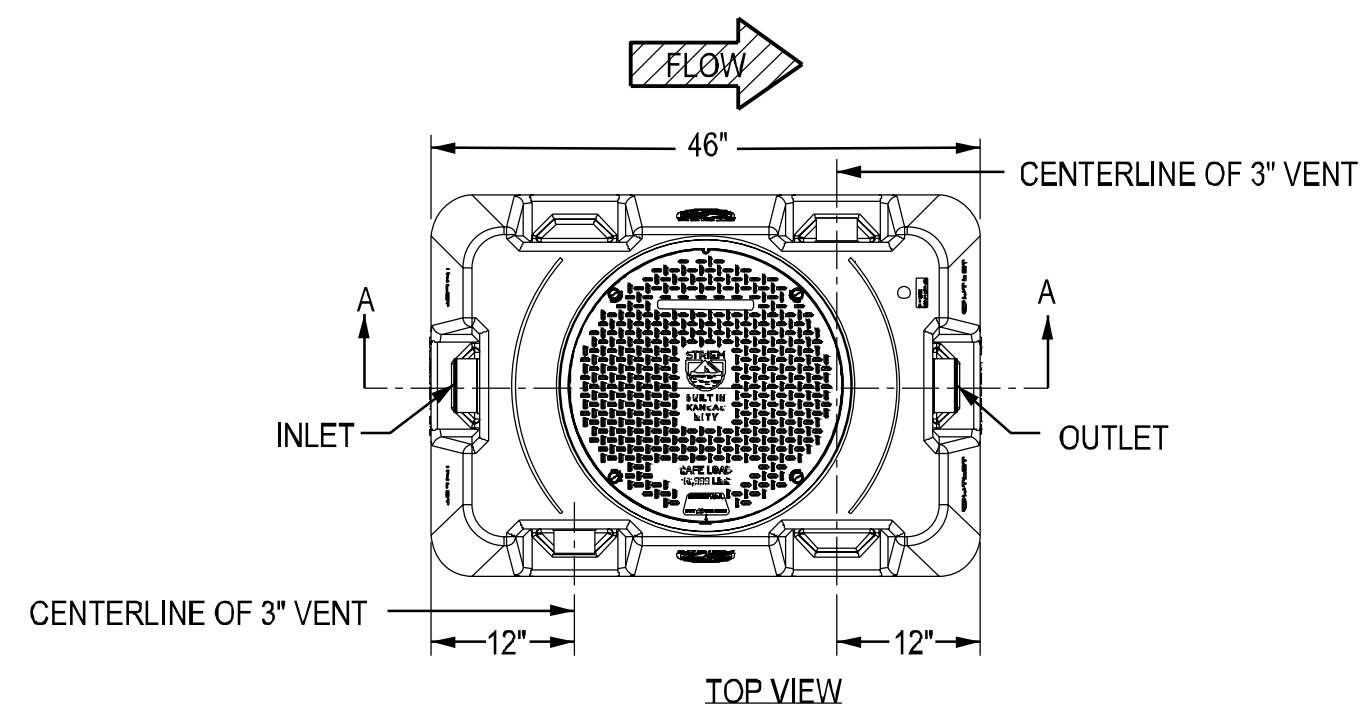
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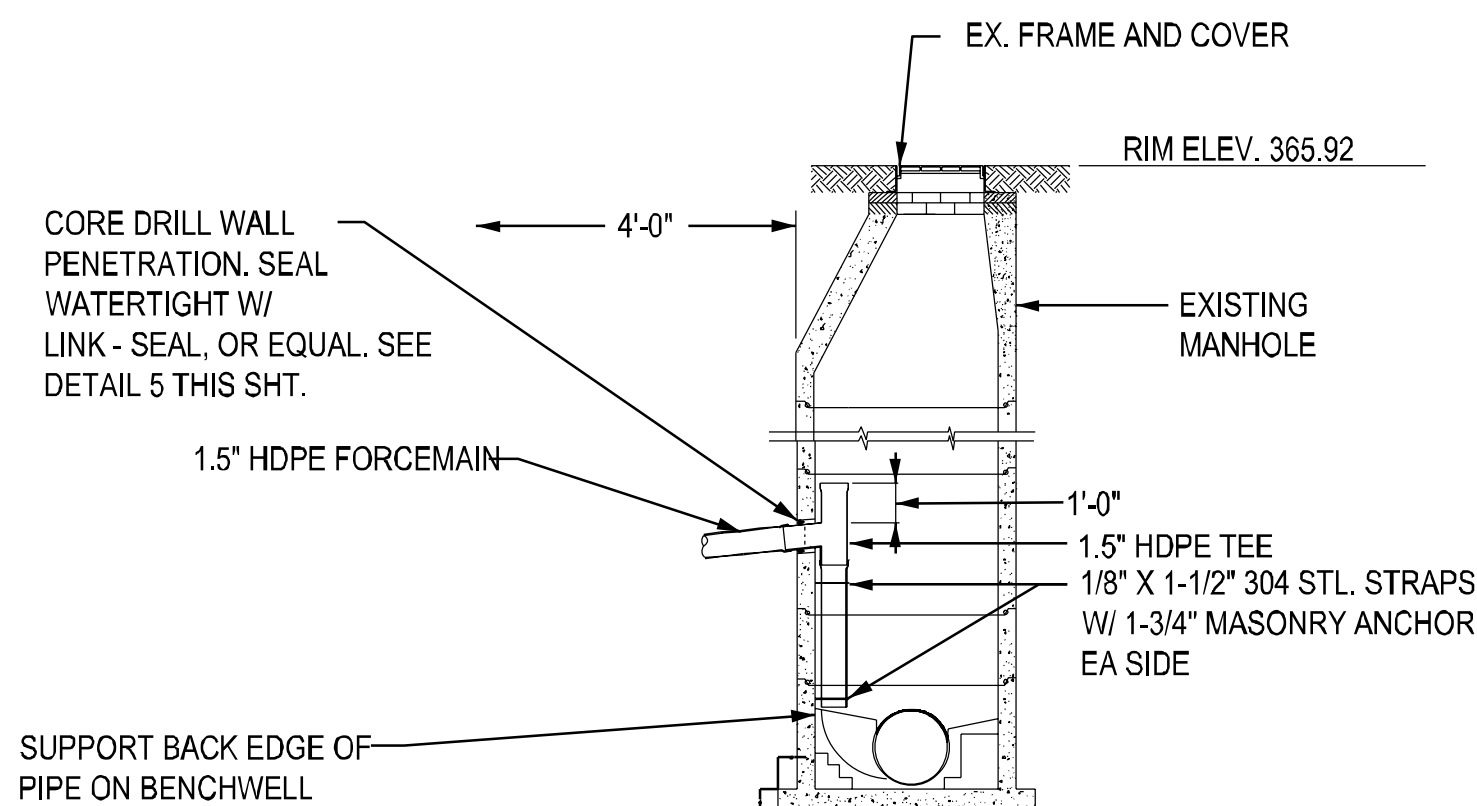
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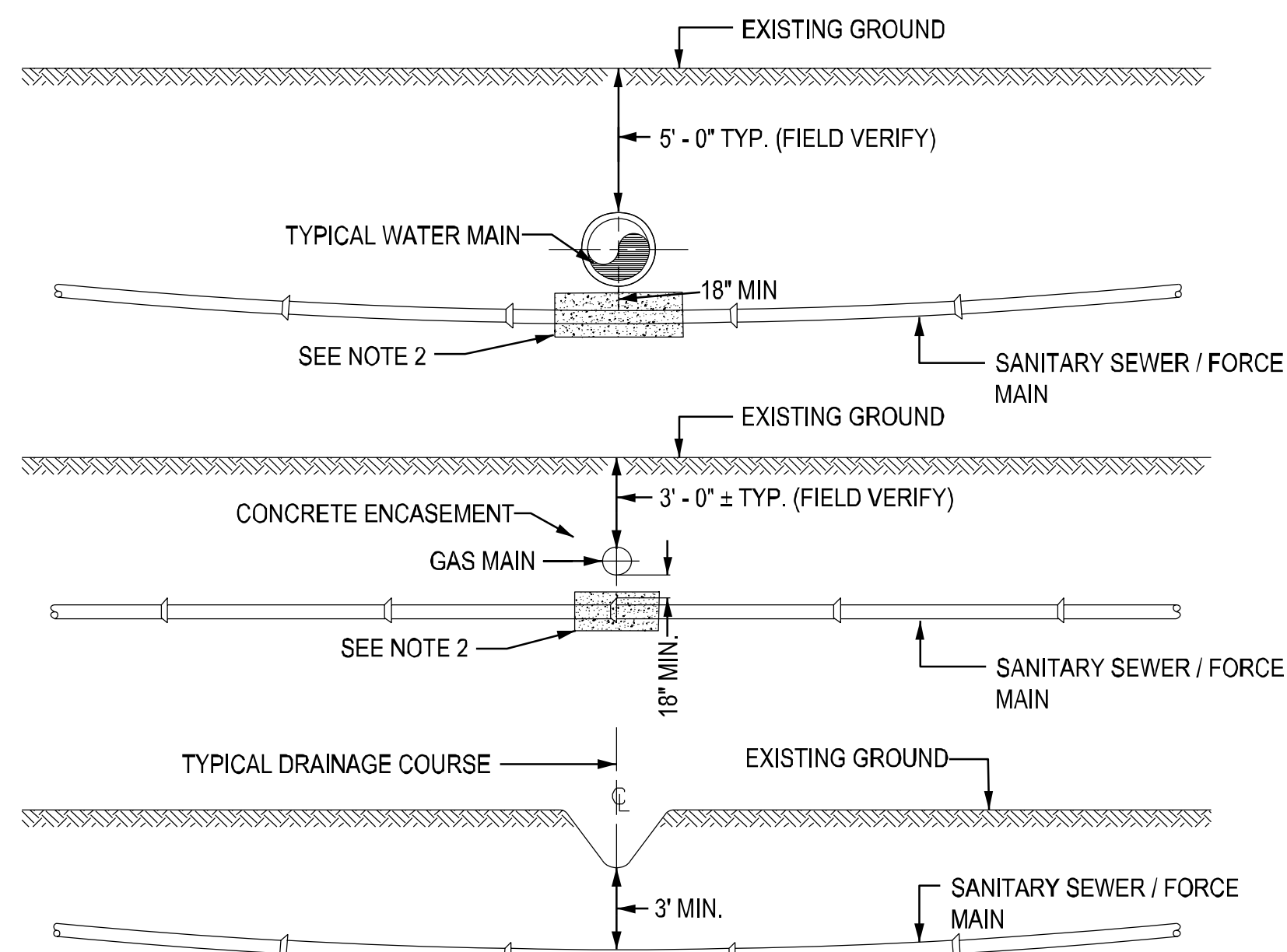


- NOTES:
1. STRIEM MODEL OS-75 OR APPROVED EQUAL.
 2. 6" MALE THREAD INLET/OUTLET.
 3. MAX FLOW RATE: 75 GPM.
 4. CAPACITIES: LIQUID: 110 GAL. (14.7 CU. FT.); OIL: 93 GAL.; SAND: 11 GAL.
 5. HIGHWAY RATED COVER.

1 75 GPM POLYETHYLENE OIL/SAND SEPARATOR
U-501 NOT TO SCALE

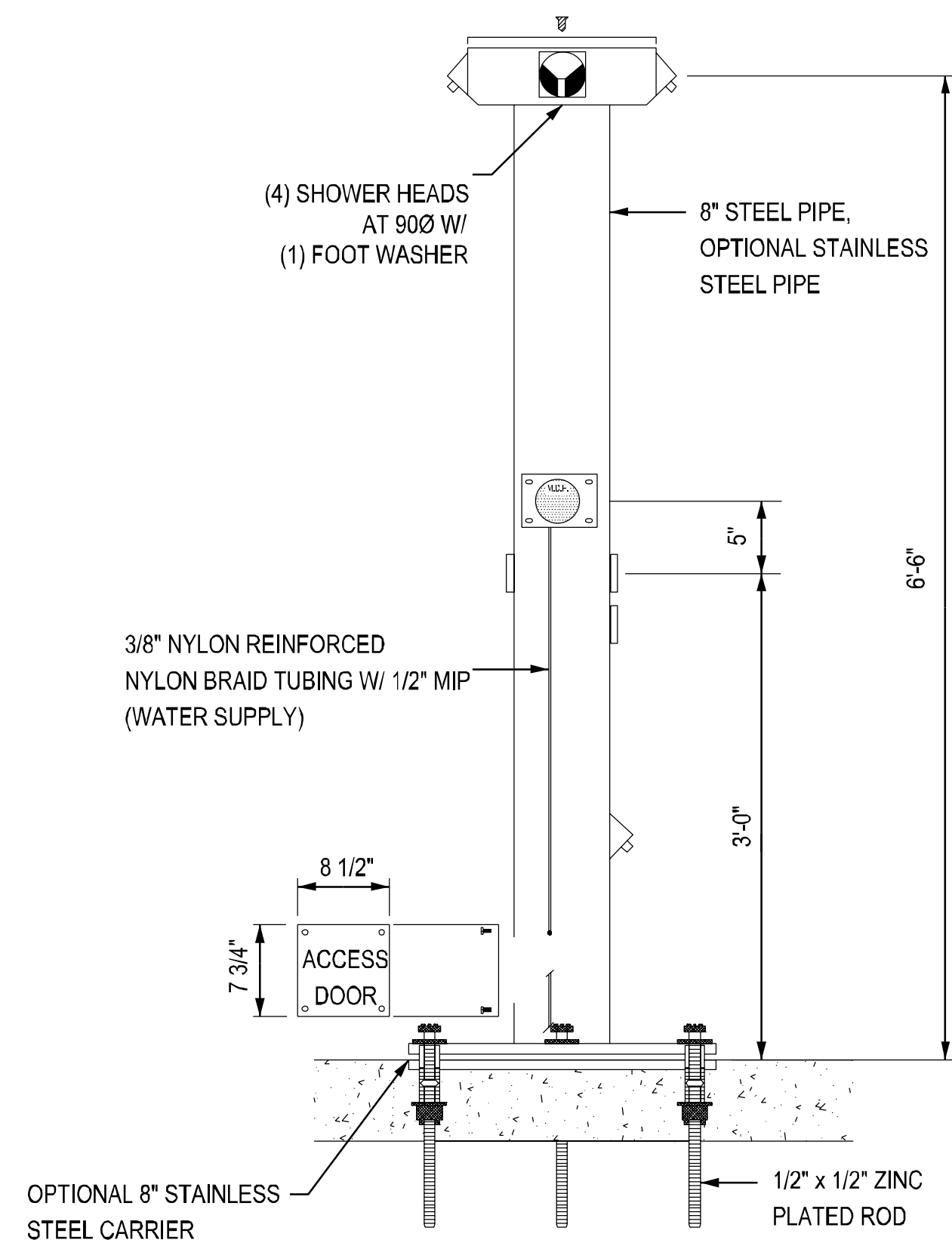


4 CONNECTION TO EXISTING SANITARY MANHOLE
U-501 NOT TO SCALE



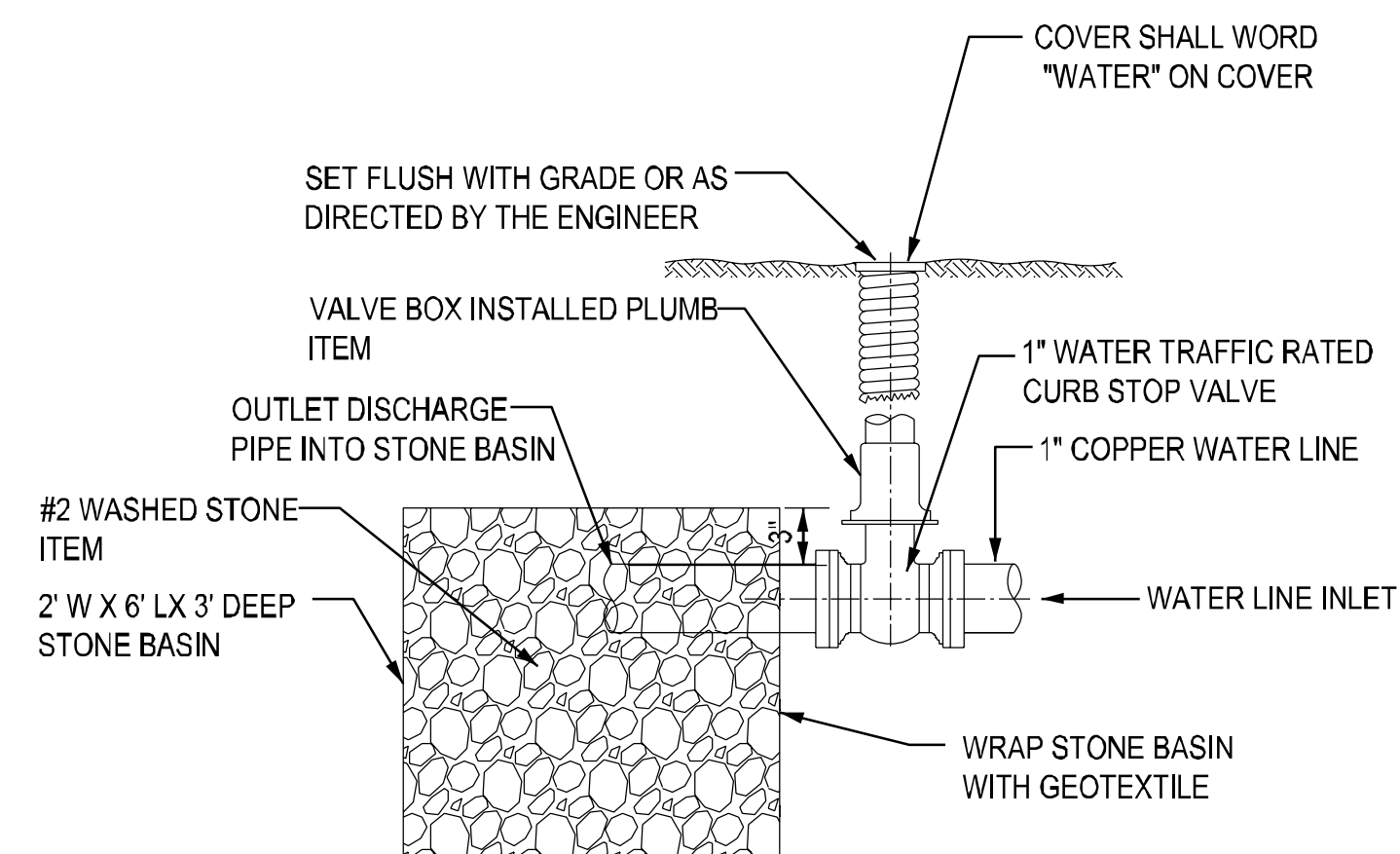
- NOTES:
1. DRAINAGE COURSE CROSSING SHALL BE ACCOMPLISHED BY PIPE JOINT DEFLECTION IF NECESSARY. JOINT DEFLECTION SHALL NOT TO EXCEED MANUFACTURES RECOMMENDATIONS.
 2. WHERE MINIMUM 18" SEPARATION FROM GAS OR WATER MAINS CANNOT BE MAINTAINED, SEWER FORCE MAIN SHALL BE ENCASED IN A MINIMUM OF 12" OF CLASS "C" CONCRETE, 10' EACH SIDE OF THE CROSSING. PAYMENT FOR ENCASEMENT SHALL BE MADE UNDER "CLASS "C" NON-STRUCTURAL CONCRETE" BID ITEM.

2 TYPICAL PROFILE AND CROSSING-SANITARY SEWER / FORCE MAIN
U-501 NOT TO SCALE

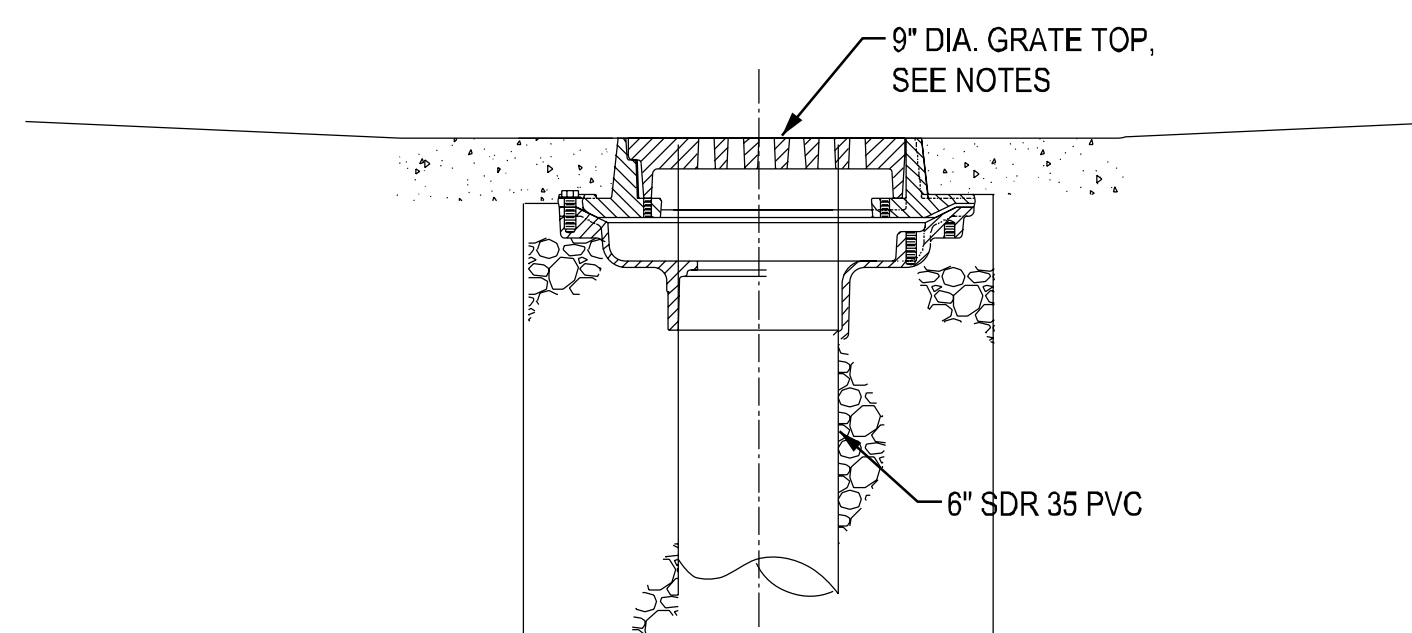


- NOTES:
1. MOST DEPENDABLE FOUNTAINS INC. MODEL 590 SM OR APPROVED EQUAL.
 2. STAINLESS STEEL SURFACE CARRIER RECOMMENDED ON SURFACE MOUNT INSTALLATION.
 3. INSTALLATION TO BE COMPLETED IN ACCORDANCE WITH MANUFACTURER'S SPECIFICATIONS.

3 OUTDOOR SHOWER DETAIL
U-501 NOT TO SCALE

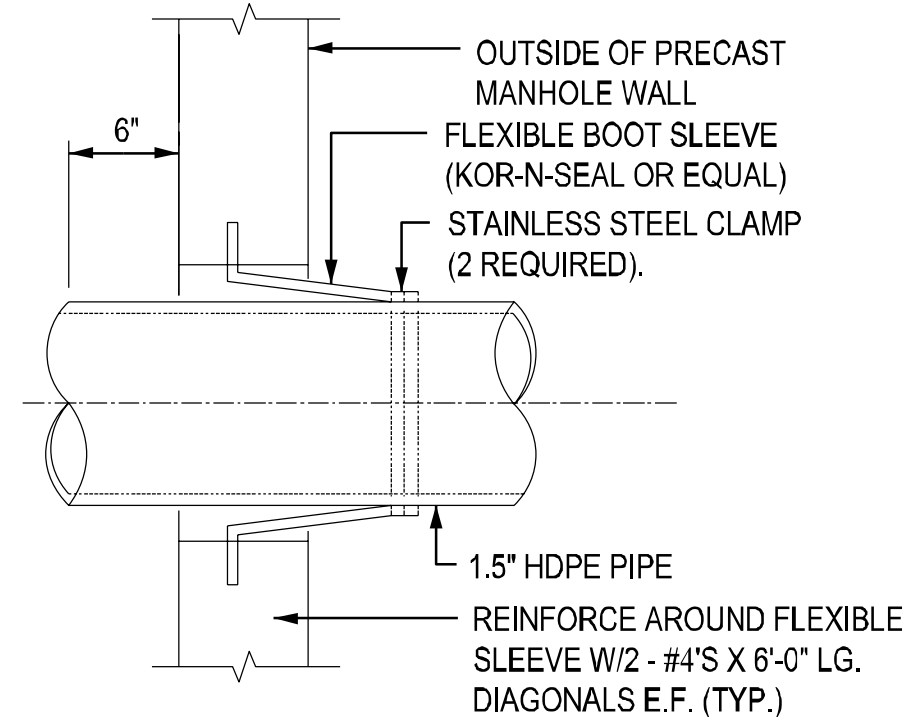


7 WATER LINE DRAIN W/ STONE BASIN
U-501 NOT TO SCALE



- NOTES:
1. Z508 9" GALVANIZED STEEL EXTRA-HEAVY-DUTY DRAIN WITH HP SLOTTED DRAIN COVER AND 6" INLET OR APPROVED EQUAL.
 2. CONTRACTOR TO PROVIDE ADDITIONAL Z508 GASKETED SOLID DRAIN COVER FOR WINTERIZING THE SHOWER AREA.
 3. INSTALL PER MANUFACTURER RECOMMENDATIONS.

6 EXTERIOR SHOWER DRAIN
U-501 NOT TO SCALE



5 HDPE PIPE SLEEVE DETAIL
U-501 NOT TO SCALE



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WILLOW BAY BEACH PROJECT

MONONDAGA BEACH FEASIBILITY STUDY
& DESIGN SERVICES

ONONDAGA LAKE PARK

ONONDAGA COUNTY

UTILITY DETAILS

SCALE: AS SHOWN
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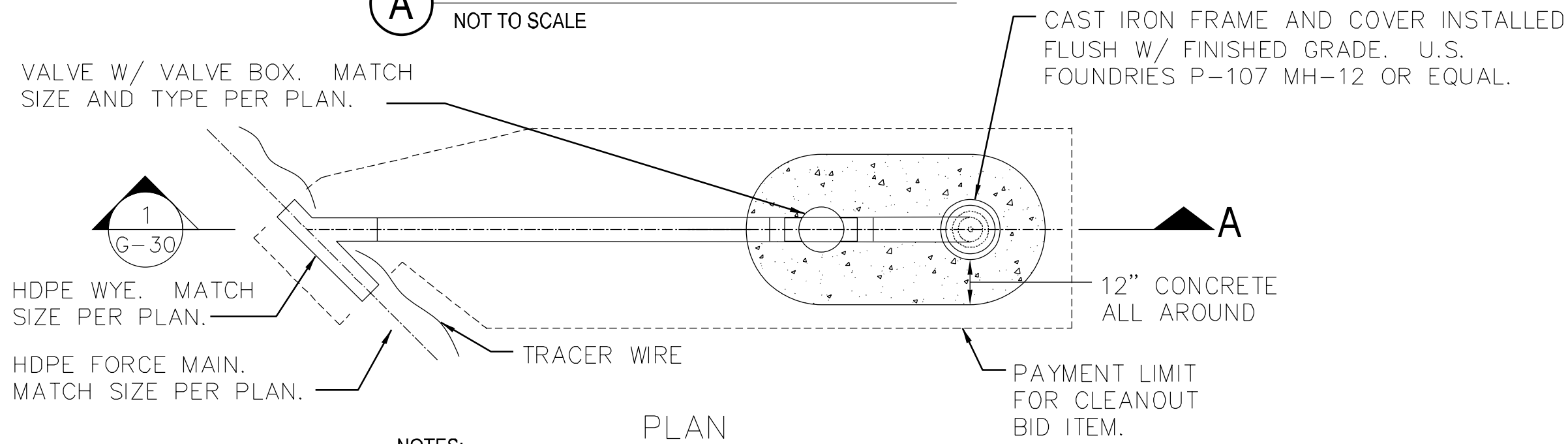
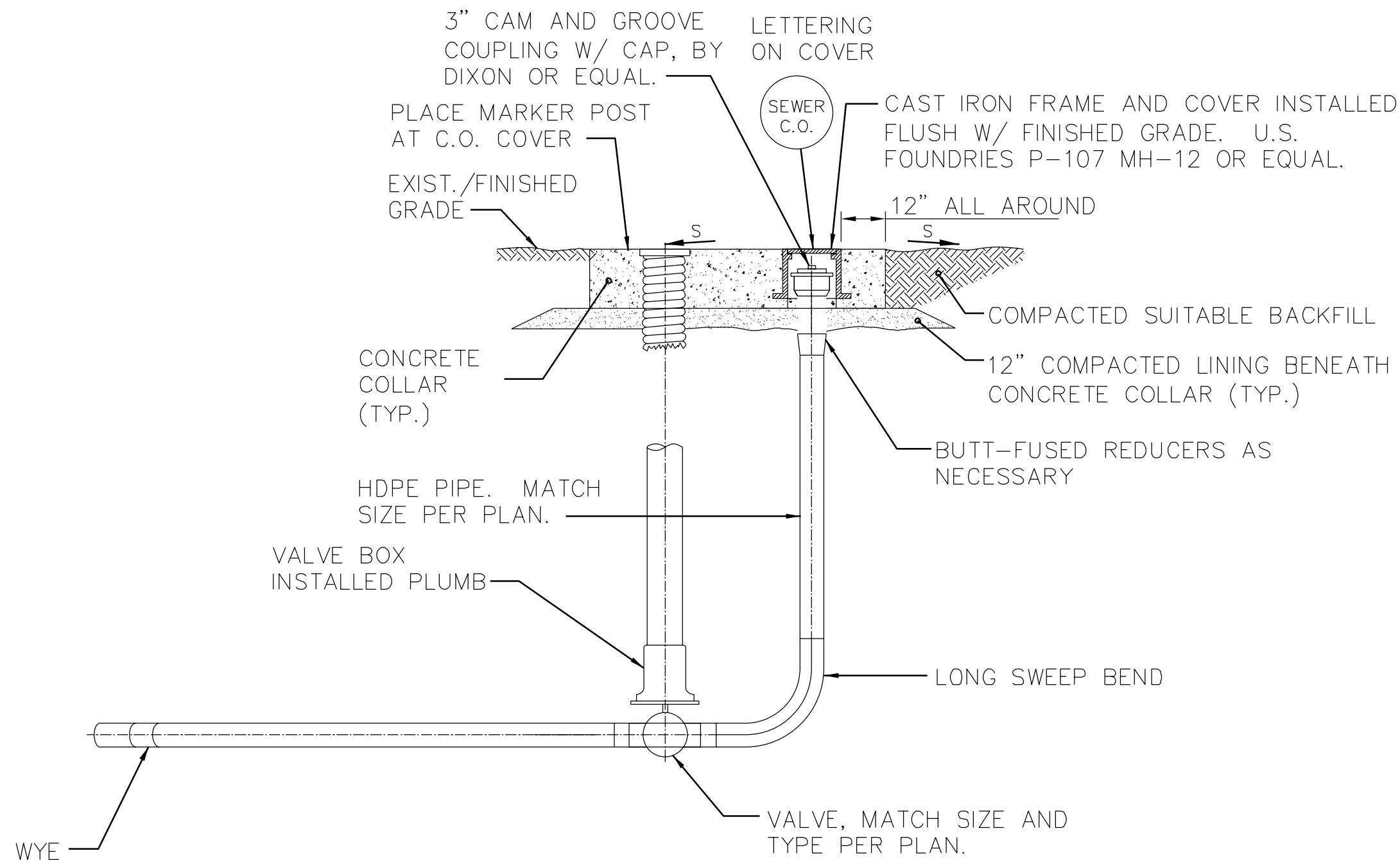
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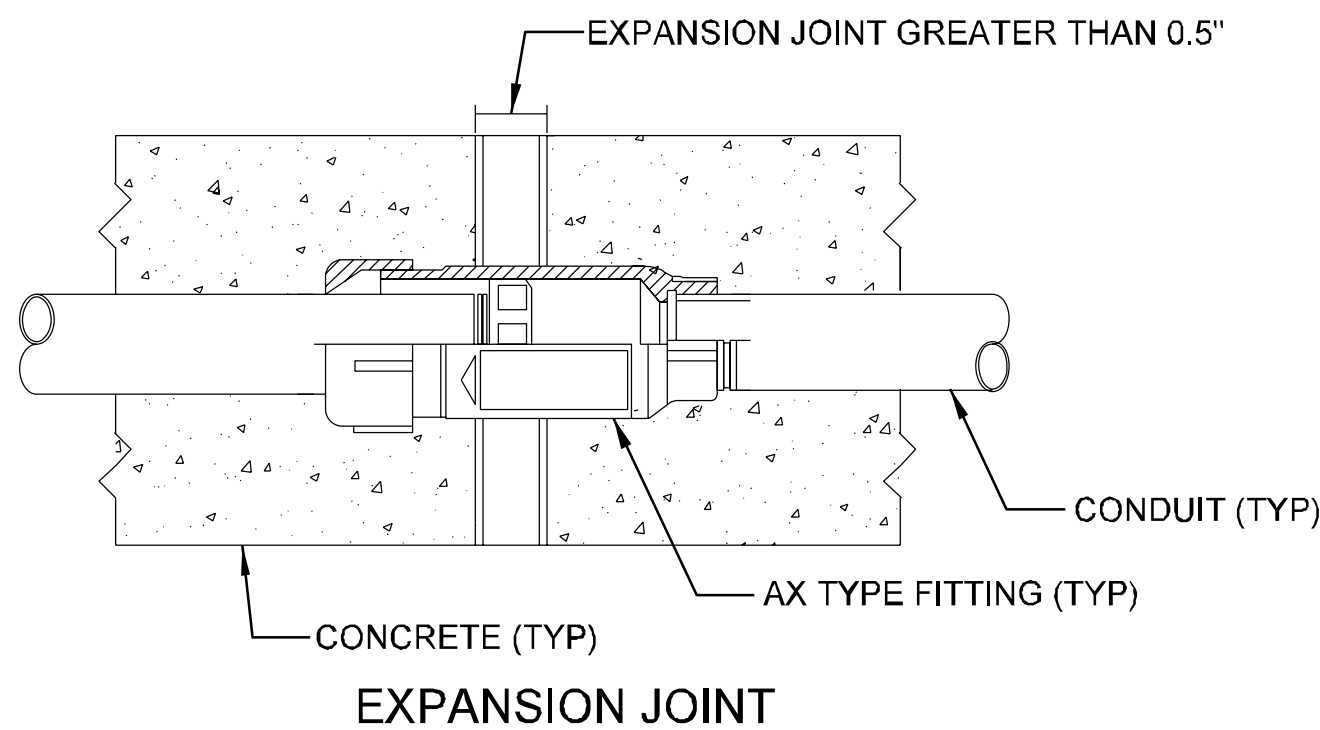
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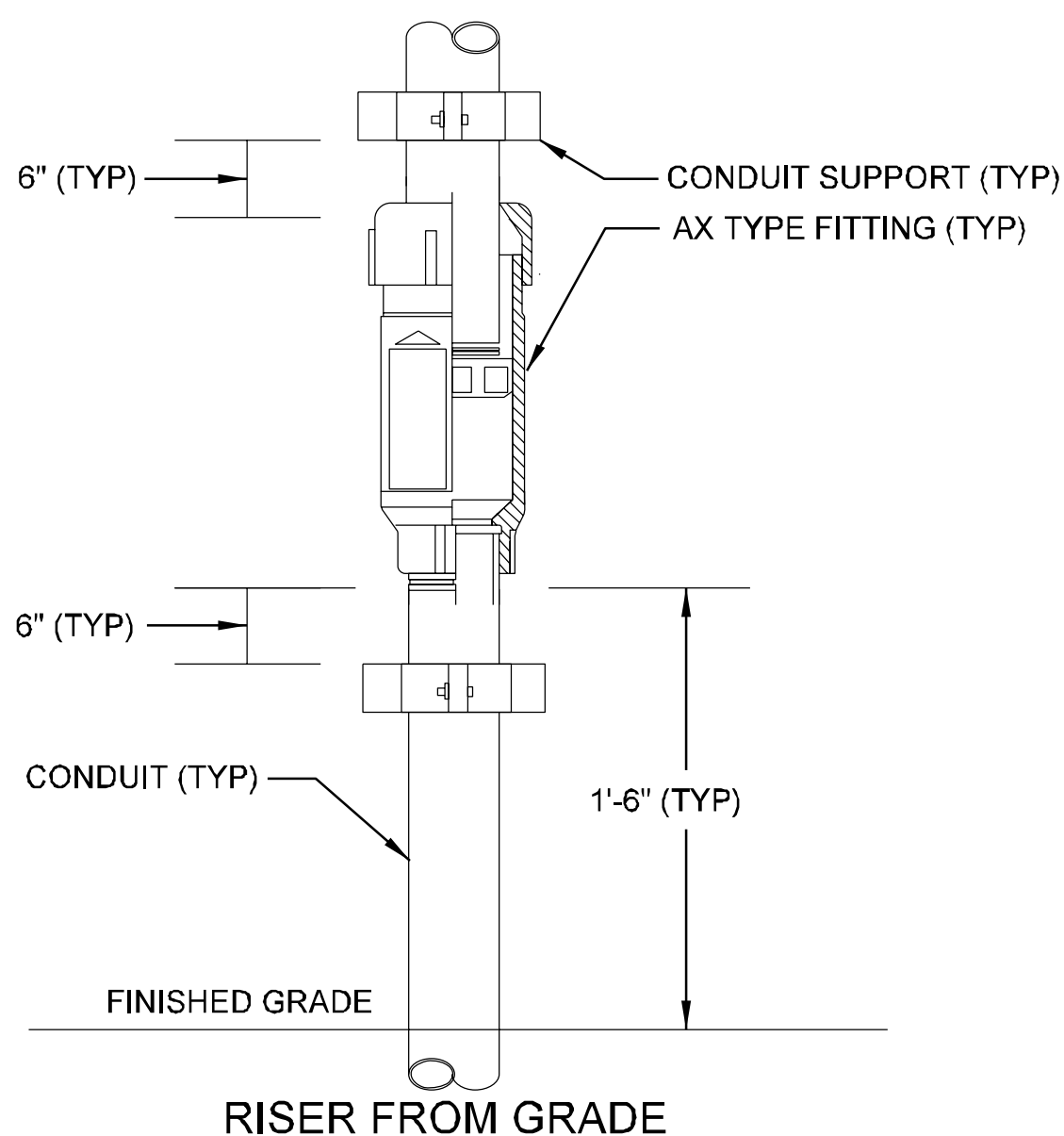
1. TRACER WIRE TO BE INSTALLED WITH ALL NON-METALLIC PIPE. TRACER WIRE TO BE TERMINATED AT TRACER WIRE BOX.

1 FORCE MAIN CLEANOUT DETAIL
NOT TO SCALE

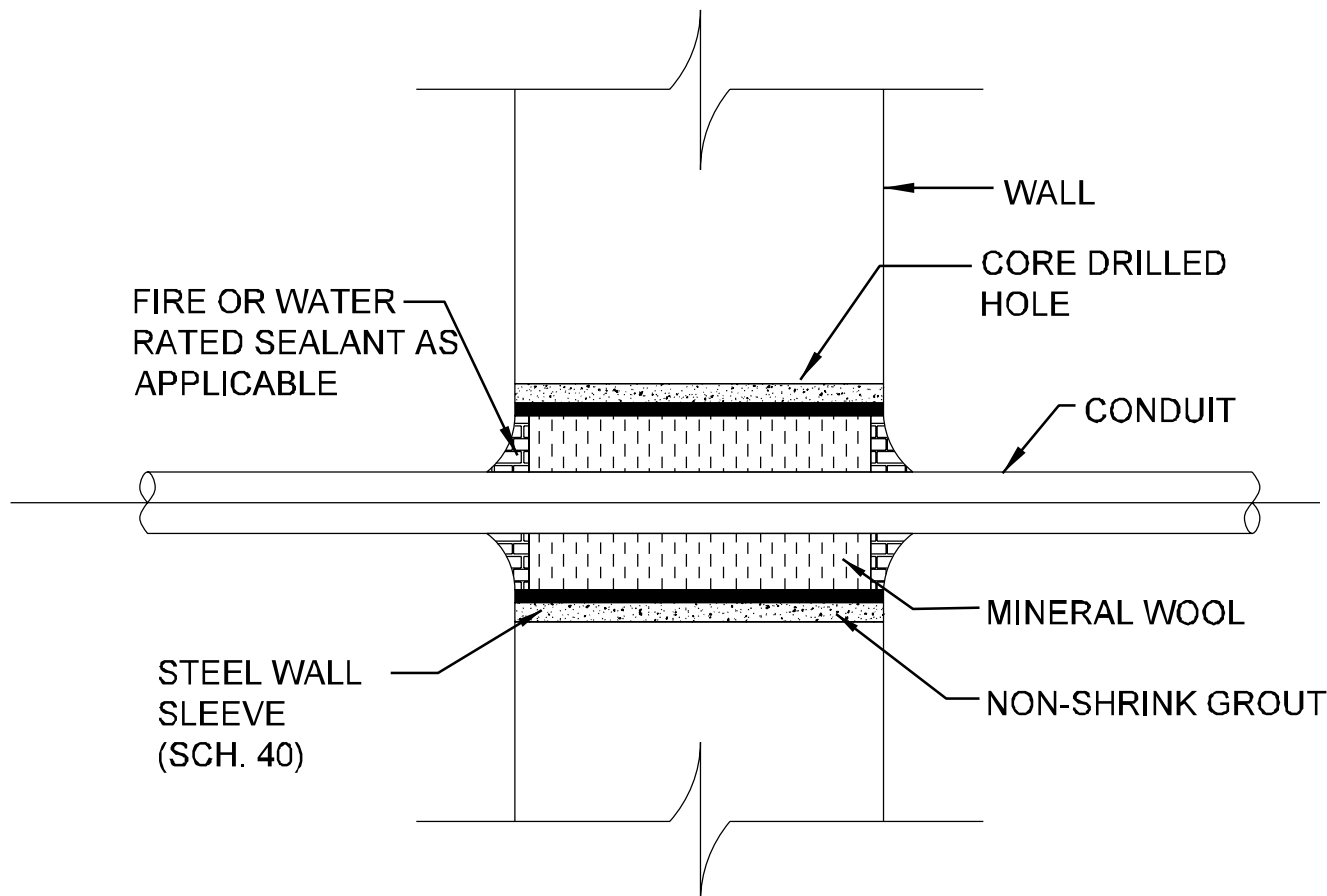


GENERAL NOTES, EXPANSION FITTING DETAIL

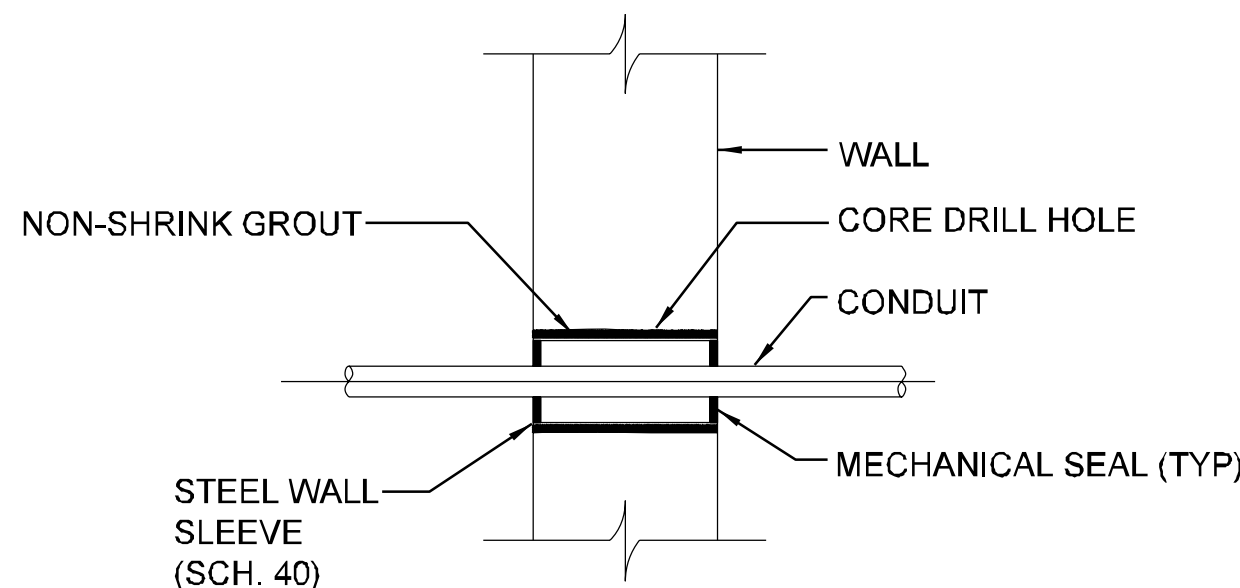
1. PROVIDE AN EXPANSION FITTING AT ALL EXPANSION JOINTS GREATER THAN 0.5" AND AS OTHERWISE INDICATED
2. PROVIDE AN EXPANSION AT ALL RISERS FROM GRADE.
3. AX FITTING SHALL BE MODEL AX AS MANUFACTURED BY O-Z GEDNEY OR APPROVED EQUAL.
4. PROVIDE ALL REQUIRED BONDING JUMPERS, BOTH INTERNAL AND EXTERNAL.



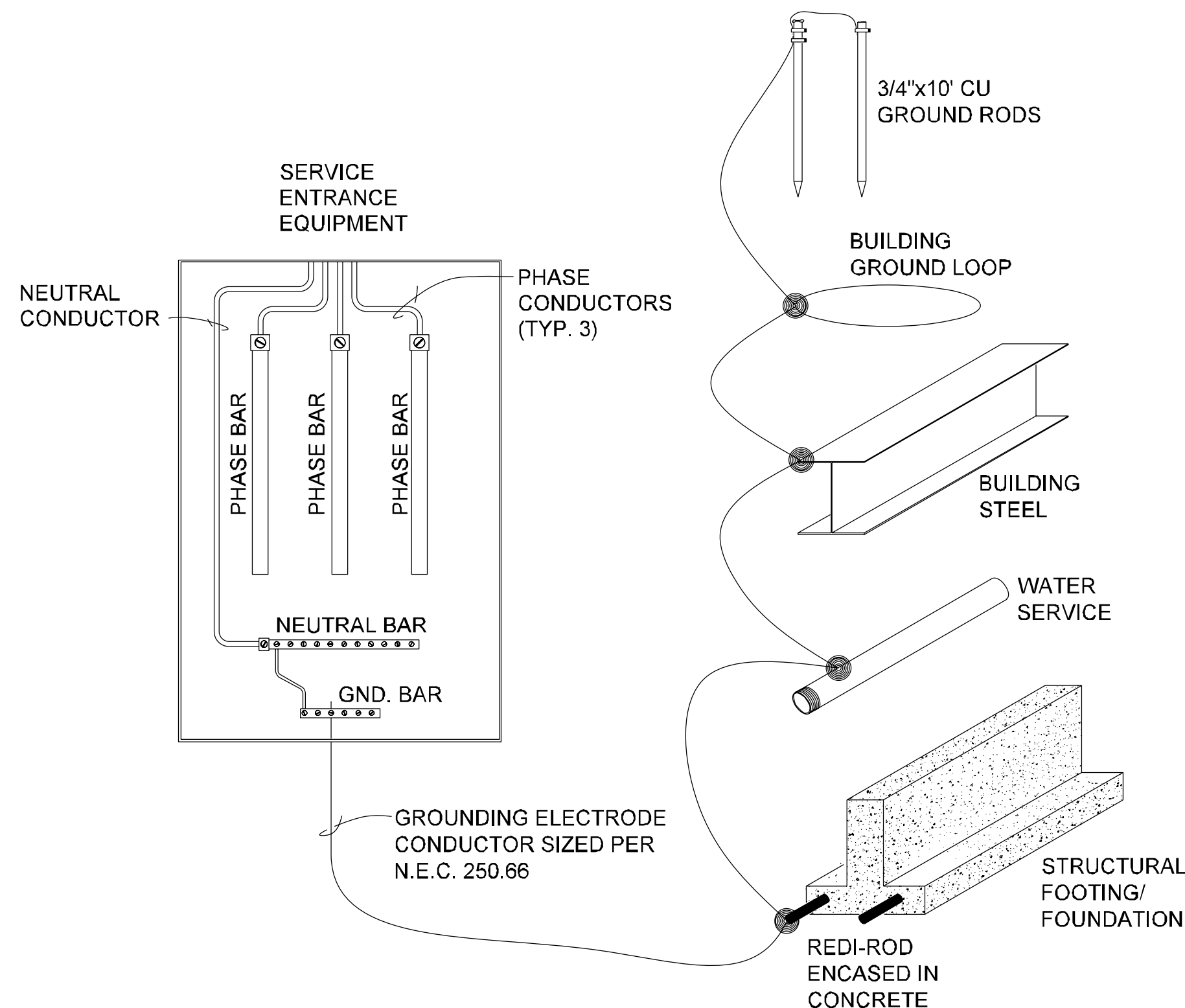
4 EXPANSION FITTING DETAIL
NOT TO SCALE



2 TYPICAL WALL CONDUIT PENETRATION DETAIL - FIRE RATED
NOT TO SCALE



3 TYPICAL WALL CONDUIT PENETRATION
NOT TO SCALE



GENERAL NOTES, TYPICAL SERVICE ENTRANCE GROUNDING

1. PROVIDE LIGHTING PROTECTION SYSTEM PER SPECIFICATIONS, BOND TO GROUND SYSTEM.
2. BOND ALL NORMAL AND EMERGENCY EQUIPMENT TO GROUND RING.
3. BOND ALL EQUIPMENT TO GROUND AS REQUIRED BY MANUFACTURER.
4. NOT ALL GROUNDING SHOWN. PROVIDE ADDITIONAL GROUNDING AS REQUIRED PER SPECIFICATIONS AND NEC.
5. ALL GROUND CONDUCTORS SHALL BE 250kCMIL COPPER, U.O.I.

5 TYPICAL SERVICE ENTRANCE GROUNDING
NOT TO SCALE

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WILLOW BAY BEACH PROJECT
ONONDAGA BEACH FEASIBILITY STUDY
& DESIGN SERVICES
ONONDAGA LAKE PARK
ONONDAGA COUNTY

UTILITY
DETAILS

SCALE: AS SHOWN

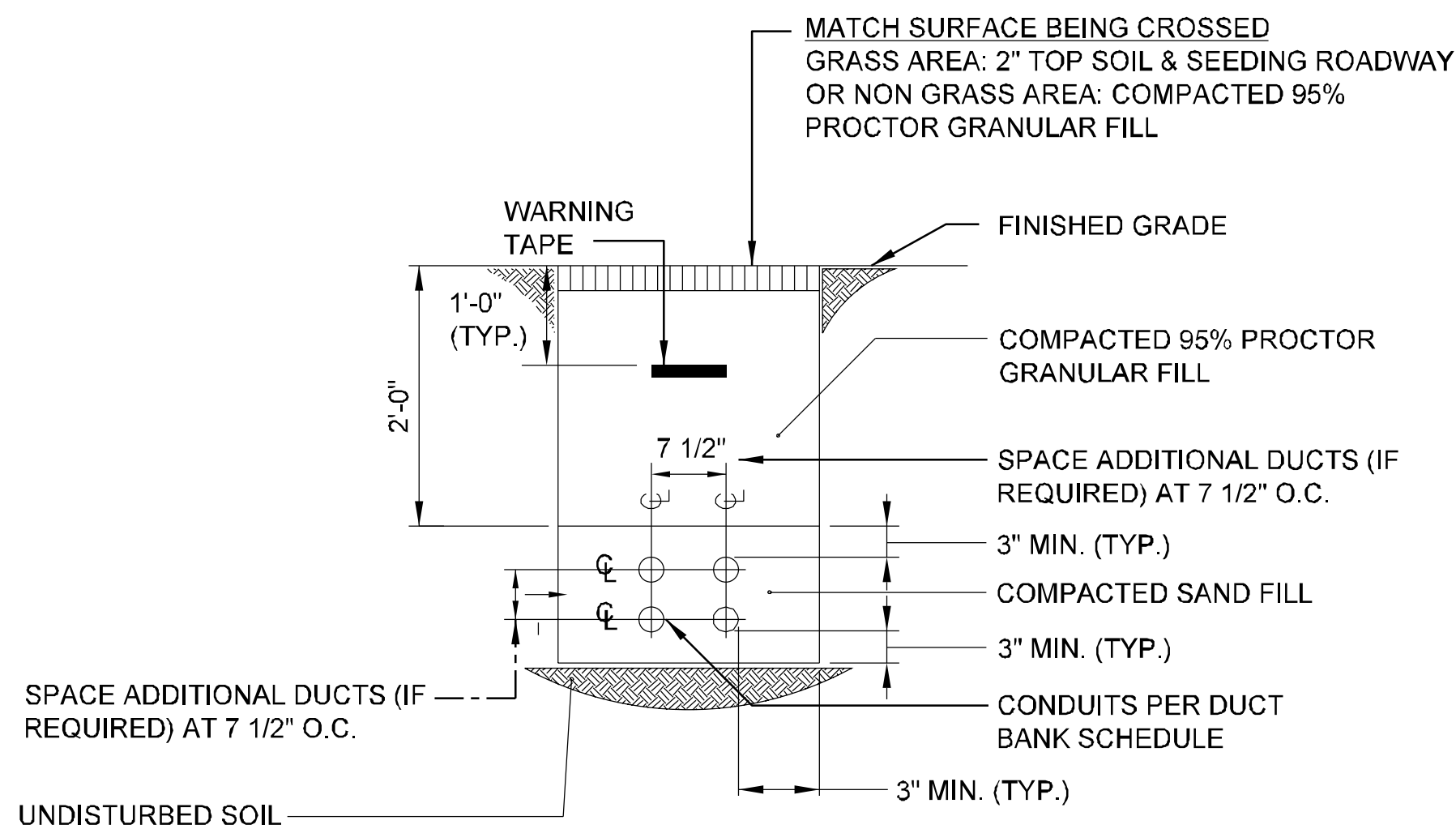
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1. DETAIL APPLIES WHEN CROSSING PIPES LESS THAN 42", TO TOP OF PIPE, DEEP. PROVIDE STANDARD DUCT BANK DEPTH FOR CROSSING PIPES AT GREATER DEPTHS.
2. PROVIDE FIELD SWEEPS IN CONDUIT TO ADJUST ELEVATION AS NECESSARY TO ROUTE BELOW PIPE.
3. SEE DUCT BANK SECTION FOR ADDITIONAL DUCT BANK REQUIREMENTS.

1 TYPICAL SERVICE ENTRANCE GROUNDING
U-503 NOT TO SCALE



2 TYPICAL SERVICE ENTRANCE GROUNDING
U-503 NOT TO SCALE

UTILITY DETAILS		SCALE: AS SHOWN		NO. DATE BY REVISION	
		DATE ISSUED 02/2021			
DRAWING U-503		ONONDAGA COUNTY			
		ONONDAGA LAKE PARK			
		ONONDAGA BEACH FEASIBILITY STUDY & DESIGN SERVICES			
		WILLOW BAY BEACH PROJECT			
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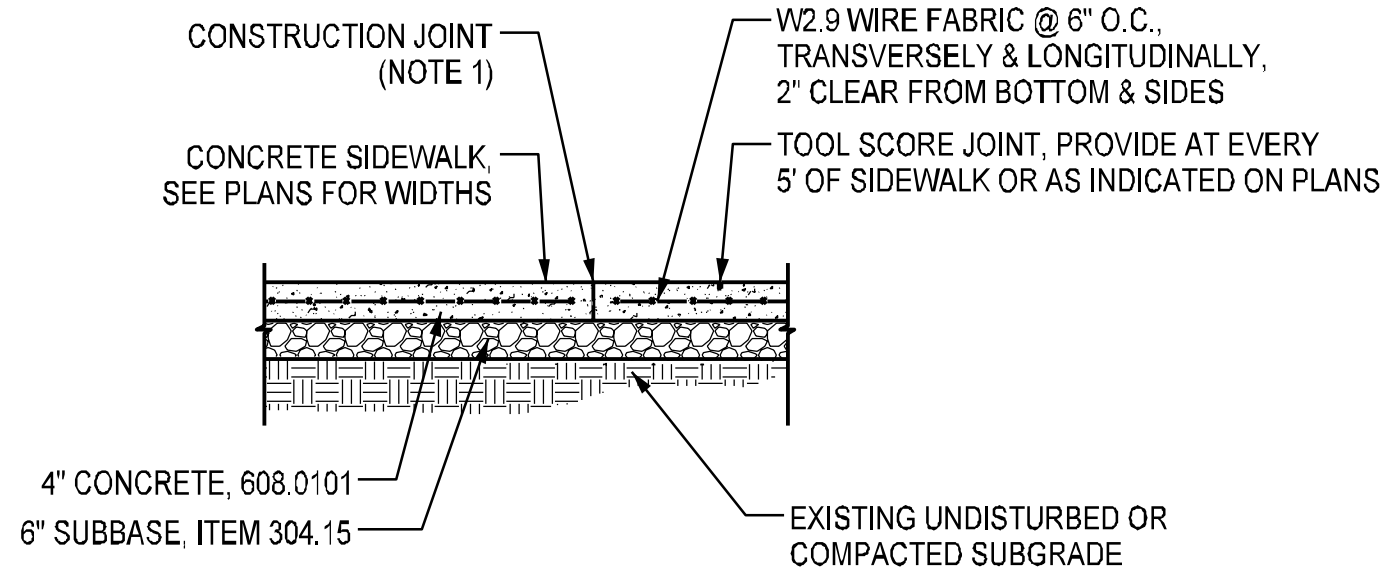
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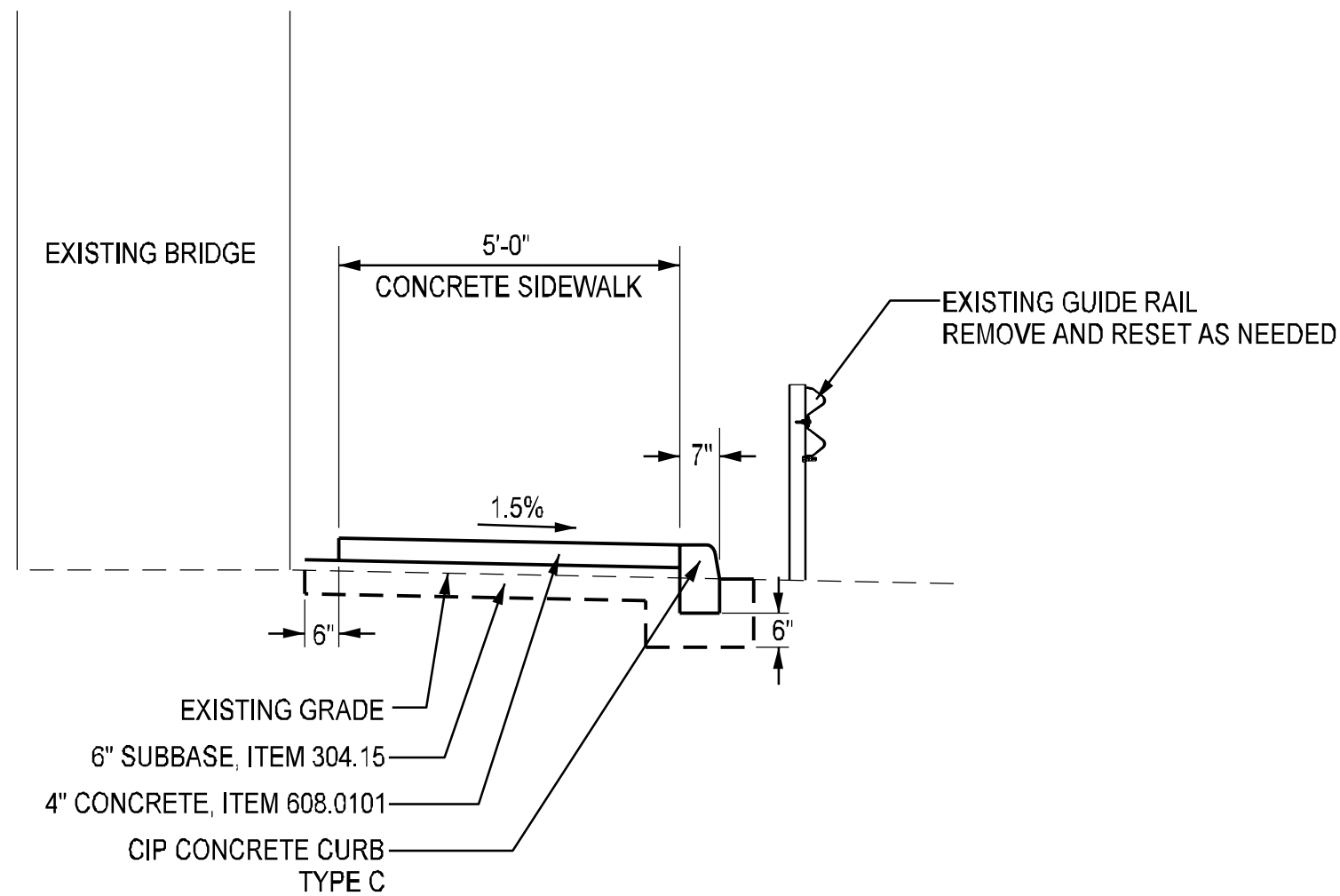
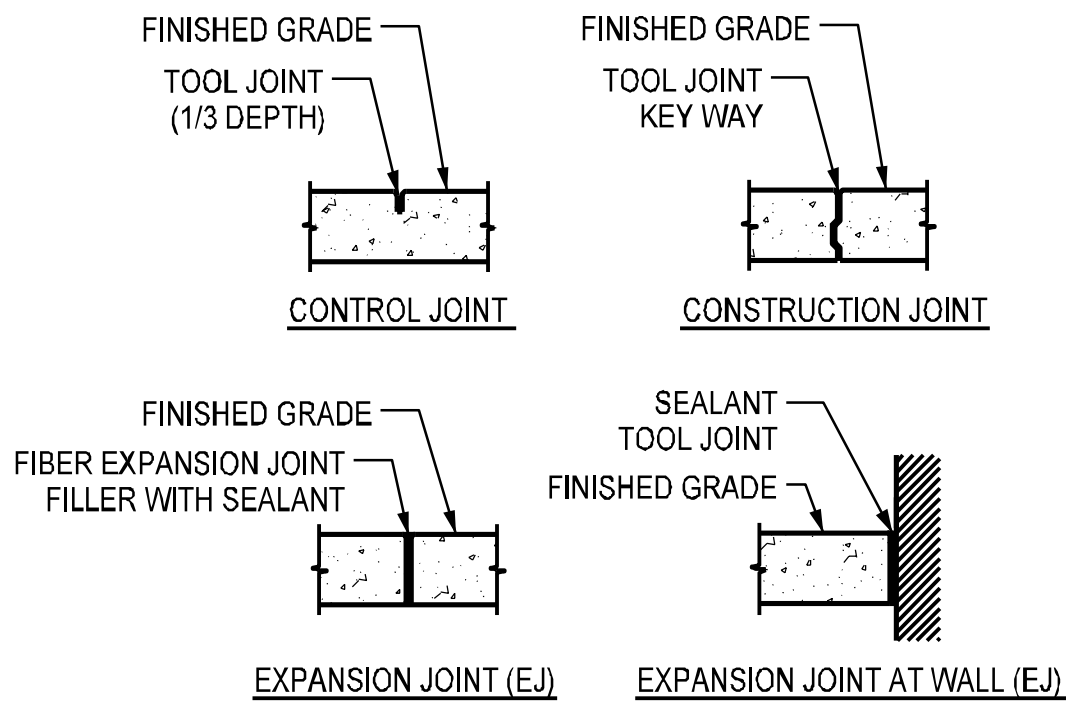
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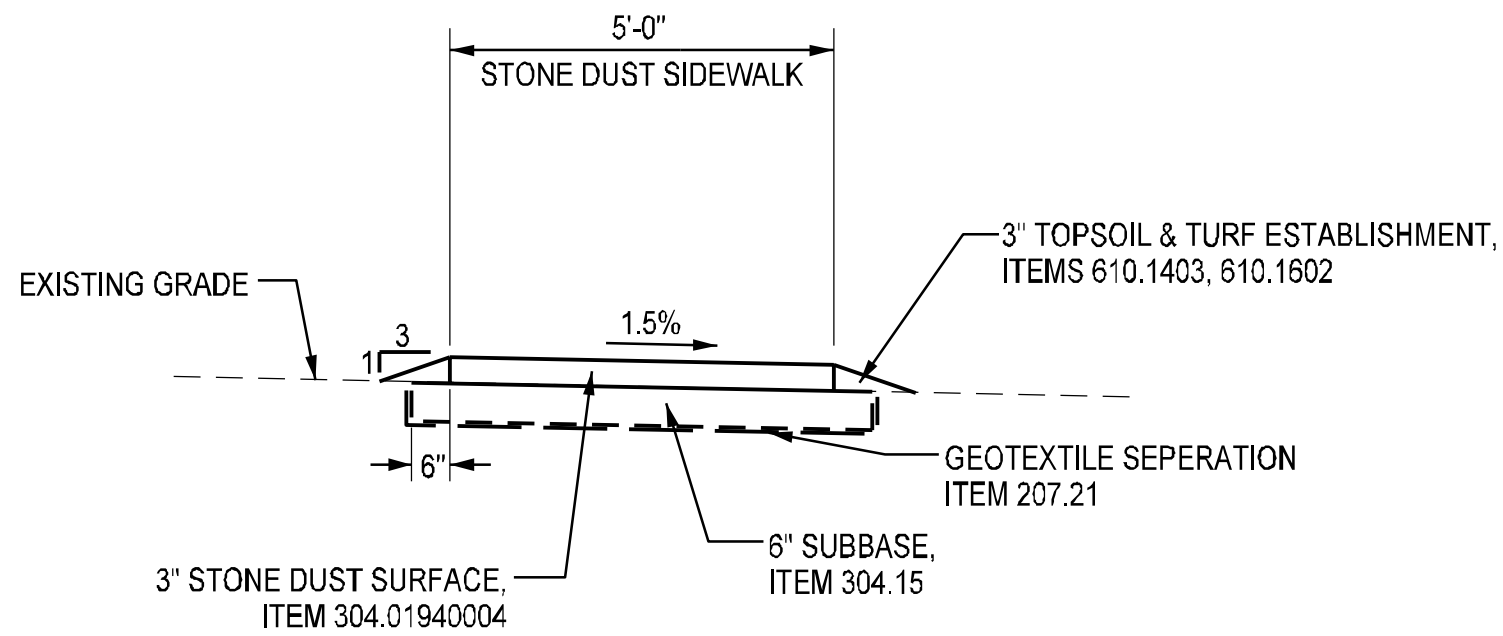
NOTES:

- TRAVERSE CONSTRUCTION JOINTS SHALL EXTEND TO THE FULL DEPTH OF CONCRETE AND SHALL BE SPACED 20' TO 26' APART MAX. PREMOLDED RESILIENT JOINT FILLER SHALL BE INSTALLED AT ALL JOINTS BETWEEN SIDEWALK AND CURB, PAVEMENT, WALLS, AND MISC. HARD OBJECTS.
- BEACH WALK SHALL HAVE 6" THICK CONCRETE - SEE DETAIL ON DWG. L-301.
- PROVIDE COARSE BROOM FINISH.

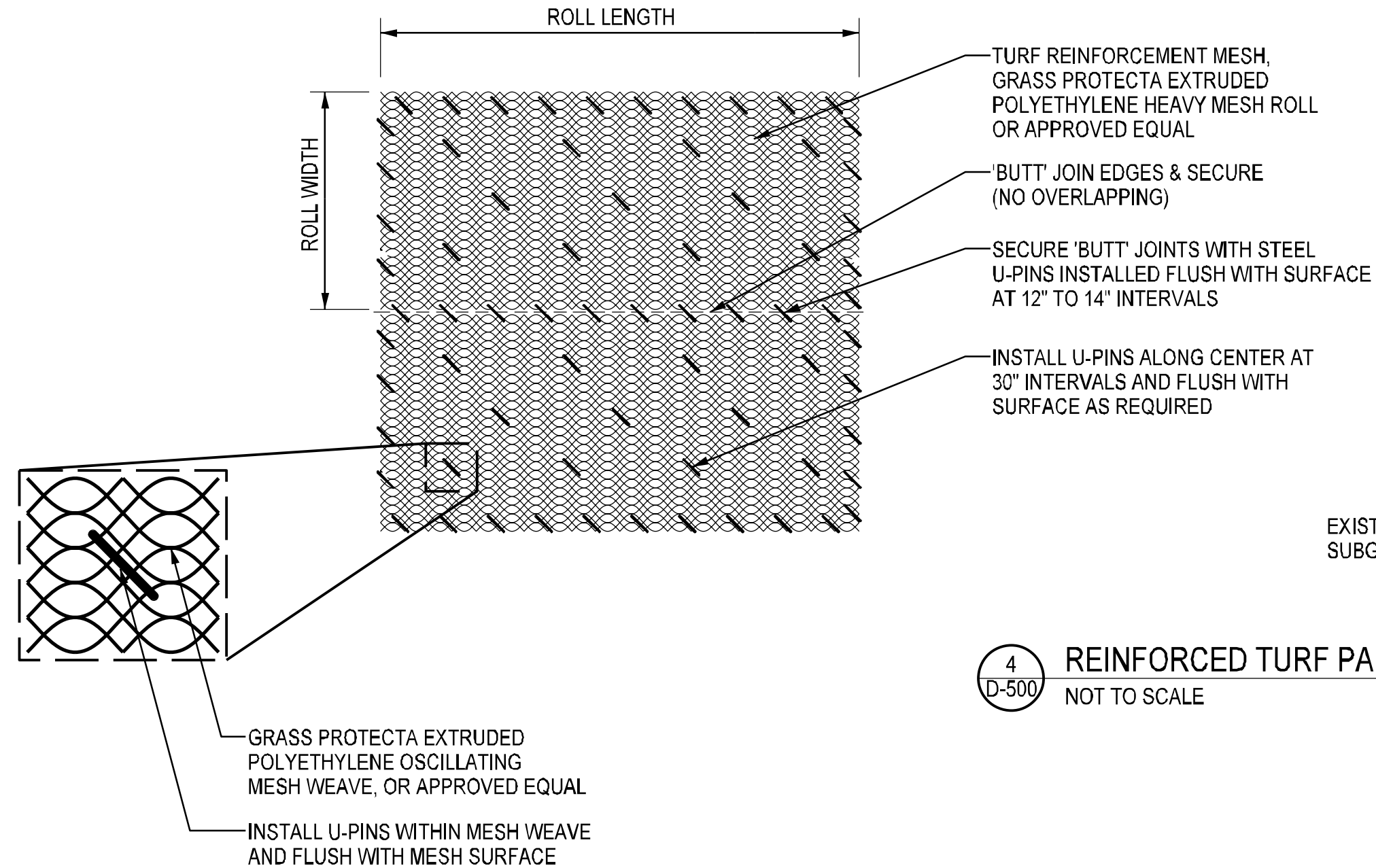
1 CONCRETE SIDEWALK
NOT TO SCALE



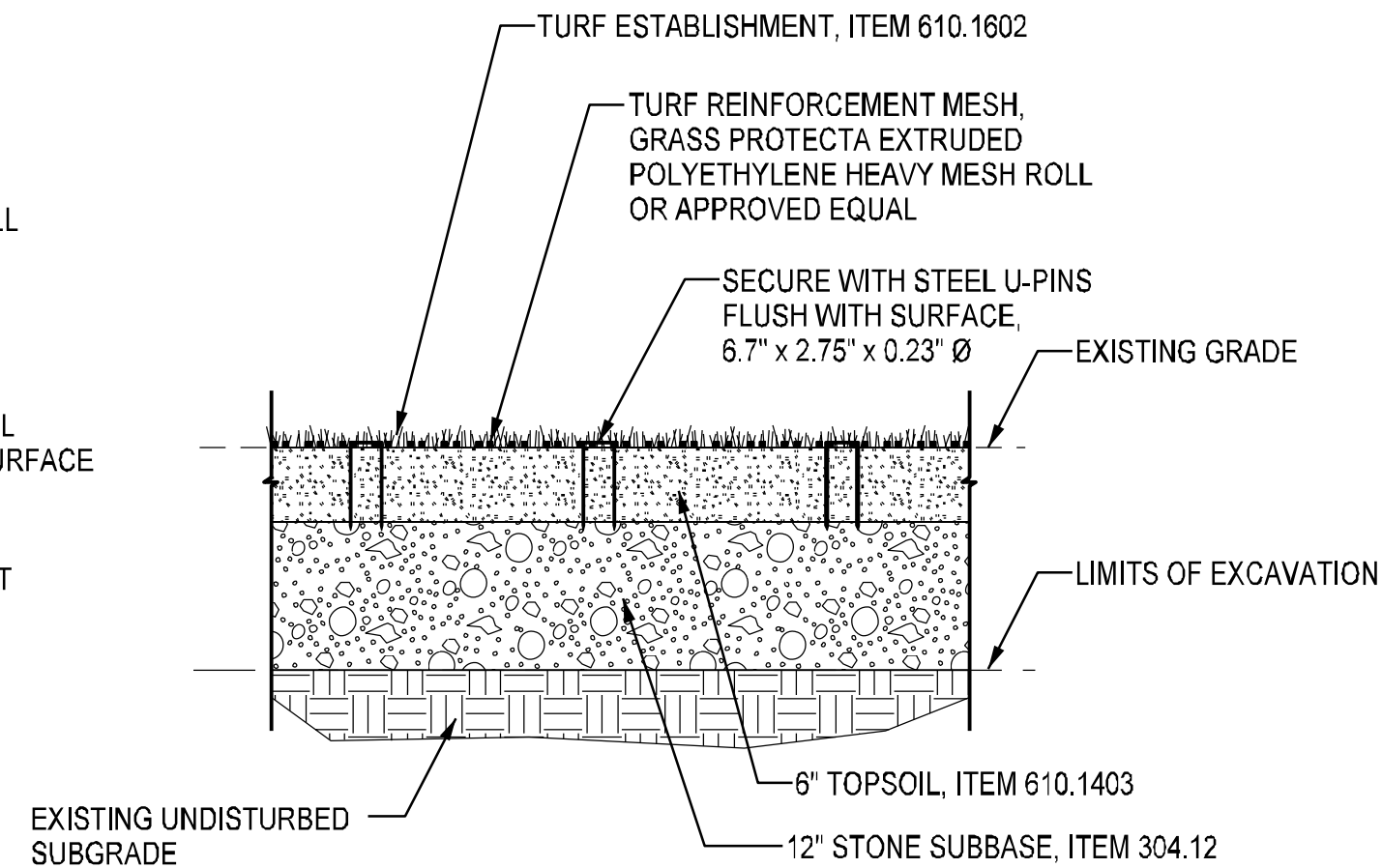
2 CONCRETE SIDEWALK AND CURB
NOT TO SCALE



3 STONE DUST SIDEWALK
NOT TO SCALE

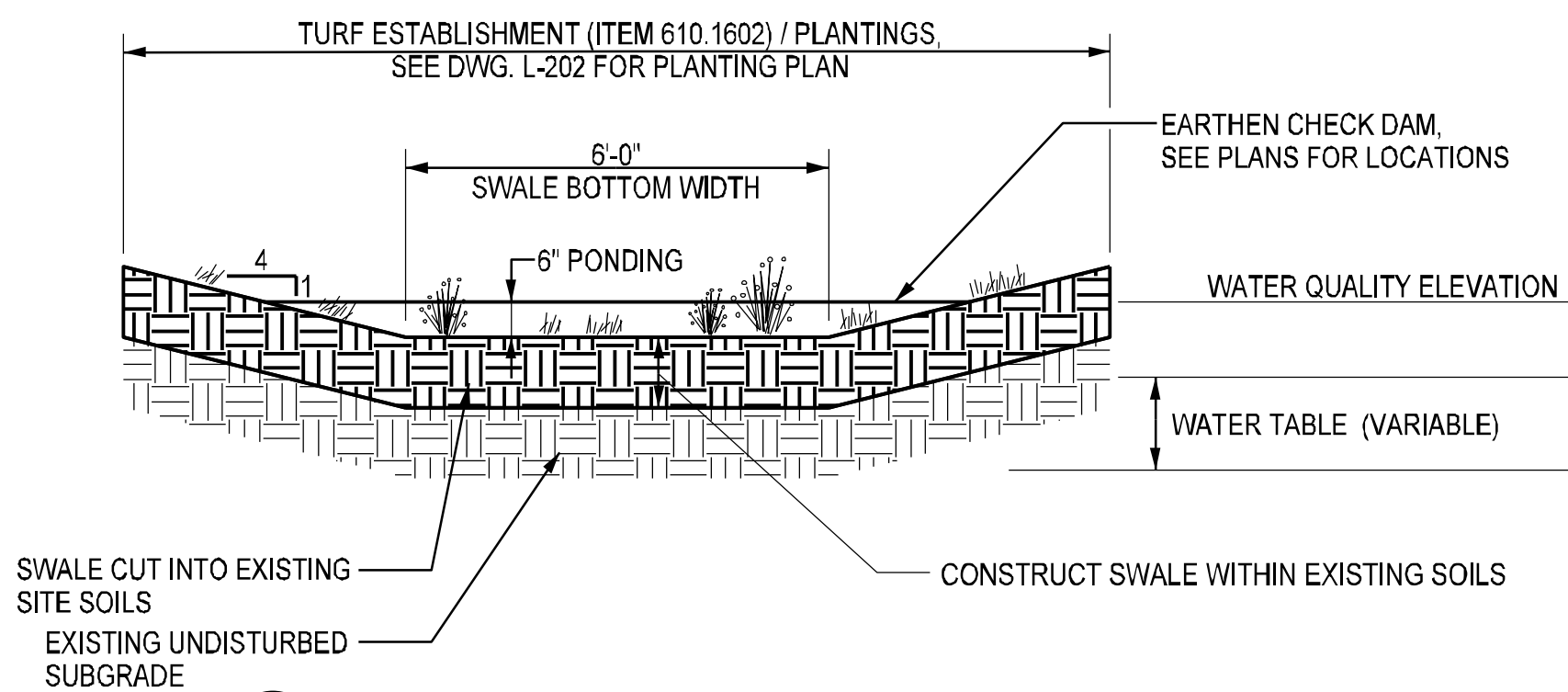


4 REINFORCED TURF PARKING LOT
NOT TO SCALE

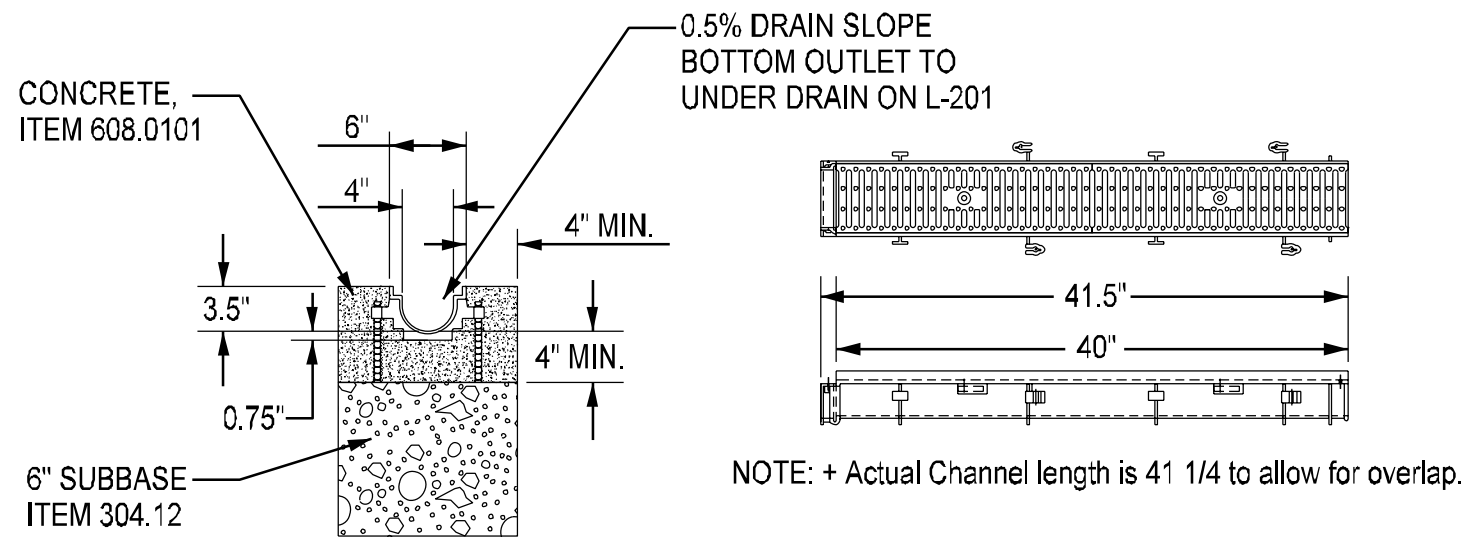


NOTES:

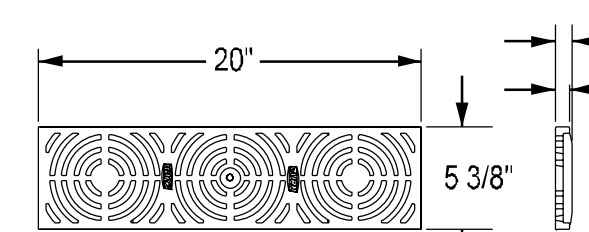
- TURF REINFORCEMENT MESH SHALL BE GRASS PROTECTA HEAVY MESH BY TYPAR GEOSYNTHETICS, OR APPROVED EQUAL
- REFER TO MANUFACTURER INSTRUCTIONS FOR INSTALLATION AND TRAFFIC RESTRICTIONS DURING ESTABLISHMENT



5 WATER QUALITY SWALE
NOT TO SCALE



6 TRENCH DRAIN - ITEM 604.06000006
NOT TO SCALE



DECORATIVE GRATE OPTION SCD

NOTES:

- TRENCH DRAIN: ZURN Z883 PERMA-TRENCH SHALLOW SYSTEM, OR APPROVED EQUAL WITH DECORATIVE GRATE OPTION SCD
- SUBMIT SHOP DRAWINGS FOR APPROVAL.

NO DATE BY REVISION



Barton & Loguidice

UNAUTHORIZED ALTERATION OR ADDITION TO THIS DRAWING IS A VIOLATION OF THE NEW YORK STATE EDUCATION LAW, ARTICLE 145, SECTION 7209

WILLOW BAY BEACH PROJECT

ONONDAGA BEACH FEASIBILITY STUDY
& DESIGN SERVICES

ONONDAGA LAKE PARK

ONONDAGA COUNTY

SITE DETAILS

SCALE: AS SHOWN

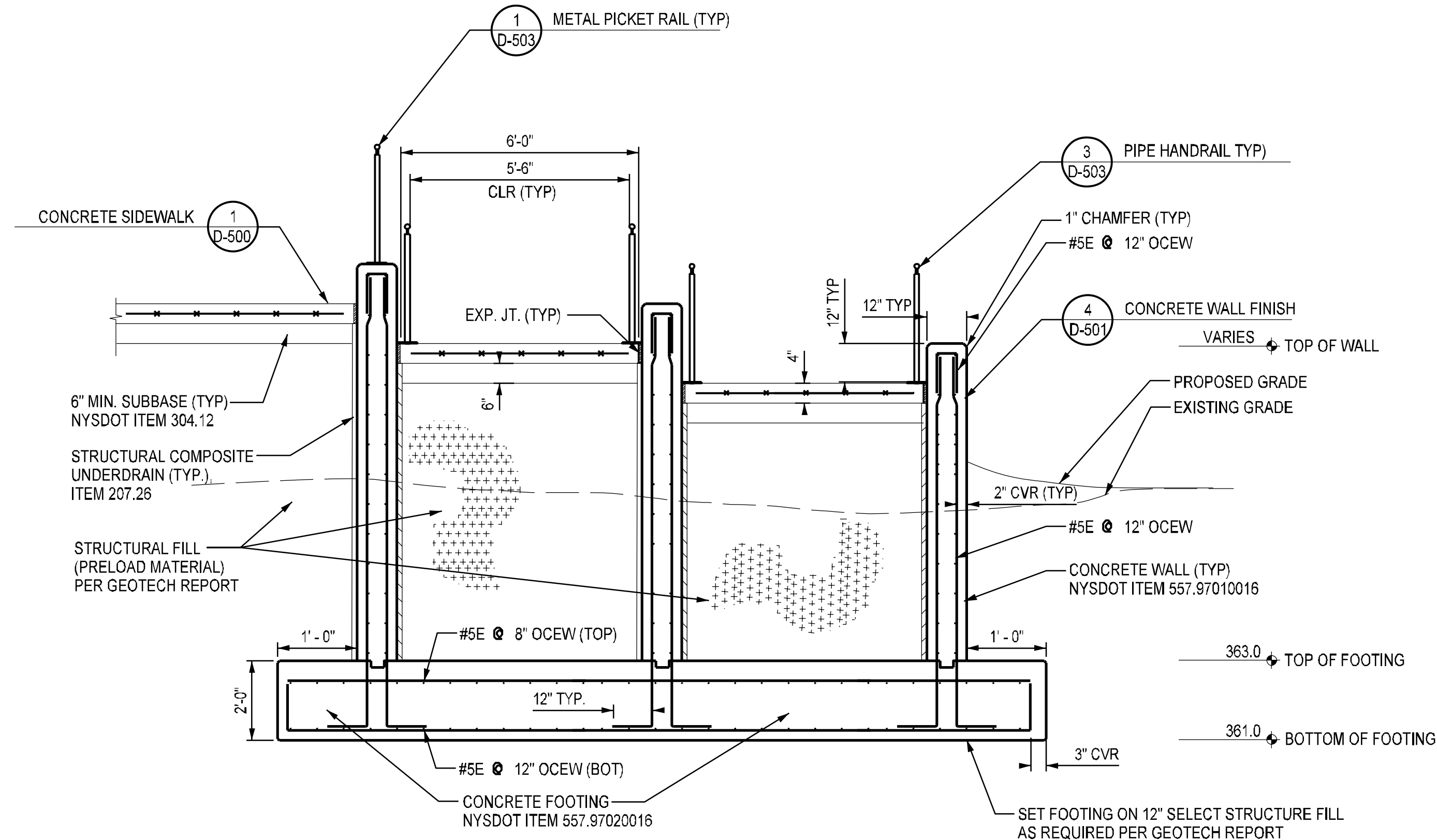
DATE ISSUED: 02/2021

DRAWING
D-500



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2 NORTH RAMP AND RETAINING WALL - SECTION
D-502 NOT TO SCALE



1. ALL REINFORCEMENT SHALL BE EPOXY COATED. SIZED AND LOCATED AS NOTED

SITE DETAILS		WILLow/BAY BEACH PROJECT			<h1 style="text-align: center;">Barton & Loguidice</h1> <p style="text-align: center;">UNAUTHORIZED ALTERATION OR ADDITION TO THIS DRAWING IS A VIOLATION OF THE NEW YORK STATE EDUCATION LAW ARTICLE 145 SECTION 7209</p>	NO.	DATE	BY	REVISION
		ONONDAGA BEACH FEASIBILITY STUDY & DESIGN SERVICES							
		ONONDAGA LAKE PARK							
		ONONDAGA COUNTY							
SCALE: AS SHOWN		DATE ISSUED 02/2021							
DRAWING		D-502							

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DATE = 2/18/2021
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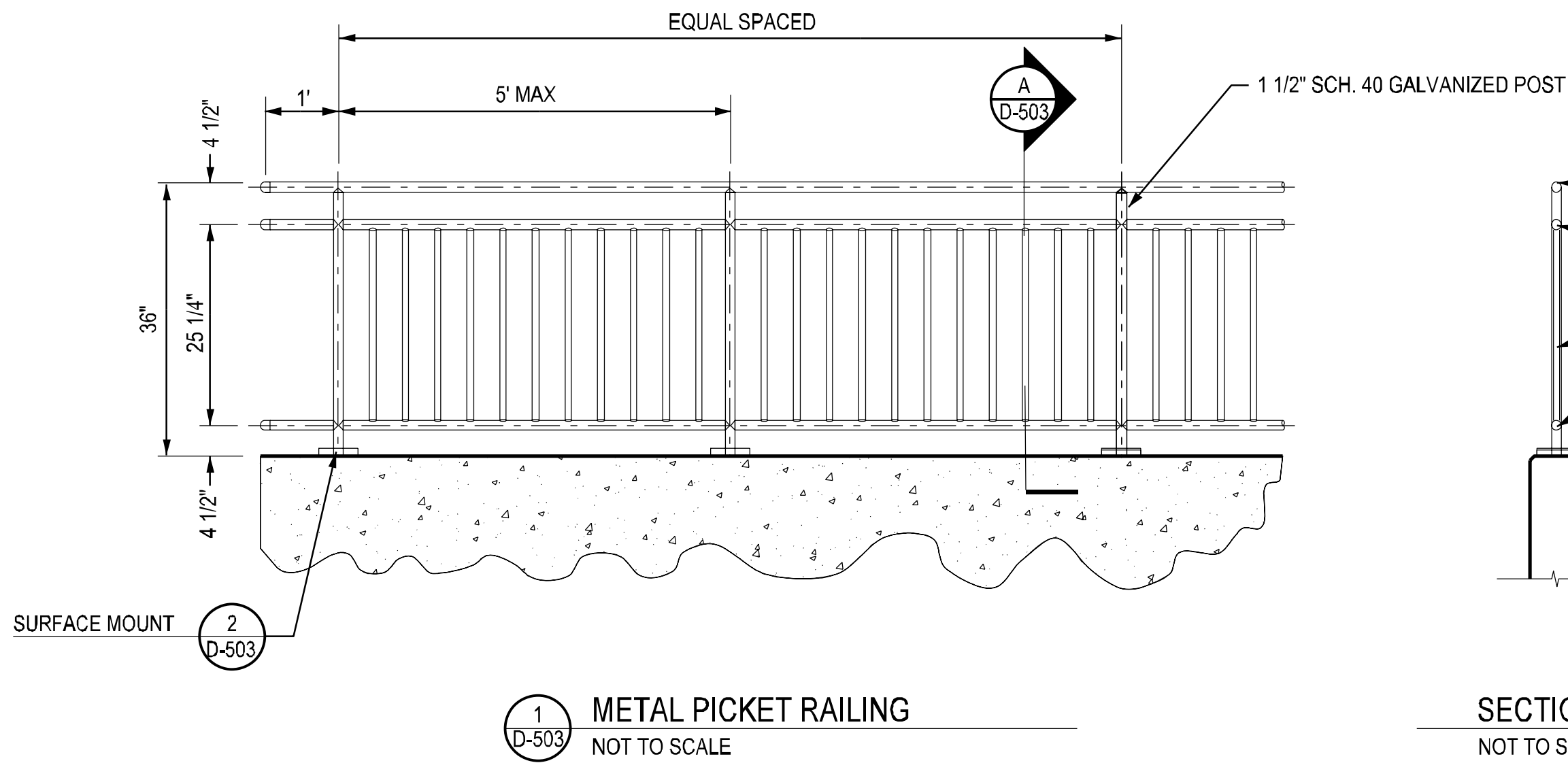
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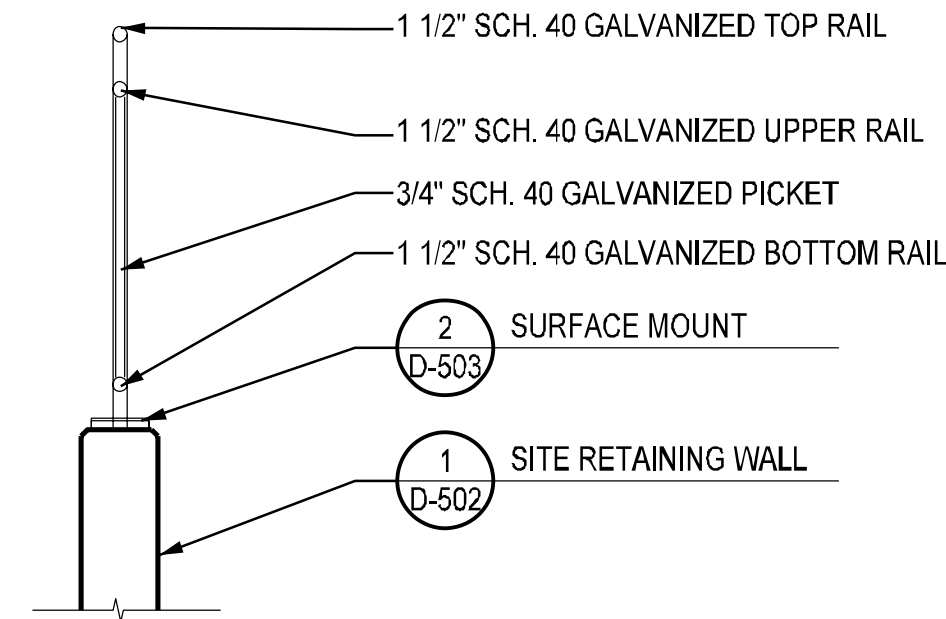
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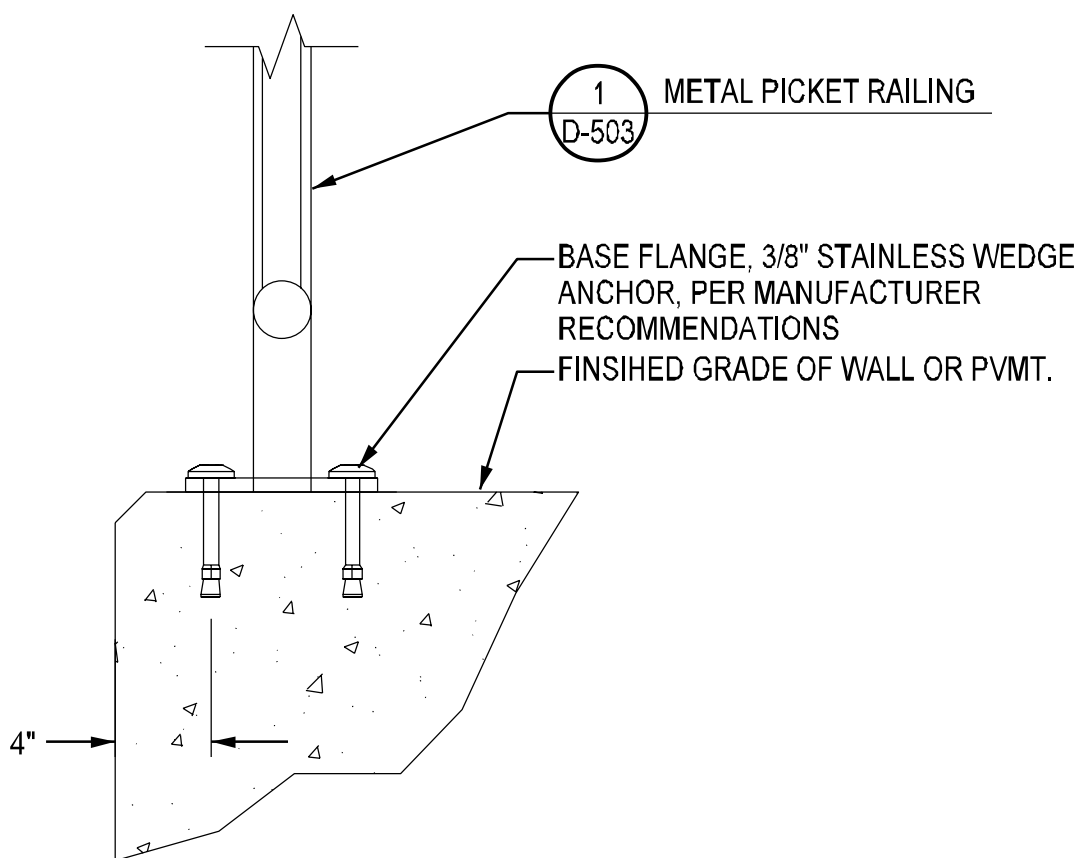


NOTES:

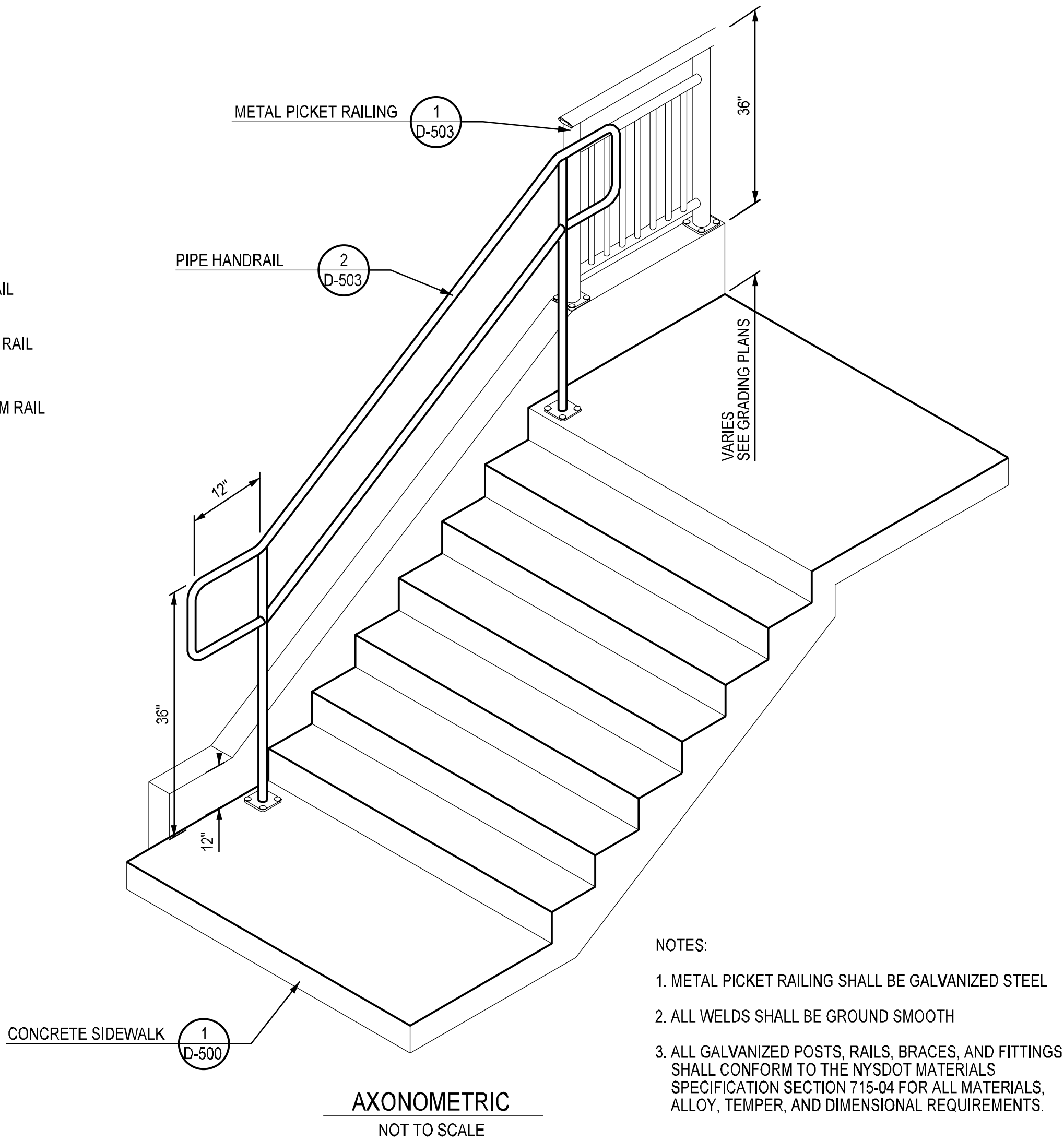
1. METAL PICKET RAILING SHALL BE GALVANIZED STEEL
2. ALL WELDS SHALL BE GROUND SMOOTH
3. PICKETS SHALL BE SPACED PROPORTIONATELY, MEETING MINIMUM CODE REQUIREMENTS FOR OPENINGS (4")
4. ALL GALVANIZED POSTS, RAILS, BRACES, AND FITTINGS SHALL CONFORM TO THE NYSDOT MATERIALS SPECIFICATION SECTION 715-04 FOR ALL MATERIALS, ALLOY, TEMPER, AND DIMENSIONAL REQUIREMENTS.



SECTION A
NOT TO SCALE

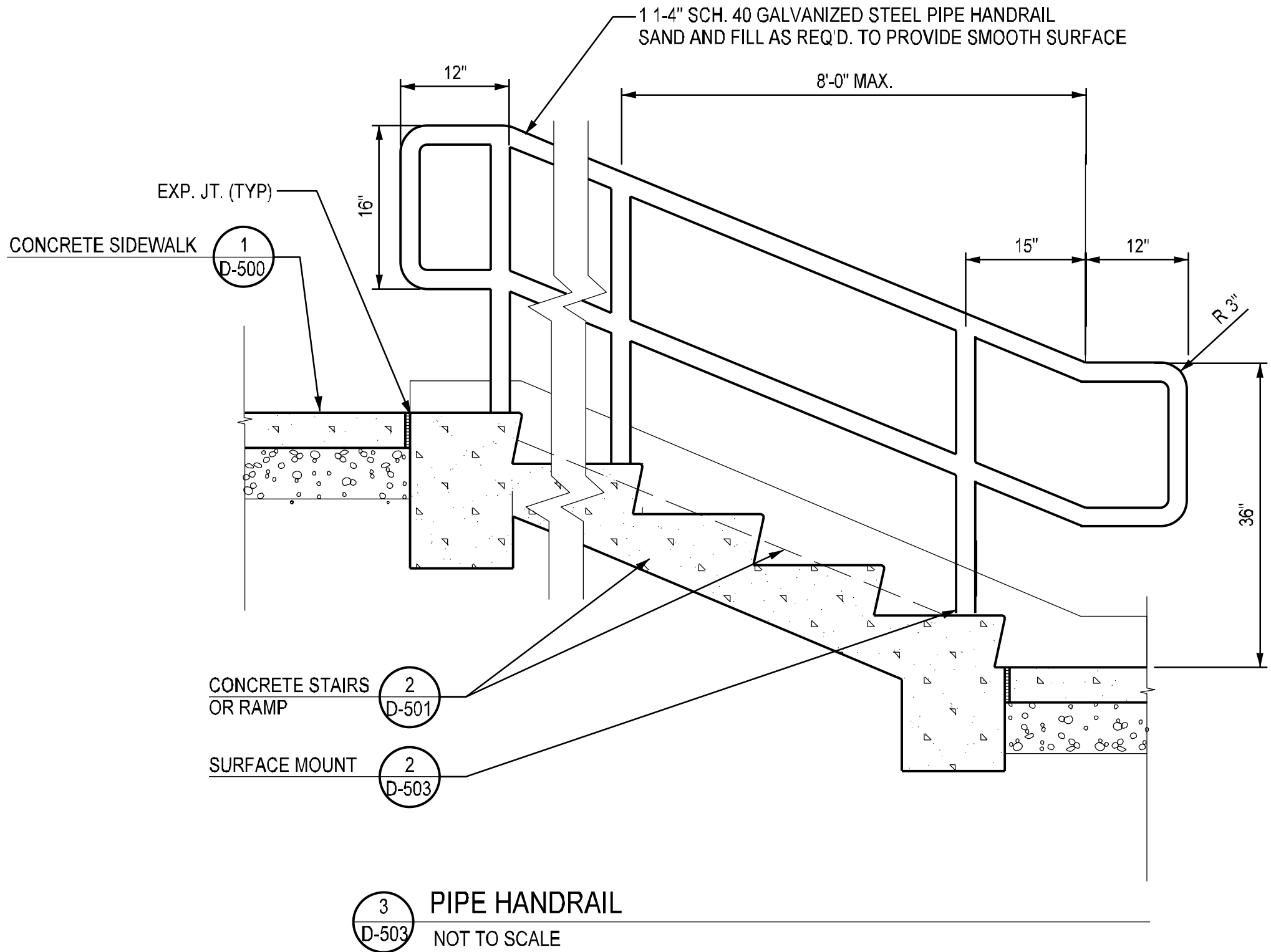


2 D-503 SURFACE MOUNT
NOT TO SCALE



NOTES:

1. METAL PICKET RAILING SHALL BE GALVANIZED STEEL
2. ALL WELDS SHALL BE GROUND SMOOTH
3. ALL GALVANIZED POSTS, RAILS, BRACES, AND FITTINGS SHALL CONFORM TO THE NYSDOT MATERIALS SPECIFICATION SECTION 715-04 FOR ALL MATERIALS, ALLOY, TEMPER, AND DIMENSIONAL REQUIREMENTS.



3 D-503 PIPE HANDRAIL
NOT TO SCALE



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DRAWING IS A VIOLATION OF THE NEW YORK STATE
EDUCATION LAW ARTICLE 145 SECTION 7209

WILLOW BAY BEACH PROJECT

ONONDAGA BEACH FEASIBILITY STUDY
& DESIGN SERVICES

ONONDAGA LAKE PARK

ONONDAGA COUNTY

RAILING DETAILS

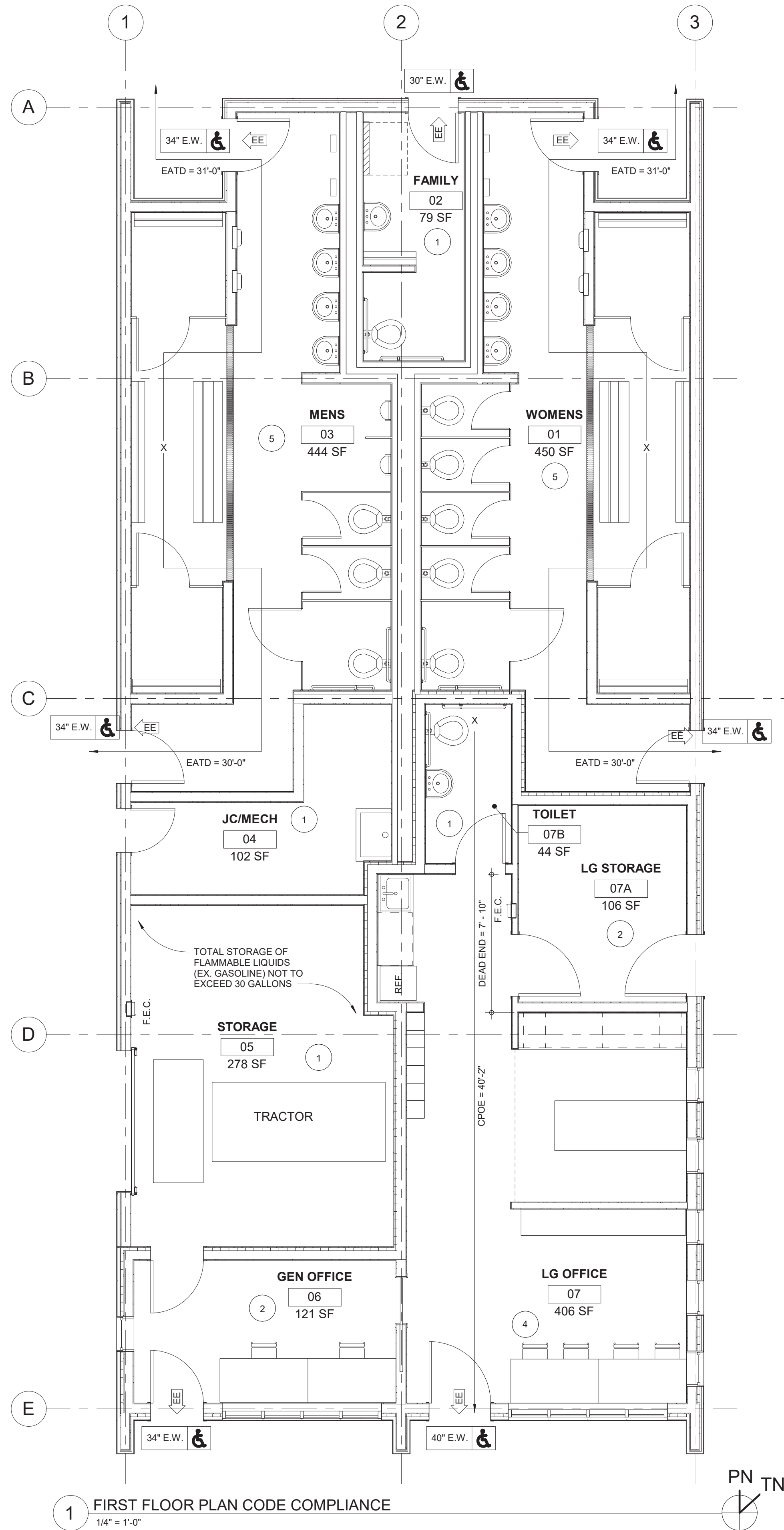
SCALE: AS SHOWN

DATE ISSUED: 02/2021

DRAWING
D-503

NO. DATE BY REVISION

X

BUILDING CODE NYS 2015 (BCNYS)

CODE ITEM	CODE SECTION	REQUIRED/ALLOWED	ACTUAL	COMMENTS
<u>CHAPTER 3 - USE AND OCCUPANCY CLASSIFICATION</u>				
OCCUPANCY B	SECTION 304			
<u>CHAPTER 5 - GENERAL BUILDING HEIGHTS AND AREAS</u>				
ALLOWABLE BUILDING HEIGHT (FEET)	TABLE 504.3	55' MAX	19'	
ALLOWABLE NUMBER OF STORIES	TABLE 504.4	3 MAX	1	
ALLOWABLE AREA	TABLE 506.2	23,000 SF MAX	2,552 SF	
<u>CHAPTER 6 - TYPES OF CONSTRUCTION</u>				
PRIMARY STRUCTURAL FRAME	TABLE 601	0	0	
BEARING WALLS				
EXTERIOR	TABLE 601	0	0	
INTERIOR	TABLE 601	0	0	
NONBEARING WALLS AND PARTITIONS				
EXTERIOR	TABLE 601	0	0	
INTERIOR	TABLE 601	0	0	
FLOOR CONSTRUCTION AND ASSOCIATED SECONDARY MEMBERS	TABLE 601	0	0	
ROOF CONSTRUCTION AND ASSOCIATED SECONDARY MEMBERS	TABLE 601	0	0	
<u>CHAPTER 7 - FIRE AND SMOKE PROTECTION FEATURES</u>				
FIRE BARRIERS	TABLE 706.4	2	N/A	
FIRE PARTITIONS	SECTION 708	1	N/A	
SMOKE BARRIERS	SECTION 709	1	N/A	
SHAFT ENCLOSURES	SECTION 713	1	N/A	
<u>CHAPTER 8 - INTERIOR FINISHES</u>				
EXIT ENCLOSURES AND EXIT PASSAGEWAYS	TABLE 803.11	CLASS A	N/A	
CORRIDORS	TABLE 803.11	CLASS B	N/A	
ROOMS AND ENCLOSED SPACES	TABLE 803.11	CLASS C	CLASS C	
INTERIOR FLOOR FINISH	SECTION 804	CLASS II	N/A	NON-FLAMMABLE
<u>CHAPTER 9 - FIRE PROTECTION SYSTEMS</u>				
AUTOMATIC SPRINKLER	SECTION 903	N	N	
PORTABLE FIRE EXTINGUISHER	SECTION 906.1(1)	1	2	
FIRE ALARM (MANUAL)	SECTION 907.2.2	N	Y	1 PROVIDED IN LIFEGUARD OFFICE
<u>CHAPTER 10 - MEANS OF EGRESS</u>				
OCCUPANCY LOAD	TABLE 1004.1.2	1 OCC. /100 SF GROSS	25	
DOORS				
WIDTH	1010.1.1	32"	34"	< 50 OCCUPANTS
SWING	1010.1.2.1	SWING OR PIVOT	SIDE-HINGED SWING	
PANIC AND FIRE EXIT HARDWARE	SECTION 1010.1.10	N	Y	NOT REQUIRED
EXIT AND EXIT ACCESS DOORWAYS	SECTION 1006	2	7	
COMMON PATH OF EGRESS TRAVEL	TABLE 1006.2.1	100'	40' - 2"	
NUMBER OF EXITS	SECTION 1006.3.1	2	7	
EXIT ACCESS	SECTION 1016			
EXIT ACCESS TRAVEL DISTANCE	SECTION 1017	200'	40' - 2"	COMPLIES
CORRIDORS	SECTION 1020	36"	N/A	
DEAD-END CORRIDORS	SECTION 1020.4	20'	8'-5"	
<u>CHAPTER 11 - ACCESSIBILITY</u>				
ACCESSIBLE ROUTE				
WITHIN A SITE	SECTION 1104.2	Y	Y	REFER TO CIVIL DRAWINGS
CONNECTED SPACES	SECTION 1104.3	Y	Y	
MULTILEVEL BUILDINGS	SECTION 1104.4	Y	N/A	

PROJECT DATA

2015 BUILDING CODE OF NYS:
CLASSIFICATION OF WORK (SEE CODE COMPLIANCE PLANS)

OCCUPANCY CLASSIFICATION: B

CONSTRUCTION CLASSIFICATION: IIB

FIRE RATINGS:

STRUCTURAL FRAME	0 HR
FLOOR CONSTRUCTION	0 HR
ROOF CONSTRUCTION	0 HR

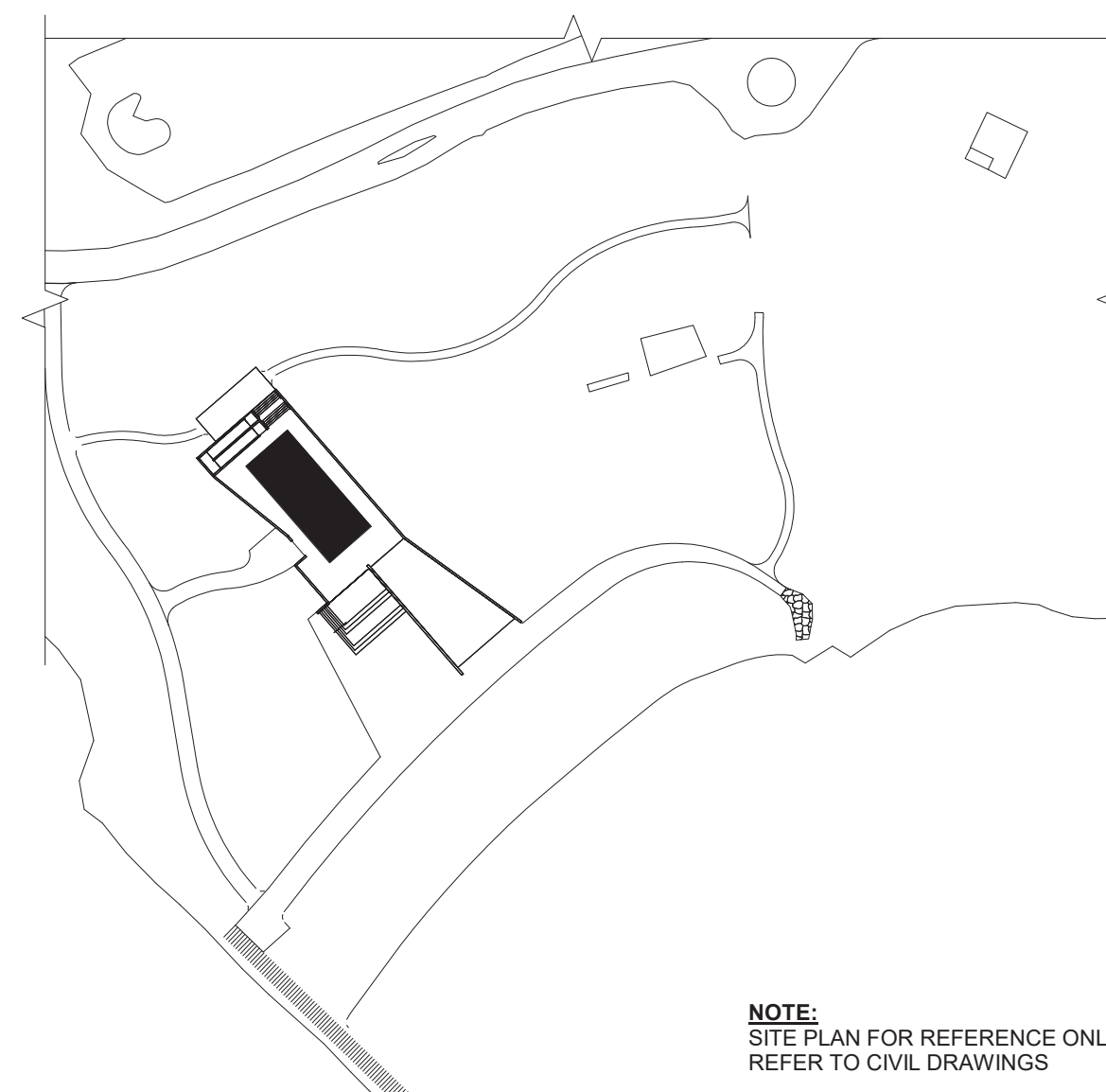
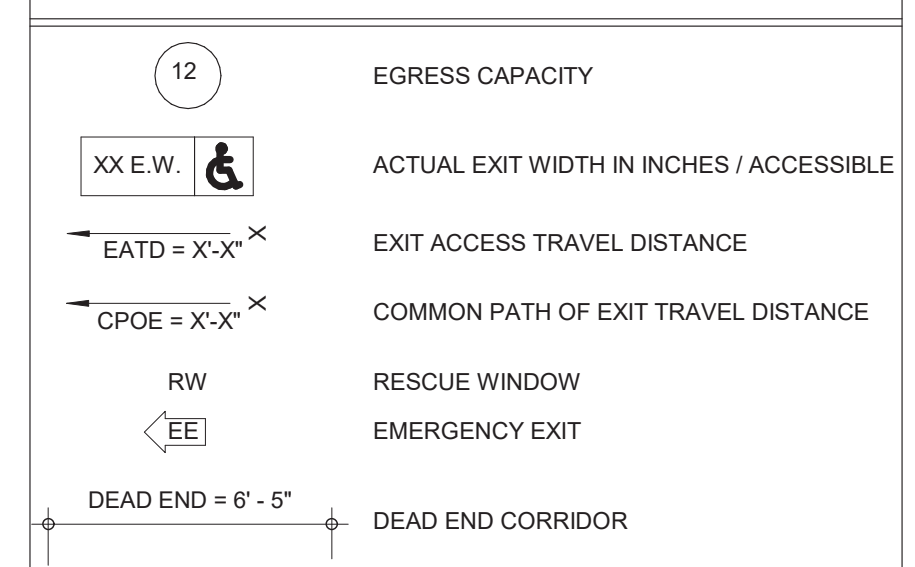
BUILDING AREAS:

FIRST FLOOR	2,498 SF
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FIRE PROTECTION SYSTEMS:

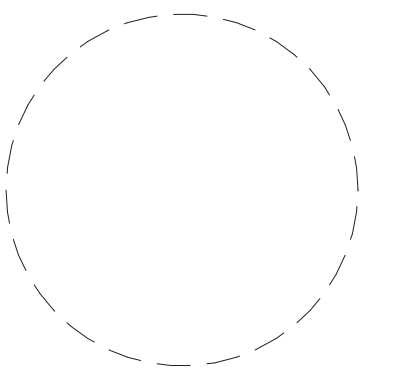
SPRINKLER SYSTEM	NONE
STANDPIPE SYSTEM	NONE
FIRE ALARM SYSTEM	YES

CODE REVIEW LEGEND



NOTE:
SITE PLAN FOR REFERENCE ONLY.
REFER TO CIVIL DRAWINGS

2 BUILDING LOCATION ON SITE



DOCUMENT PHASE

CONSTRUCTION
DOCUMENTS

REVISIONS

NO.	DATE	BY	DESCRIPTION

PROJECT:
ONONDAGA BEACH
FEASIBILITY STUDY &
DESIGN SERVICES

CLIENT:
ONONDAGA COUNTY

DRAWING TITLE

FIRST FLOOR CODE COMPLIANCE PLAN

DRAWING NO.

G-004

drawn by	KKS
checked	MSM
proj. mgr.	MSM
proj. no.	AR19003.00

ISSUE DATE

12/31/2019

SYMBOLS

PLAN OR DETAIL NOTATION	SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION
	B1, B2... BP1, BP2... C1, C2... F1, F2... GB1, GB2... H1, H2... L1, L2... P1, P2... SW1, SW2... (SL) (+X-X") T/ XXX X-X" XXX ELEV. X-X" XXX /	BEAM MARK BEARING PLATE COLUMN MARK FOOTING MARK GRADE BEAM MARK HEADER MARK LINTEL MARK PIER MARK SHEAR WALL MARK INDICATES SLOPED MEMBER INDICATES TOP OF STEEL ELEVATION CALL OUT (PLAN) ELEVATION CALL OUT (SECTION / DETAIL) TYPE AND SPAN OF DECK, GRATING, SLAB... STEP/CHANGE IN ELEVATION SLOPE/CHANGE IN ELEVATION DATUM POINT FLOOR DRAIN DIRECTION OF SLOPE	 	CONCRETE CONCRETE MASONRY CRUSHED STONE / GRAVEL STEEL UNDISTURBED EARTH / SUBGRADE SLAB DEPRESSION WALL DEPRESSION / DOOR THRESHOLD WELDED WIRE REINFORCEMENT SLAB CONTROL JOINT BRACING JOIST BRIDGING ROOF DRAIN AND FRAMING DECK OR SLAB OPENING	 	BEAM SIZE BEAM END ELEV. (IF SLOPED) CAMBER T/ STEEL ELEV. JOIST/TRUSS SIZE BRG. ELEV. (IF SLOPED) MECHANICAL UNIT (OUTLINE) AND OPERATING WEIGHT

ABBREVIATIONS

@	AT	E	EAST	L	ANGLE	R	RISER, RADIUS
AB	ANCHOR BOLT	E-W	EAST-WEST	L or LG	LONG, LENGTH	RAD	RADIUS
ACI	AMERICAN CONCRETE INSTITUTE	EA	EACH	LAM	LAMINATED	RB	RECTANGULAR BEAM
ADOL	ADDITIONAL	EE	EACH END	LB(S)	POUND(S)	RC	REINFORCED CONCRETE
ADJ	ADJACENT, ADJUSTABLE	EF	EACH FACE	LF	LINEAR FEET(FOOT)	RD	ROOF DRAIN
AESS	ARCHITECTURALLY-EXPOSED	EJ	EXPANSION JOINT	LF	LEFT HAND	REC	RECESSED
	STRUCTURAL STEEL	EJD	EXPANSION JOINT W/ DOWEL	LN	LINEAR	RE or REF	REFER TO, REFERENCE
AFF	ABOVE FINISHED FLOOR	ELAS	ELASTOMERIC	LL	LIVE LOAD	REG(S)	REGULAR, REGULATION(S)
AGG	AGGREGATE	ELEV	ELECTRICAL	LLH	LONG LEG HORIZONTAL	REIN	REINFORCE(ING)(D)(MENT)
AHU	AIR HANDLING UNIT	ELEV	ELEVATION	LLH	LONG LEG HORIZONTAL	REIN	REINFORCE(ING)(D)(MENT)
AISC	AMERICAN INSTITUTE OF STEEL	EMBED	EMBEDDED, EMBEDMENT	LLV	LONG LEG VERT	RET	RETURN, RETAINING
	CONSTRUCTION	EN	EDGE NAIL	LOC(S)	LOCATION(S)	REV	REVISED(D)(ION)
AISI	AMERICAN IRON AND STEEL	ENCL	ENCLOSURE	LONG	LONGITUDINAL	RH	RIGHT HAND
	INSTITUTE	ENGR	ENGINEER	LRFD	LOAD AND RESISTANCE FACTOR	RM	ROOM
ALT	ALTERNATE	EOD	EDGE OF DECK		DESIGN	RO	ROUGH OPENING
ALUM	ALUMINUM	EOR	ENGINEER OF RECORD	LSL	LAMINATED STRAND LUMBER	ROBT(M)	REQUIREMENT(S)
APA	AMERICAN PLYWOOD ASSOCIATION	EOS	EDGE OF SLAB	LT	LIGHT	RTU	ROOF TOP UNIT
APPROX	APPROXIMATELY	EQ	EQUAL	LTWT	LIGHTWEIGHT	RV	ROOF VENT
ARCH	ARCHITECT, ARCHITECTURAL	EQ SP	EQUALLY SPACED	LVL	LEVEL, LAMINATED VENEER LUMBER		
ASCE	AMERICAN SOCIETY OF CIVIL ENGINEERS	EQUIP	EQUIPMENT	LWC	LIGHTWEIGHT CONCRETE	S	SOUTH
		ES	EACH SIDE			SC	SHEAR CONNECTOR, SLIP CRITICAL, SOLID CORE
ASD	ALLOWABLE STRESS DESIGN	ETC	ET CETERA	MACH	MACHINE	SCH or SCHED	SCHEDULE
ASTM	AMERICAN SOCIETY FOR TESTING AND MATERIALS	ETR	EXISTING TO REMAIN	MACH RM	MACHINE ROOM	SECT	SECTION
AWS	AMERICAN WELDING SOCIETY	EW	EACH WAY	MAINT	MAINTENANCE	SF	SQUARE FEET, SAFETY FACTOR
		EXIST	EXISTING	MATL	MATERIAL	SHT	SHEET
		EXP	EXPAND, EXPANSION	MAX	MAXIMUM	SIM	SIMILAR
		EXT	EXTERIOR	MCJ	MASONRY CONTROL JOINT	SJ	SAWJOINT JOINT
B/ or BO	BOTTOM OF			ME	MATCH EXISTING	SL	SHORT LEG HORIZONTAL
BAL	BALANCE	FAB	FABRICATE	MECH	MECHANICAL	SLH	SEISMIC LOAD-RESISTING SYSTEM
BB	BACK-TO-BACK	FD	FLOOR DRAIN, FOUNDATION DRAIN	MFP	MECHANICAL/ELECTRICAL/PLUMBING	SLV	SHORT LEG VERTICAL
BF	BRACED FRAME	FF	FAR FACE	MFG	MANUFACTURER	SOG	SLAB ON GRADE
BG	BACKGUAGE	FFE	FINISHED FLOOR ELEVATION	MIN	MINIMUM	SP	SPACE(S)
BL	BRICK LEDGE	FIN	FINISHED	MISC	MISCELLANEOUS	SPEC(S)	SPECIFICATION(S)
BLDG	BUILDING	FIXT	FIXTURE	ML	MICRO-LAM	SUPT or SUPT	SQUARE
BLKG	BLOCKING	FLG	FLANGE	MTD	MOUNTED	SS	STAINLESS STEEL
BM	BEAM, BENCHMARK	FLR	FLOOR	MTL	METAL	STD	STANDARD
BN	BOUNDARY NAIL	FNDN	FOUNDATION			STIFF	STIFFENER
BOS	BOTTOM OF STEEL	FO	FACE OF	N	NORTH	STL	STEEL
B or BOT	BOTTOM	FP	FULL PENETRATION, FIRE PROOFING	NF	NORTH FACE	STR	STRAIGHT, STRINGER
BRG	BEARING	FRAM	FRAMING	N-S	NORTH-SOUTH	STRUCT	STRUCTURAL
BRKT	BRACKET	FRP	FIBERGLASS REINFORCED PLASTIC	NIC	NOT IN CONTRACT	SUSP	SUSPENDED
BSMT	BASEMENT	FS	FAR SIDE	NM	NON-METALLIC	SW	SHEARWALL
BTWN	BETWEEN	FT	FOOT, FEET	NO or #	NUMBER	SY	SQUARE YARD
BW	BOTH WAYS	FTG	FOOTING	NOM	NOMINAL	SYM	SYMMETRICAL
				NS	NON-SHRINK, NEAR SIDE		
CANT	CANTILEVER	GAL	GAGE, GAUGE	NTS	NOT TO SCALE	T	TOP, TREAD
CC	CENTER TO CENTER	GALLON	GALLON	NWC	NORMAL-WEIGHT CONCRETE	T&B	TOP & BOTTOM
CF	CUBIC FEET(FOOT), COLD-FORMED	GALV	GALVANIZED			T&B	TONGUE AND GROOVE
CFMF	COLD-FORMED METAL FRAMING	GB or GR BM	GRADE BEAM	OA	OVERALL	Ti or TO	TOP OF
CFM	CENTER OF GRAVITY	GC	GENERAL CONTRACTOR	OF	OUTSIDE FACE	TEMP	TEMPORARY, TEMPERATURE
CI	CAST IRON	GFRG	GLASS FIBER REINFORCED CONCRETE	OE	ON APPROVED EQUIVALENT	THK	THICKNESS
CIP	CAST-IN-PLACE, CAST IRON PIPE	GL	GLU-LAM	OAE	ON CENTER	THRD	THREADED
CJ	CONTROL JOINT	GR	GRADE, GRIND	OD	OUTSIDE DIAMETER	TJ	TWO JOINT
CJP	COMPLETE JOINT PENETRATION	GYP	GYP	OH	OPPOSITE HAND, OVERHANG,	TL	TOTAL LOAD
CL	CENTERLINE	GYP BD	GYP	OP	OVERHEAD	TOC	TOP OF CONCRETE
CLG	CEILING			OIO	OUT TO OUT	TOF	TOP OF FOOTING
CLR	CLEAR	HAS	HEADED ANCHOR STUD	OPNG	OPENING	TOM	TOP OF MASONRY
CMU	CONCRETE MASONRY UNIT	HOLLOW CORE	HOLLOW CORE	OPP	OPPOSITE	TOS	TOP OF STEEL
CO	CLEANOUT	HD	HEADED	OPT	OPTIONAL	TOW	TOP OF WALL
COL	COLUMN	HG or HD GALV	HOLD DIPPED	OTLN	OUTLINE	TRANS	TRANSVERSE
CONC	CONCRETE			OVS	OVERSIZED	TYP	TYPICAL
CONN	CONNECTION	HEF	HORIZONTAL EACH FACE	OZ	OUNCES		
CONST	CONSTRUCTION	HIF	HORIZONTAL INSIDE FACE			UC	UNDERCUT
CONT	CONTINUE, CONTINUOUS	HK	HOOK	PAF	POWDER ACTUATED FASTENER	UGND	UNDERGROUND
CONTR	CONTRACTOR	HM	HOLLOW METAL	PC	PRECAST	ULT	ULTIMATE
COORD	COORDINATE	HOF	HORIZONTAL OUTSIDE FACE	PCA	PORTLAND CEMENT ASSOCIATION	UNEX	UNEXCAVATED
CSK	COUNTERSINK	HP	HIGH POINT	PCF	POUNDS PER CUBIC FOOT	UNFIN	UNFINISHED
CTR	CENTERED	HS	HIGH STRENGTH	PE	PROFESSIONAL ENGINEER	UNO	UNLESS NOTED OTHERWISE
CY	CUBIC YARD	HORIZ	HORIZONTAL	PED	PEDESTAL	UNO	UNLESS NOTED OTHERWISE
		HT	HEIGHT	PEN	PENETRATION	US	UNDERSTUD
d	PENNY	HVAC	HEATING, VENTILATION & AIR CONDITIONING	PERF	PERFORATED	UTIL	UTILITY
db	BAR DIAMETER			PERP	PERPENDICULAR		
DBL	DOUBLE	IBC	INTERNATIONAL BUILDING CODE	PL	PLATE	VEF	VERTICAL EACH FACE
DCW	DEMAND CRITICAL WELD	IF	INSIDE FACE	PLF	POUNDS PER LINEAR FOOT	VENT	VENTILATION
DEG	DEGREE	ID	INSIDE DIAMETER	PLUM	PLUMBING	VERT	VERTICAL
DEMO	DEMOLITION	IN	INSIDE DIAMETER	PLYWD	PLYWOOD	VIF	VERTICAL INSIDE FACE, VERIFY IN FIELD
DEP	DRPRESS(ON)	INCHES	INCLUDE(D)	PR	PAIR	VOF	VERTICAL OUTSIDE FACE
DIA or Ø	DIAMETER	INCL	INCLUDE(D)	PREFAB	PREFABRICATED	VOL	VOLUME
DIAG	DIAGONAL	INT	INTERIOR, INTERMEDIATE	PREFIN	PREFINISHED	VR	VAPOR RETARDER
DIM	DIMENSION	INFO	INFORMATION	PRELIM	PRELIMINARY		
DIR	DIRECTION	INSP	INSPECTION	PREP	PREPARE(D)		
DIV	DIVISION	INV	INVERT	PROJ	PROJECT	W	WEST
DL	DEAD LOAD			PS	POST-STRESSED	WI	WITH
DN	DOWN	JST	JOIST	PSF	POUNDS PER SQUARE FOOT	W/O	WITHOUT
DO	DITTO	JT	JOINT	PSI	POUNDS PER SQUARE INCH	WD	WOOD
DP	DRIER PILED, DEEP			PT	POINT, POST-TENSIONED,	WF	WIDE FLANGE
DR	DOOR, DRIVE				PRESSURE TREATED,	WORKING	WORKING POINT, WATERPROOFING
DS	DOWNSPOUT				PRE-TENSIONED	WT	WEIGHT, WATERTIGHT
DT	DOUBLE TEE				POLYVINYL CHLORIDE (PLASTIC)	WWF	WELDED WIRE FABRIC
DTL(S)	DETAIL(S)	k	KIP	QTY	QUANTITY	WWR	WELDED WIRE REINFORCEMENT
DWG(S)	DRAWING(S)	KIP	1,000 POUNDS				
DWL(S)	DRAWING(S)						

STRUCTURAL DESIGN CRITERIA

GOVERNING BUILDING CODE	2015 INTERNATIONAL BUILDING CODE
BUILDING OCCUPANCY CATEGORY	2017 NEW YORK STATE UNIFORM CODE SUPPLEMENT
DESIGN SOIL BEARING CAPACITY	II
FLOOR LIVE LOADS	1000 PSF
REST ROOMS	60 PSF
MECHANICAL EQUIPMENT PLATFORMS/SUPPORTS	100 PSF
OFFICES	50 PSF
ROOF LIVE LOAD	
ROOF CONSTRUCTION LOAD	20 PSF
COLATERAL LOADS	
MECHANICAL, ELECTRICAL, PLUMBING ALLOWANCE	5 PSF
SUSPENDED CEILINGS	2 PSF
PARTITIONS	10 PSF
SNOW LOAD	
SNOW LOAD IMPORTANCE FACTOR, I_s	1.00
GROUND SNOW LOAD, P_g	50 PSF
FLAT ROOF SNOW LOAD, P_f	38.5 PSF
SNOW EXPOSURE FACTOR, C_e	1.0
THERMAL FACTOR, C_t	1.10
WIND LOAD - MAIN WIND FORCE RESISTING SYSTEM	
BASIC WIND SPEED, V	115 MPH
WIND EXPOSURE	D
TOPOGRAPHIC FACTOR, K_{zt}	1.00
WIND DIRECTIONALITY FACTOR, K_d	0.85
VELOCITY PRESSURE EXPOSURE COEFFICIENT, K_z	1.13
MEAN ROOF HEIGHT, H	13'-6"
MAXIMUM WIND PRESSURE, WALLS - HORIZONTAL (PSF)	
PARALLEL TO N-S DIRECTION (WINDWARD / LEeward)	28.1 / -14.2
PARALLEL TO E-W DIRECTION (WINDWARD / LEeward)	28.1 / -19.8
MAXIMUM WIND PRESSURE, ROOFS - VERTICAL (PSF)	
PARALLEL TO N-S DIRECTION	
WINDWARD (0 TO H / H TO 2H / > 2H)	-30.8 / -19.8 / -14.2
LEeward	-10.9
PARALLEL TO E-W DIRECTION	
WINDWARD (0 TO H/2 / > H/2)	-34.7 / -28.9
LEeward	-10.9
WIND LOAD - COMPONENTS AND CLADDING	
MAXIMUM WIND PRESSURE, WALLS (PSF)	
BUILDING (INTERIOR ZONE / END ZONE)	35.9, -38.9 / 35.9, -47.6
MAXIMUM WIND PRESSURE, ROOF (PSF)	
BUILDING (INTERIOR ZONE / END ZONE / CORNER ZONE)	14.1, -37.5 / 14.1, -54.5 / 14.1, -70.4
NOTE: POSITIVE AND NEGATIVE NUMBERS INDICATE FORCES/PRESSURES ACTING TOWARD AND AWAY FROM THE SURFACES RESPECTIVELY.	
SEISMIC LOAD	
SEISMIC IMPORTANCE FACTOR, I_e	1.00
SITE SOIL CLASSIFICATION	E
MAPPED SHORT PERIOD SPECTRAL ACCELERATION, S_s	0.144 g
MAPPED ONE SECOND PERIOD SPECTRAL ACCELERATION, S_1	0.062 g
SHORT PERIOD SPECTRAL DESIGN ACCELERATION, S_{DS}	0.20 g
ONE SECOND PERIOD SPECTRAL DESIGN ACCELERATION, S_{D1}	0.145 g
SEISMIC DESIGN CATEGORY	C
BASIC SEISMIC FORCE-RESISTING SYSTEM (BCNYS T1617.6.2)	Type A16
SEISMIC RESPONSE COEFFICIENT, C_s	0.037
RESPONSE MODIFICATION FACTOR, R	6.5
ANALYSIS PROCEDURE	EQUIVALENT LATERAL FORCE
DESIGN BASE SHEAR, V (N-S DIRECTION / E-W DIRECTION)	4.6 KIPS / 3.7 KIPS

STRUCTURAL DRAWING LIST

[illegible]

RELEASE NOTES:
DD REV.: DRAWINGS RELEASED FOR DESIGN DEVELOPMENT REVIEW SET
DD: DRAWINGS RELEASED FOR DESIGN DEVELOPMENT
CD: DRAWINGS RELEASED FOR CONSTRUCTION
BID: DRAWINGS RELEASED FOR BIDDING
ADD: DRAWINGS RELEASED FOR ADDENDUM



IT IS A VIOLATION OF NEW YORK STATE EDUCATION LAW ARTICLE 145 SEC. 7209
FOR ANY PERSON, UNLESS ACTING UNDER THE DIRECTION OF A LICENSED
ARCHITECT, PROFESSIONAL ENGINEER, OR LAND SURVEYOR, TO ALTER AN
ITEM IN ANY WAY IF AN ITEM BEARING THE SEAL OF AN ARCHITECT, ENGINEER,
OR LAND SURVEYOR IS AFFIXED; THE ALTERING ARCHITECT, ENGINEER OR
LAND SURVEYOR SHALL AFFIX TO THE ITEM THEIR SEAL AND NOTATION
"ALTERED BY" FOLLOWED BY THEIR SIGNATURE AND DATE OF SUCH
ALTERATIONS, AND A SPECIFIC DESCRIPTION OF SUCH ALTERATIONS.

POPULI DESIGN GROUP, ARCHITECTURE + ENGINEERING, PC.
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DOCUMENT PHASE

CONSTRUCTION
DOCUMENTS

REVISIONS

[illegible]

PROJECT:

ONONDAGA BEACH
FEASIBILITY STUDY &
DESIGN SERVICES

CLIENT:

ONONDAGA COUNTY

DRAWING TITLE

STRUCTURAL SYMBOLS, ABBREVIATIONS, DRAWING LIST, AND DESIGN CRITERIA

DRAWING NO.	drawn by	PS
S001	checked	JMF
	proj. mgr.	MSM
	proj. no.	AR19003.00

ISSUE DATE

03/17/2020

GENERAL STRUCTURAL NOTES

GENERAL NOTES:

- WORK SHALL CONFORM TO THE LATEST EDITIONS OF THE BUILDING CODE OF NEW YORK STATE, THE AMERICAN INSTITUTE OF STEEL CONSTRUCTION (AISC) STANDARD SPECIFICATION, THE AMERICAN CONCRETE INSTITUTE (ACI) BUILDING CODE, THE AMERICAN WELDING SOCIETY (AWS) CODE AND ALL APPLICABLE ASTM STANDARDS. IN CASES OF CONFLICT, THE MOST STRINGENT SHALL GOVERN.
- CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND CONDITIONS ON THE JOB. THE CONTRACTOR SHALL REFER TO ARCHITECTURAL DRAWINGS FOR INFORMATION NOT NOTED ON THE STRUCTURAL DRAWINGS AND COMPARE THE STRUCTURAL DRAWINGS TO THE ARCHITECTURAL DRAWINGS. REPORT DISCREPANCIES TO THE ARCHITECT IMMEDIATELY. VERIFICATION OF EXISTING DIMENSIONS AND CONDITIONS SHALL BE DONE PRIOR TO THE PREPARATION OF SHOP DRAWINGS.
- TYPICAL DETAILS SHALL APPLY TO ALL DRAWINGS AND SHALL BE USED EXCEPT WHERE OTHERWISE SHOWN OR NOTED.
- ANY DEVIATION FROM, ADDITION TO, SUBSTITUTION FOR, OR MODIFICATIONS TO THE STRUCTURE SHOWN ON THESE DRAWINGS SHALL BE SUBMITTED IN WRITING TO THE ENGINEER FOR REVIEW. SHOP DRAWINGS THAT ARE SUBMITTED FOR REVIEW DO NOT CONSTITUTE "IN WRITING" UNLESS IT IS CLEARLY NOTED THAT SPECIFIC CHANGES ARE BEING SUGGESTED.
- THE STRUCTURAL DRAWINGS AND SPECIFICATIONS REPRESENT THE FINISHED STRUCTURE. THEY DO NOT INDICATE THE METHODS OF CONSTRUCTION UNLESS SO STATED OR NOTED. THE CONTRACTOR SHALL PROVIDE ALL MEASURES NECESSARY TO PROTECT WORKERS AND OTHER PERSONS DURING CONSTRUCTION.
- THE STRUCTURAL DRAWINGS ARE NOT TO BE SCALED FOR DETERMINATION OF QUANTITIES, LENGTHS OR FIT OF MATERIALS.
- THE GENERAL CONTRACTOR SHALL BE SOLELY AND EXCLUSIVELY RESPONSIBLE FOR THE ADEQUACY OF ALL SHORING AND BRACING. THE CONTRACTOR SHALL PROVIDE TEMPORARY ERECTION SHORING AND BRACING OF ALL STRUCTURAL WORK AS REQUIRED FOR THE STABILITY OF THE STRUCTURE DURING ALL PHASES OF CONSTRUCTION.
- REFER TO THE ARCHITECTURAL, MECHANICAL AND ELECTRICAL DRAWINGS FOR VERIFICATION OF LOCATIONS AND DIMENSIONS OF CHASES, INSERTS, OPENINGS, SLEEVES, WASHES, REVEALS, DEPRESSIONS AND OTHER PROJECT REQUIREMENTS.
- REPRODUCTION OF ANY PORTION OF THE CONTRACT DRAWINGS SHALL NOT BE USED AS SHOP DRAWINGS OR ERECTION DRAWINGS AND IS A VIOLATION OF COPYRIGHT LAWS. ALL PLANS, NOTES, DETAILS, AND SECTIONS MUST BE REDRAWN AND COORDINATED WITH THE CONTRACT DRAWINGS. REPRODUCED CONTRACT DRAWINGS THAT ARE SUBMITTED WILL NOT BE REVIEWED.
- THIS PROJECT REQUIRES STRUCTURAL TESTS AND SPECIAL INSPECTIONS AS DEFINED IN CHAPTER 17 OF THE 2015 INTERNATIONAL BUILDING CODE WITH 2017 NEW YORK STATE SUPPLEMENT. IT IS THE CONTRACTOR'S RESPONSIBILITY TO BECOME FAMILIAR WITH THE STATEMENT OF SPECIAL INSPECTIONS, SUBMIT ALL REQUIRED DOCUMENTATION, AND ALLOW THE OWNER'S TESTING AND INSPECTION AGENCY ACCESS TO PERFORM ALL REQUIRED TESTS AND INSPECTIONS. AS PART OF THIS PROGRAM, THE CONTRACTOR SHALL ALSO SUBMIT A COPY OF THEIR QUALITY CONTROL PROCEDURES AND CONTACT INFORMATION FOR ALL PERSONNEL RESPONSIBLE FOR EXECUTION OF SAME.

FOUNDATION NOTES:

- FOUNDATION DESIGN AND SEISMIC LOADING CRITERIA, INDICATED ON THE DRAWING, IS BASED ON A SITE CLASS DESIGNATION OF E IN ACCORDANCE WITH THE BUILDING CODE OF NEW YORK STATE, SECTION 1615.5.2.
- FOOTINGS MUST BE CARRIED DOWN TO PERMANENT STRUCTURAL FILL (SUBGRADE), NOT LESS THAN FOUR FEET BELOW FINISHED EXTERIOR GRADE, HAVING A MINIMUM NET ALLOWABLE BEARING CAPACITY AS INDICATED UNDER THE STRUCTURAL DESIGN CRITERIA.
- SITE IS TO BE BUILT UP WITH PERMANENT STRUCTURAL FILL, SAND LIGHTWEIGHT FILL PER GEOTECHNICAL REPORT, WITH AN 18" PAD OF COMPACTED CRUSHED STONE. PRIOR TO CONSTRUCTION THE SITE IS TO BE SURCHARGED FOR A MIN OF 1 TO 2 YEARS OR UNTIL SETTLEMENT APPROACHES ZERO. SURCHARGE METHOD AND MONITORING REQUIREMENTS ARE PER THE GEOTECHNICAL REPORT.
- ANY OBSTRUCTIONS ENCOUNTERED DURING EXCAVATION WHICH MAY INTERFERE WITH THE CONSTRUCTION OF ANY OF THE PERMANENT STRUCTURAL FILL, FOUNDATIONS OR WALLS MUST BE REMOVED AND REPLACED IN COMPLIANCE WITH THE GEOTECHNICAL ENGINEERS' RECOMMENDATIONS.
- NO FOUNDATION OR SOIL-SUPPORTED SLABS SHALL BE PLACED IN WATER OR ON OR AGAINST FROZEN GROUND.
- THE EXPOSED SUBGRADE IS READILY DISTURBED AND DEGRADED BY GROUND OR SURFACE WATER. WATER MUST NOT BE ALLOWED TO POND ON ANY SUBGRADE SURFACE. PROTECT EXPOSED SUBGRADES FROM CONSTRUCTION TRAFFIC. GROUND WATER SHALL BE CONTROLLED BY PROPER SITE GRADINGS AND DEWATERING TECHNIQUES SUCH AS SUMP AND PUMP OR WELLPOINT METHODS OF DEWATERING. ALL DEWATERING MEANS AND METHODS SHALL BE THE COMPLETE RESPONSIBILITY OF THE CONTRACTOR.
- ALL CONCRETE AND FOUNDATIONS SHALL BE PROTECTED AGAINST FROST UNTIL THE PROJECT IS COMPLETED.
- FOUNDATION SUBGRADES SHALL BE HAND TRIMMED.
- FINISHED EXCAVATIONS AND BEARING GRADES SHALL BE INSPECTED AND APPROVED BY THE TESTING AGENCY'S GEOTECHNICAL ENGINEER IMMEDIATELY BEFORE ANY CONCRETE IS PLACED.
- THE ENGINEER ASSUMES NO RESPONSIBILITY FOR THE VALIDITY OF THE SUBSURFACE CONDITIONS DESCRIBED ON THE DRAWINGS, TEST BORINGS OR TEST PITS. THESE DATA DESCRIBE CONDITIONS ONLY AT THE SPECIFIC LOCATIONS AND PARTICULAR TIMES SUCH SUBSURFACE EXPLORATIONS WERE PERFORMED.
- CONCRETE FOR EACH INDIVIDUAL FOOTING SHALL BE PLACED IN A SINGLE CONTINUOUS POUR.
- BRACE FOUNDATION WALLS AND GRADE BEAMS DURING BACKFILLING AND COMPACTION PROCEDURES. DO NOT REMOVE TEMPORARY BRACING UNTIL PERMANENT SUPPORTS ARE INSTALLED.
- BACKFILL UNDER ANY PORTION OF THE BUILDING OR FOUNDATION SHALL BE COMPACTED IN 6" LIFTS OF 95% COMPACTED LIGHTWEIGHT SAND FILL AS APPROVED BY THE GEOTECHNICAL ENGINEER.
- PROTECT ADJACENT STRUCTURES FROM CONSTRUCTION ACTIVITIES AND LOADS.

CONCRETE NOTES:

- CONCRETE MATERIALS AND CONSTRUCTION SHALL CONFORM TO ACI-318 AND ACI-301, LATEST EDITIONS.
- CONCRETE SHALL HAVE THE FOLLOWING MINIMUM COMPRESSIVE STRENGTH AT 28 DAYS:

ELEMENTS	STRENGTH	UNIT WEIGHT
FOUNDATIONS, WALLS AND PITS	4,000 PSI	145 PCF
INTERIOR SLAB-ON-GRADE	4,000 PSI	145 PCF
EQUIPMENT/HOUSEKEEPING PADS	3,000 PSI	145 PCF
ALL OTHER CONCRETE	4,000 PSI	145 PCF
- PROVIDE CONSTRUCTION JOINTS WHERE SHOWN. SUBMIT DRAWINGS SHOWING ALL PROPOSED CONSTRUCTION JOINT LOCATIONS FOR APPROVAL PRIOR TO PREPARATION OF AFFECTED REINFORCEMENT SHOP DRAWINGS.
- SIZES OF CONCRETE PLACEMENT SHALL NOT EXCEED THE FOLLOWING:
 - WALLS AND GRADE BEAMS:
 - PLACE IN SECTIONS, 24 FOOT MINIMUM LENGTH, AND 90 FOOT MAXIMUM LENGTH.
 - SLAB-ON-GRADE:
 - AS SHOWN ON PLAN.
- REINFORCEMENT SHALL BE CONTINUOUS THROUGH CONSTRUCTION JOINTS UNLESS NOTED OTHERWISE.
- CONCRETE SLABS SHALL BE CAST SO THAT THE SLAB THICKNESS IS AT NO POINT LESS THAN THAT INDICATED ON THE DRAWINGS.
- MINIMUM ELAPSED TIME BETWEEN ADJACENT CONCRETE PLACEMENTS SHALL BE 48 HOURS.
- CONCRETE SHALL REACH 75% OF SPECIFIED STRENGTH BEFORE CONSTRUCTION LOADS ARE APPLIED, UNLESS SPECIFICALLY APPROVED BY THE STRUCTURAL ENGINEER-OF-RECORD. CONCRETE STRENGTH SHALL BE VERIFIED WITH 7-DAY CYLINDER BREAKS.
- INTERIOR SLABS SHALL BE PLACED AFTER ROOF DECK INSTALLATION HAS BEEN COMPLETED.
- NOTE SPECIFICATION REQUIREMENTS FOR SPECIAL INSPECTION OF CONCRETE CONSTRUCTION.

REINFORCEMENT NOTES:

- BAR REINFORCEMENT SHALL CONFORM TO ASTM 615 GRADE 60.
- REINFORCEMENT SHALL BE CONTINUOUS THROUGH ALL CONSTRUCTION JOINTS UNLESS OTHERWISE INDICATED ON THE DRAWINGS.
- WHERE REINFORCEMENT IS NOT SHOWN ON THE DRAWINGS, PROVIDE REINFORCEMENT IN ACCORDANCE WITH APPLICABLE TYPICAL DETAILS OR SIMILAR TO THAT SHOWN FOR MOST NEARLY SIMILAR SITUATIONS AS DETERMINED BY THE ENGINEER. IN NO CASE SHALL REINFORCEMENT BE LESS THAN MINIMUM REINFORCEMENT PERMITTED BY THE AMERICAN CONCRETE INSTITUTE (ACI) BUILDING CODE.
- WHERE CONTINUOUS BARS ARE CALLED FOR, THEY SHALL BE RUN CONTINUOUSLY AROUND CORNERS AND LAPPED AT NECESSARY SPLICES OR HOOKED AT DISCONTINUOUS ENDS. REINFORCEMENT SHALL BE LAPPED AS PER SPLICE SCHEDULE.
- REINFORCEMENT SHALL BE INSPECTED AND APPROVED BY THE TESTING AGENCY BEFORE CONCRETE IS PLACED.
- WELDED WIRE FABRIC SHALL BE LAPPED TWO FULL MESH PANELS OR 1'-0" MINIMUM.
- BEAMS, SLABS AND WALLS SHALL NOT BE SLEEVED OR BOXED OUT OR HAVE THEIR REINFORCEMENT INTERRUPTED EXCEPT AS SPECIFICALLY NOTED ON THE DRAWINGS. PROVIDE ADDITIONAL REINFORCEMENT AROUND OPENINGS AS SHOWN IN THE DETAILS.
- CONCRETE PROTECTION FROM REINFORCING BARS:

CAST AGAINST AND PERMANENTLY EXPOSED TO EARTH:	3"
EXPOSED TO EARTH OR WEATHER:	#6 OR LARGER: 2"
#5 AND SMALLER:	1 1/2"
COLUMNS (TO TIES):	1 1/2"
FLAT SLAB:	3/4"
- ALL OTHER PER LATEST EDITION OF ACI 318.
- NOTE SPECIFICATION REQUIREMENTS FOR SPECIAL INSPECTION OF REINFORCEMENT.

STRUCTURAL STEEL NOTES:

- ALL STEEL SHALL BE NEW STEEL, CONFORMING TO A.I.S.C. "SPECIFICATIONS FOR DESIGN, FABRICATION & ERECTION OF STRUCTURAL STEEL FOR BUILDINGS", FOURTEENTH EDITION.
- STRUCTURAL STEEL SHALL BE NEW STEEL CONFORMING TO THE FOLLOWING REQUIREMENTS:
 - ANGLES: ASTM A36
 - HOLLOW STRUCTURAL SHAPES: ASTM A500 GRADE B
 - MISC. SHAPES, PLATES & BARS: ASTM A36
- BOLTED CONNECTIONS OF PRIMARY MEMBERS SHALL CONFORM TO THE REQUIREMENTS OF THE A.I.S.C. "SPECIFICATIONS FOR STRUCTURAL JOINTS USING A.S.T.M. A 325 BOLTS." HIGH STRENGTH BOLTS, NUTS AND WASHERS SHALL CONFORM TO THE REQUIREMENT OF ASTM A325 OR A490 (3/4" MINIMUM DIAMETER).
- ALL WELD MATERIAL SHALL BE 70 KSI. ALL WELDS SHALL DEVELOP THE FULL STRENGTH OF THE MATERIAL BEING WELDED.
- WELDING WORK SHALL BE PERFORMED BY CERTIFIED WELDERS, SUBMIT DOCUMENTATION.
- IT SHALL BE AT THE DISCRETION OF THE STEEL FABRICATOR AND ERECTOR TO PROVIDE SHOP AND FIELD WELDS UNLESS SPECIFICALLY NOTED ON PLANS.
- WHERE NO CAMBER IS INDICATED, FABRICATE BEAMS WITH NATURAL CAMBER UPWARD.
- THE USE OF OVERSIZED, SHORT-SLOTTED, OR LONG SLOTTED HOLES IN LIEU OF STANDARD HOLES REQUIRES THE APPROVAL OF THE ENGINEER-OF-RECORD.
- THE MINIMUM SIZE OF FILLET WELDS SHALL BE AS REQUIRED BY THE AISC SPECIFICATION SECTION J2 - WELDS, BUT SHALL NOT BE LESS THAN 1/2" UNLESS SPECIFICALLY NOTED ON THE DRAWINGS.
- THERE SHALL BE NO FIELD CUTTING OF STRUCTURAL STEEL WITHOUT PRIOR REVIEW AND ACCEPTANCE BY THE ENGINEER.
- ALL STEEL SHALL HAVE ONE COAT OF RUST INHIBITIVE PRIMER PAINT. TOUCH UP ALL WELDS, SCRATCHES, OR SCRAPES AFTER ERECTION.
- TEMPORARY ERECTION BRACING SHALL BE PROVIDED AS REQUIRED TO HOLD STRUCTURAL STEEL SECURELY IN POSITION. IT SHALL NOT BE REMOVED UNTIL PERMANENT BRACING HAS BEEN INSTALLED. THE BUILDING SHALL BE TRUE AND PLUMB BEFORE CONNECTIONS MAY BE FINALLY BOLTED OR WELDED.
- NOTE SPECIFICATION REQUIREMENTS FOR SPECIAL INSPECTION OF STRUCTURAL STEEL.

STEEL DECK NOTES:

- STEEL DECK SHALL BE DESIGNED, FURNISHED, FABRICATED, AND ERECTED IN ACCORDANCE WITH THE FOLLOWING STANDARDS: AISI "SPECIFICATIONS FOR THE DESIGN OF LIGHT GAGE, COLD-FORMED STRUCTURAL STEEL MEMBERS," AND STEEL DECK INSTITUTE SPECIFICATIONS, DESIGN OF LIGHT GAGE, COLD-FORMED STRUCTURAL STEEL MEMBERS.
- STEEL DECK SHALL BE FABRICATED FROM SHEET STEEL MEETING THE REQUIREMENTS OF ASTM A653, STRUCTURAL STEEL, GRADE 33, HAVING A MINIMUM G60 GALVANIZED COATING, UNLESS NOTED OTHERWISE.
- PROVIDE STEEL DECK OF THE DEPTH, PROFILE, AND THICKNESS AS FOLLOWS:
 - ROOF DECK: 1 1/2" TYPE B DECK, 20g
 - PROVIDE PREMOLDED RUBBER CLOSURE AND FINISH STRIPS AT PERIMETER OF ROOF DECK AND OPENINGS, ATTACHED DIRECTLY TO THE STEEL DECK TO PROVIDE A FINISHED SURFACE FOR THE APPLICATION OF INSULATION AND ROOFING.
- PROVIDE CONTINUOUS SHEET METAL CLOSURES AT ALL SLAB OPENINGS AND SLAB EDGES, CONTINUOUS DECK CLOSURES AT ALL DECK ENDS, AND COLUMN CLOSURES, CANT STRIPS, SUMP PANS, ETC. AS REQUIRED. PROVIDE SUPPLEMENTAL FRAMING AT OPENINGS AND OTHER DISCONTINUITIES AS REQUIRED TO PROVIDE PROPER SUPPORT FOR STEEL DECK. PROVIDE STRAP ANCHORS OR TEMPORARY SHORING AT CANTILEVERED STEEL DECK AS REQUIRED TO CONTROL SLAB-EDGE DEFLECTIONS.
- INSTALL DECK PANELS AND ACCESSORIES ACCORDING TO APPLICABLE SPECIFICATIONS AND COMMENTARY IN SDI PUBLICATION NO. 30, MANUFACTURER'S WRITTEN INSTRUCTIONS AND REQUIREMENTS OF THE SPECIFICATIONS.
- INSTALL DECK ENDS OVER SUPPORTING FRAMING WITH A MINIMUM END BEARING OF 1-1/2". END JOINTS MAY BE BUTTED OR LAPPED 2" MINIMUM AT THE CONTRACTOR'S OPTION. STAGGER ADJACENT STEEL DECK END JOINTS.
- INSTALL STEEL DECK OVER A MINIMUM OF 3-SPANS IN THE DIRECTION INDICATED. SINGLE SPAN CONDITIONS ARE NOT PERMITTED UNLESS SPECIFICALLY INDICATED. WHERE INDICATED, SINGLE SPAN DECK SHALL BE ADEQUATELY SHORED DURING CONSTRUCTION.
- FASTEN STEEL DECK PANELS TO SUPPORTING FRAMING WITH SCREWS INDICATED BELOW, FASTENED THROUGH THREE SHEET THICKNESSES MINIMUM.

ROOF DECK:	#12 TEK SCREWS - 36/17 PATTERN
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- FASTEN STEEL DECK SIDE LAPS AS FOLLOWS:

ROOF DECK:	#10 TEK SCREWS AT 12" O.C. MAXIMUM
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- LOADS SUSPENDED FROM STEEL ROOF DECK SHALL NOT EXCEED 50 POUNDS.
- SUPPORT ALL DUCTWORK, PIPING, CONDUIT SUPPLEMENTAL FRAMING, AND OTHER LARGE LOADS DIRECTLY FROM STRUCTURAL STEEL FRAMING.
- SUBMIT DESIGN CAPACITIES, DETAILS, INSTALLATION REQUIREMENTS, REQUIRED LAPS, PLANS, ETC. TO THE ARCHITECT FOR REVIEW AND APPROVAL PRIOR TO FABRICATION.
- NOTE SPECIFICATION REQUIREMENTS FOR SPECIAL INSPECTION OF STEEL DECK.

COLD FORMED METAL FRAMING NOTES:

- SEE ARCHITECTURAL PLANS FOR LOCATION AND DIMENSIONS OF ALL LIGHT GAGE METAL FRAMING.
- THE LAYOUT SHOWN IS THE RECOMMENDED SCHEME. FINAL SIZES, LOCATIONS, AND DETAILS ARE TO BE PROVIDED BY THE LIGHT GAGE METAL FABRICATOR.
- STRUCTURAL MEMBER PROPERTIES USED IN THESE DRAWINGS ARE THOSE PUBLISHED BY THE STEEL STUD MANUFACTURERS ASSOCIATION.
- ALL FRAMING MEMBERS, TRACK BRIDGING, AND MISCELLANEOUS ACCESSORIES SHALL BE FORMED FROM STEEL POSSESSING A MINIMUM G60 ZINC COATING CORRESPONDING TO THE REQUIREMENTS OF ASTM A525, UNLESS NOTED OTHERWISE.
- ALL DRIFT AND DEFLECTION CLIPS SHALL BE FORMED FROM STEEL POSSESSING A MINIMUM G90 ZINC COATING CORRESPONDING TO THE REQUIREMENTS OF ASTM A525, UNLESS NOTED OTHERWISE.
- ALL METAL STUDS SHALL BE 600S162-54 UNLESS NOTED OTHERWISE ON THE STRUCTURAL DRAWINGS.
 - IF A DIFFERENT STUD SYSTEM IS TO BE USED, THE RESPONSIBILITY FOR THE DESIGN OF ALL MEMBERS UNDER THE APPLIED LOADS SHALL BE THE SOLE RESPONSIBILITY OF THE COLD FORMED METAL FABRICATOR. DRAWINGS SHALL INCLUDE ALL DESIGN COMPUTATIONS FOR THE FRAMING MEMBERS AND CONNECTIONS AND MUST BE STAMPED BY A REGISTERED PROFESSIONAL ENGINEER.
- ALL 54MIL (16 GAGE) AND LARGER MEMBERS SHALL SATISFY THE REQUIREMENTS OF ASTM A446 GRADE D, WITH A MINIMUM YIELD STRENGTH OF 60,000 P.S.I. ALL 43 MIL (18 GAGE) AND SMALLER MEMBERS SHALL BE MANUFACTURED FROM STEEL FABRICATED IN ACCORDANCE WITH ASTM A446, GRADE B, WITH A MINIMUM YIELD STRENGTH OF 33,000 P.S.I.
- ALL FIELD ABRASIONS TO MEMBERS FROM WELDING SHALL BE TOUCHED UP WITH A ZINC RICH PAINT.
- CONNECTIONS OF LIGHT STEEL FRAMING MEMBERS SHALL BE BY SELF DRILLING SCREWS OR BY WELDING IN STRICT ACCORDANCE WITH THE MANUFACTURERS' REQUIREMENTS. WIRE TYING OF FRAMING MEMBERS WILL NOT BE PERMITTED.
- WELDING OF LIGHT GAUGE STEEL FRAMING MAY BE PERFORMED USING A MINIMUM 1/8 INCH FILLET WELD AWS TYPE 6013 WELDING ROD FOR MATERIAL 18 GAUGE AND THICKER. WELDING TO CONFORM TO AWS D1.3. WELDING SHALL BE PERFORMED BY WELDERS EXPERIENCED IN COLD FORMED STRUCTURAL STEEL FRAMING WORK.
- ALL FRAMING COMPONENTS SHALL BE CUT SQUARELY FOR ATTACHMENT TO PERPENDICULAR MEMBERS OR AS REQUIRED FOR AN ANGULAR FIT AGAINST ABUTTING MEMBERS.
- PROVIDE TEMPORARY ERECTION BRACING AS REQUIRED TO HOLD COLD FORMED FRAMING SECURELY IN POSITION. DO NOT REMOVE TEMPORARY BRACING UNTIL PERMANENT BRACING IS INSTALLED AND/OR FINAL CONNECTIONS ARE MADE.
- ALL FIELD CUTTING OF STUDS MUST BE PERFORMED BY SAWING OR SHEARING. TORCH CUTTING OF COLD-FORMED FRAMING IS NOT PERMITTED.
- ENSURE ALIGNMENT OF STUD "PUNCHOUTS" FOR PROPER BRIDGING INSTALLATION WHEN ASSEMBLING FRAMING AND FIELD CUTTING STUDS TO LENGTH.
- THERE SHALL BE NO SPLICING OF STUDS, JOISTS, OR OTHER LOAD CARRYING MEMBERS WITHOUT PRIOR REVIEW AND ACCEPTANCE BY THE ARCHITECT.
- TOP AND BOTTOM TRACKS SHALL BE SECURELY ANCHORED TO CEILING OR ROOF STRUCTURE OVERHEAD AND TO FLOOR STRUCTURE BELOW. SILL OR BASE TRACK SHALL BE ANCHORED WITH ANCHOR BOLTS, CONCRETE NAILS, POWDER ACTUATED FASTENERS, SCREWS, EXPANSION BOLTS OR BY WELDING. MAXIMUM SPACING FOR ANCHORS SHALL BE 24" ON CENTER, UNLESS NOTED OTHERWISE ON PLANS, AND NO NEARER THAN 4" FROM EITHER END OF TRACK. CONNECTION OF STUDS TO TRACKS AT THE UNDERSIDE OF THE STEEL BEAMS OR OTHER ROOF FRAMING MEMBERS SHALL HAVE A SLIP OR SLOTTED CONNECTION AS REQUIRED TO ALLOW FOR VERTICAL DEFLECTION OF THE ROOF FRAMING MEMBER.
- STUD BRIDGING REQUIREMENTS:

UP TO 10'-0" IN HEIGHT:	TWO ROWS OF BRIDGING, EQUALLY SPACED OVER 10'-0" IN HEIGHT.
ONE ROW AT MID-SPAN	
- ROOF JOIST BRIDGING REQUIREMENTS:

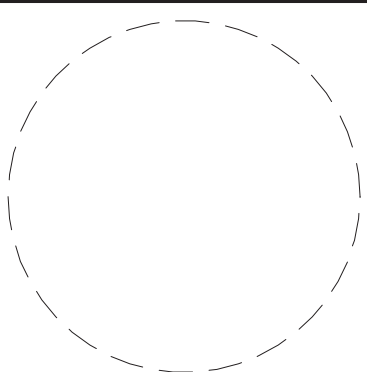
UP TO 16'-0"	ONE ROW AT MID-SPAN
FOR SPANS 16'-0" TO 24'-0":	TWO ROWS AND ONE THIRD POINTS
FOR SPANS 24'-0" TO 32'-0":	THREE ROWS AND ONE QUARTER POINTS
a. SOLID BLOCKING REQUIRED AT ALL OPENINGS AND FOR 2 BAYS AT END OF JOIST SYSTEM	
b. THE TOP STRAP MY BE ELIMINATED WHERE SHEATHING IS USED	
- NOTE SPECIFICATION REQUIREMENTS FOR SPECIAL INSPECTION OF COLD-FORMED METAL FRAMING.



555 Penbrooke Drive • Penfield, NY 14526
main: 585.388.2060 • fax: 585.388.2070

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PENFIELD, NEW YORK



DOCUMENT PHASE

CONSTRUCTION DOCUMENTS

REVISIONS

NO.	DATE	BY	DESCRIPTION

PROJECT:

ONONDAGA BEACH FEASIBILITY STUDY & DESIGN SERVICES

CLIENT:

ONONDAGA COUNTY

DRAWING TITLE

GENERAL STRUCTURAL NOTES

DRAWING NO.

S002

drawn by

Author

checked Checker

proj. mgr. MSM

proj. no. AR19003.00

ISSUE DATE

03/17/2020

SPECIAL INSPECTIONS			
STRUCTURAL TESTS AND SPECIAL INSPECTIONS			
1. THIS PROJECT REQUIRES STRUCTURAL TESTS AND SPECIAL INSPECTIONS AS DEFINED IN THE NEW YORK STATE UNIFORM CODE (CHAPTER 17 OF THE 2015 INTERNATIONAL BUILDING CODE AS AMENDED BY NEW YORK STATE UNIFORM CODE SUPPLEMENT). IT IS THE CONTRACTOR'S RESPONSIBILITY TO BECOME FAMILIAR WITH THE STATEMENT OF SPECIAL INSPECTIONS, SUBMIT ALL REQUIRED DOCUMENTATION, AND ALLOW THE OWNER'S TESTING AND INSPECTION AGENCY ACCESS TO PERFORM ALL REQUIRED TESTS AND INSPECTIONS. AS PART OF THIS PROGRAM, THE CONTRACTOR SHALL ALSO SUBMIT A COPY OF THEIR QUALITY CONTROL PROCEDURES AND CONTACT INFORMATION FOR ALL PERSONNEL RESPONSIBLE FOR EXECUTION OF SAME.			
2. THE FOLLOWING ITEMS ARE INCLUDED IN THE SPECIAL INSPECTIONS PROGRAM:			
• EARTHMOVING - EXCAVATION, SUBGRADE PREPARATION, PERMANENT STRUCTURAL FILL, SURCHARGE PROGRAM, BACKFILL PLACEMENT AND COMPACTION.			
• CONCRETE - FORMWORK INSTALLATION, REINFORCING STEEL INSTALLATION, MIX DESIGNS, PLACEMENT, PROTECTION, BOLTS, CURING, CONSTRUCTION TESTING (SLUMP, AIR CONTENT, COMPRESSIVE STRENGTH, ETC.) FOR FOUNDATIONS, PIERS, FOOTINGS, MATS, AND STRUCTURAL SLABS.			
• STRUCTURAL STEEL - FABRICATION AND INSTALLATION OF STRUCTURAL STEEL FRAMING INCLUDING FIT-UP / ASSEMBLY, WELDED AND BOLTED CONNECTIONS.			
• POST-INSTALLED ANCHORS AND BOLTS - DRILLING, HOLE PREPARATION AND CLEANING, ADHESIVE INJECTION, REBAR / BOLT INSTALLATION, CURING, AND TIGHTENING.			
3. REFER TO STRUCTURAL TESTING AND SPECIAL INSPECTIONS DRAWINGS FOR SCOPE OF WORK, GENERAL NOTES AND REQUIREMENTS.			
ARCHITECTURAL, MECHANICAL, ELECTRICAL, AND PLUMBING COMPONENTS REQUIRING SEISMIC BRACING			
ARCHITECTURAL COMPONENTS			
IMPORTANCE FACTOR, Ip = 1.0 REQUIRED			
IMPORTANCE FACTOR, Ip = 1.5 REQUIRED			
M / E / P COMPONENTS			
IMPORTANCE FACTOR, Ip = 1.0 REQUIRED			
IMPORTANCE FACTOR, Ip = 1.5 REQUIRED			

SPECIAL INSPECTIONS FOR CONCRETE CONSTRUCTION			
VERIFICATION AND/OR INSPECTION	FREQUENCY	STANDARD	REMARKS
1. INSPECT REINFORCING STEEL, INCLUDING PRESTRESSING TENDONS, VERIFY PLACEMENT AND:	P	ACI 318 CH. 20, 25.2, 25.3, 26.6.1-26.6.3 IBC 1908.4	
- GRADE, SIZE, AND QUANTITY.	P		
- BAR CONDITION, COVER, AND PROPER SUPPORT.	P		
- INSPECT FOR DAMAGE TO REINFORCEMENT COATINGS.	--		
- VERIFY BAR SPLICES AND DOWEL EMBEDMENT.	P		
2. INSPECT REINFORCING STEEL WELDING:		AWS D1.4 ACI 318 26.6.4	
- VERIFY WELDABILITY OF REINFORCEMENT OTHER THAN ASTM A 706;	--		
- INSPECT SINGLE-PASS FILLET WELDS UP TO 5/16"; AND	--		
- INSPECT ALL OTHER WELDS.	--		
3. INSPECT BOLTS AND ANCHORS TO BE INSTALLED IN CONCRETE PRIOR TO AND DURING PLACEMENT OF CONCRETE.	P	ACI 318 17.8.2	
4. INSPECT BOLTS AND ANCHORS POST-INSTALLED IN HARDENED CONCRETE MEMBERS.			
- ADHESIVE ANCHORS INSTALLED IN HORIZONTALLY OR UPWARDLY INCLINED ORIENTATIONS TO RESIST SUSTAINED TENSION LOADS.	--	ACI 318 17.8.2.4	
- MECHANICAL ANCHORS AND ADHESIVE ANCHORS NOT DEFINED ABOVE.	P	ACI 318 17.8.2	
5. VERIFY USE OF REQUIRED MIX DESIGN(S) INCLUDING MATERIALS, MANUFACTURER'S CERTIFIED MILL TEST REPORTS, AND CURING METHODS.	P	ACI 318 CH. 19, 26.4.3, 26.4.4 IBC 1904.1, 1904.2, 1908.2, 1908.3	
- REVIEW PLANT QUALITY CONTROL PROCEDURES AND BATCHING AND MIXING METHODS	--		
6. PRIOR TO CONCRETE PLACEMENT, SAMPLE FRESH CONCRETE AND FABRICATE SPECIMENS FOR STRENGTH TESTS, PERFORM SLUMP AND AIR CONTENT TESTS, AND DETERMINE THE TEMPERATURE OF THE CONCRETE.	C	ASTM C172 ASTM C31 ACI 318 26.4, 26.12 IBC 1908.10	
7. INSPECT CONCRETE AND SHOTCRETE PLACEMENT FOR PROPER APPLICATION TECHNIQUES.	C	ACI 318 26.5 IBC 1908.6, 1908.7, 1908.8	
8. VERIFY MAINTENANCE OF SPECIFIED CURING TEMPERATURE AND TECHNIQUES.	P	ACI 318 26.5.3-26.5.5 IBC 1908.9	
- OBSERVE METHODS OF MOISTURE RETENTION AND FORMWORK REMOVAL.	P		
9. INSPECT PRESTRESSED CONCRETE FOR:			
- INSPECT FOR DAMAGE TO STRAND SHELLS;	--	ACI 318 2610	
- APPLICATION OF TENSIONING FORCES AND TENDON ANCHORAGE; AND	--		
- GROUTING OF BONDED PRESTRESSING TENDONS.	--		
10. INSPECT ERECTION OF PRECAST CONCRETE MEMBERS.	--	ACI 318 CH. 26.8	
11. VERIFICATION OF IN-SITU CONCRETE STRENGTH, PRIOR TO STRESSING OF TENDONS IN POST-TENSIONED CONCRETE AND PRIOR TO REMOVAL OF SHORES AND FORMS FROM BEAMS AND STRUCTURAL SLABS.	--	ACI 318 26.11.2	
12. INSPECTION OF FORMWORK FOR LOCATION, SHAPE/GEOMETRY, FIT, AND DIMENSIONS OF CONCRETE MEMBER BEING FORMED.	--	ACI 318 26.11.1(b)	
- INSPECT FORM SURFACES, THE TYPE AND LAYOUT FOR ARCHITECTURAL CONCRETE.	--		

SPECIAL INSPECTIONS FOR SOIL			
VERIFICATION AND/OR INSPECTION	FREQUENCY	STANDARD	REMARKS
SITE PREPARATION			
A. INSPECT SUBGRADE SOILS AND BEARING STRATA FOR PROPER PREPARATION IN ACCORDANCE WITH CONSTRUCTION DOCUMENTS AND/OR GEOTECHNICAL ENGINEERING REPORT.	P	IBC 1705.6	
B. VERIFY THAT EXCAVATIONS HAVE REACHED PROPER DEPTH AND MATERIAL.	P		
C. INSPECT SOIL BEARING SURFACES FOR CONSISTENCY WITH GEOTECHNICAL ENGINEERING REPORT AND TO VERIFY SOIL BEARING CAPACITY.	P		
D. INSPECT WATER CONTROL METHODS AND SURFACE PROTECTION.	P		
E. OBSERVE PROOF ROLLING OF SUBGRADE TO IDENTIFY AREAS OF UNSUITABLE SOILS.	--		SITE TO HAVE PERMANENT STRUCTURAL FILL PLACED UNDER THE BUILDING FOLLOWED BY A SURCHARGE PROGRAM
F. OBSERVE REMOVAL OF UNSUITABLE SOIL AND STABILIZATION OF SUBGRADE SOILS, IF NECESSARY.	C		AS RELATED TO 18" CRUSHED STONE PAD THE PERMANENT STRUCTURAL FILL IS TO BE PLACED UPON
FILL MATERIAL AND PLACEMENT			
A. INSPECT AND TEST FILL MATERIALS FOR COMPLIANCE WITH THE PROJECT SPECIFICATIONS AND/OR GEOTECHNICAL ENGINEERING REPORT.	P		
B. PERFORM CLASSIFICATION AND TESTING IN ACCORDANCE WITH THE PROJECT SPECIFICATIONS TO DETERMINE OPTIMUM WATER CONTENT AND MAXIMUM DRY DENSITY.	P		
C. VERIFY CORRECT USE AND PLACEMENT OF FILL MATERIALS, INCLUDING DENSITIES AND LIFT THICKNESS, DURING PLACEMENT AND COMPACTION.	C		
D. PERFORM FIELD DENSITY TESTS OF THE IN-PLACE FILL MATERIAL TO VERIFY COMPLIANCE WITH THE PROJECT SPECIFICATIONS AND/OR GEOTECHNICAL ENGINEERING REPORT.	P		

SPECIAL INSPECTIONS FOR POST-INSTALLED ANCHORS			
VERIFICATION AND/OR INSPECTION	FREQUENCY	STANDARD	REMARKS
MECHANICAL ANCHORS (EXPANSION-, SLEEVE-, AND SCREW-TYPE)			
A. PRIOR TO COMMENCING WORK:	--	ICC-ES REPORT	
- REVIEW CONTRACTOR'S INSTALLATION PROCEDURE	P		
B. PRIOR TO ANCHOR INSTALLATION:	--	ICC-ES REPORT	
- VERIFY TYPE, DIAMETER, LENGTH, FINISH OF EACH ANCHOR.	P		
- VERIFY BASE MATERIAL AND SUITABILITY FOR ANCHOR INSTALLATION.	P		
- VERIFY MAXIMUM ANCHOR TORQUE RATING FOR SCREW-TYPE ANCHORS.	P		
C. DURING ANCHOR INSTALLATION:	--	ICC-ES REPORT	
- VERIFY THE FOLLOWING AT ALL DRILLED HOLES: HOLE DIMENSIONS AND PROPER CLEANING.	C		
- VERIFY THE FOLLOWING FOR ALL ANCHORS: EMBEDMENT, EDGE DISTANCE AND SPACING.	C		
D. AFTER INSTALLATION OF EACH ATTACHED ASSEMBLY:	--	--	VISUALLY INSPECT 100% OF ATTACHED ASSEMBLIES.
- VERIFY THE FOLLOWING AT EACH ASSEMBLY: CONFIGURATION OF ASSEMBLY AND CONTACT WITH SUBSTRATE; ANCHOR ORIENTATION, QUANTITY, AND EDGE DISTANCES.	P		
- VERIFY THE FOLLOWING FOR ALL ANCHORS: THREAD ENGAGEMENT, NUT/HEAD CONTACT WITH ANCHORED ASSEMBLY, AND PLUMB.	P		
E. ANCHOR TESTING:	--		
- TEST EACH INSTALLED ANCHOR WITH CALIBRATED TORQUE WRENCH TO 100% OF THE INSTALLATION TORQUE NOTED IN THE ICC-ES REPORT.	P		TEST 100% OF INSTALLED ANCHORS; TORQUE SHALL BE ATTAINED WITHIN 1-1/2 TURN OF THE NUT.
ADHESIVE ANCHORS AND REINFORCING STEEL INSTALLED IN HARDENED CONCRETE			
A. PRIOR TO COMMENCING WORK:	--	ICC-ES REPORT	
- REVIEW CONTRACTOR'S INSTALLATION PROCEDURE	--		
B. PRIOR TO ANCHOR INSTALLATION:	--	ICC-ES REPORT	
- VERIFY TYPE, DIAMETER, LENGTH, FINISH OF EACH ANCHOR.	--		
- VERIFY BASE MATERIAL AND SUITABILITY FOR ANCHOR INSTALLATION.	--		
C. DURING ANCHOR INSTALLATION:	--	ICC-ES REPORT	
- VERIFY THE FOLLOWING AT ALL DRILLED HOLES: HOLE DIMENSIONS AND PROPER CLEANING.	--		
- VERIFY THE FOLLOWING FOR ALL ANCHORS: EMBEDMENT, EDGE DISTANCE AND SPACING.	--		
- VERIFY FULL CURE TIME HAS ELAPSED PRIOR TO APPLICATION OF TORQUE OR LOAD.	--		VISUALLY INSPECT 100% OF INSTALLED ANCHORS AND REINFORCEMENT.
D. AFTER INSTALLATION OF EACH ATTACHED ASSEMBLY:	--		VISUALLY INSPECT 100% OF ATTACHED ASSEMBLIES.
- VERIFY THE FOLLOWING AT EACH ASSEMBLY: CONFIGURATION OF ASSEMBLY AND CONTACT WITH SUBSTRATE; ANCHOR ORIENTATION, QUANTITY, AND EDGE DISTANCES.	--		
- VERIFY THE FOLLOWING FOR ALL ANCHORS: THREAD ENGAGEMENT, NUT/HEAD CONTACT WITH ANCHORED ASSEMBLY, AND PLUMB.	--		
E. ANCHOR TESTING:	--	ASTM E 488	
- PERFORM INITIAL STATIC TENSION TESTING AT THE FIRST 3 OF EACH ANCHOR TYPE, BASE MATERIAL, AND POSITION (VERTICAL/DOWN, HORIZONTAL, VERTICAL/OVERHEAD).	--		OBSERVE MINIMUM EDGE DISTANCES PER ASTM E 488 FOR DETERMINING TEST LOCATIONS.
- AFTER INITIAL TESTING, PERFORM VERIFICATION TENSION TESTING AT 1% OF THE REMAINING ANCHORS FOR EACH ANCHOR TYPE, BASE MATERIAL, AND POSITION.	--		OBSERVE MINIMUM EDGE DISTANCES PER ASTM E 488 FOR DETERMINING TEST LOCATIONS.

SPECIAL INSPECTIONS FOR STRUCTURAL STEEL			
VERIFICATION AND/OR INSPECTION	FREQUENCY	STANDARD	REMARKS
REQUIRED INSPECTIONS PRIOR TO WELDING			
1. WELDING PROCEDURE SPECIFICATIONS (WPS) AVAILABLE	C	AISC 360 TABLE N5.4-1	
2. MANUFACTURER CERTIFICATIONS FOR WELDING CONSUMABLE AVAILABLE	C	AISC 360 TABLE N5.4-1	
3. MATERIAL IDENTIFICATION (TYPE/GRADE)	P	AISC 360 TABLE N5.4-1	
4. WELDER IDENTIFICATION SYSTEM	P	AISC 360 TABLE N5.4-1	
5. FIT-UP OF GROOVE WELDS, INCLUDING JOINT GEOMETRY	--	AISC 360 TABLE N5.4-1	
6. CONFIGURATION AND FINISH OF ACCESS HOLES	--	AISC 360 TABLE N5.4-1	
7. FIT-UP OF FILLET WELDS	P	AISC 360 TABLE N5.4-1	
8. CHECK WELDING EQUIPMENT	P	AISC 360 TABLE N5.4-1	
REQUIRED INSPECTIONS DURING WELDING			
1. USE OF QUALIFIED WELDERS	P	AISC 360 TABLE N5.4-2	
2. CONTROL AND HANDLING OF WELDING CONSUMABLES	P	AISC 360 TABLE N5.4-2	
3. NO WELDING OVER CRACKED TACK WELDS	P	AISC 360 TABLE N5.4-2	
4. ENVIRONMENTAL CONDITIONS	P	AISC 360 TABLE N5.4-2	
5. VERIFY WPS FOLLOWED	P	AISC 360 TABLE N5.4-2	
6. VERIFY WELDING TECHNIQUES	P	AISC 360 TABLE N5.4-2	
REQUIRED INSPECTIONS AFTER WELDING			
1. WELDS CLEANED	P	AISC 360 TABLE N5.4-3	
2. SIZE, LENGTH, AND LOCATION OF WELDS	C	AISC 360 TABLE N5.4-3	
3. WELDS MEET VISUAL ACCEPTANCE CRITERIA	C	AISC 360 TABLE N5.4-3	VISUALLY INSPECT 100% OF SHOP AND FIELD WELDS
4. ARC STRIKES	--	AISC 360 TABLE N5.4-3	
5. K-AREA	--	AISC 360 TABLE N5.4-3	
6. BACKING AND WELD TABS REMOVED (IF REQUIRED)	--	AISC 360 TABLE N5.4-3	
7. REPAIR ACTIVITIES	C	AISC 360 TABLE N5.4-3	
8. DOCUMENT ACCEPTANCE OR REJECTION OF WELDED JOINT OR MEMBER	C	AISC 360 TABLE N5.4-3	PERFORM THE FOLLOWING:
		ASTM E164	- ULTRASONIC INSPECTION: 100% OF SHOP AND FIELD PENETRATION WELDS
		ASTM E709	- MAGNETIC PARTICLE INSPECTION: 15% OF SHOP AND FIELD WELDS SELECTED AT RANDOM
		ASTM A435, ASTM A898	- ULTRASONIC INSPECTION OF BASE METAL ON 100% OF SHAPES AND PLATES > 1-1/2" THICK
REQUIRED INSPECTIONS PRIOR TO BOLTING			
1. MANUFACTURER'S CERTIFICATION AVAILABLE FOR FASTENER MATERIALS	C	AISC 360 TABLE N5.6-1	
2. FASTENERS MARKED IN ACCORDANCE WITH ASTM REQUIREMENTS	P	AISC 360 TABLE N5.6-1	
3. PROPER FASTENERS SELECTED FOR THE JOINT DETAIL - GRADE, TYPE, LENGTH, THREADS EXCLUDED FROM SHEAR PLANE	P	AISC 360 TABLE N5.6-1	
4. PROPER BOLTING PROCEDURE SELECTED FOR JOINT DETAIL	P	AISC 360 TABLE N5.6-1	
5. CONNECTING ELEMENTS, INCLUDING PAYING SURFACES AND HOLE PREPARATION MEET APPLICABLE REQUIREMENTS	P	AISC 360 TABLE N5.6-1	
6. PRE-INSTALLATION VERIFICATION TESTING BY INSTALLATION PERSONNEL OBSERVED AND DOCUMENTED FOR FASTENER ASSEMBLIES AND METHODS USED	P	AISC 360 TABLE N5.6-1	
7. PROPER STORAGE PROVIDED FOR BOLTS, NUTS, WASHERS AND OTHER FASTENER COMPONENTS	P	AISC 360 TABLE N5.6-1	
REQUIRED INSPECTIONS DURING BOLTING			
1. FASTENER ASSEMBLIES OF SUITABLE CONDITION PLACED IN ALL HOLES AND WASHERS POSITIONED AS REQUIRED	P	AISC 360 TABLE N5.6-2	INSPECT AND TEST 100% OF SHOP AND FIELD BOLTED CONNECTIONS
2. JOINT BROUGHT TO SNUG-TIGHT CONDITION PRIOR TO PRE-TENSIONING	--	AISC 360 TABLE N5.6-2	INSPECT AND TEST 100% OF SHOP AND FIELD BOLTED CONNECTIONS
3. FASTENER COMPONENT NOT TURNED BY THE WRENCH PREVENTED FROM ROTATING	P	AISC 360 TABLE N5.6-2	INSPECT AND TEST 100% OF SHOP AND FIELD BOLTED CONNECTIONS
4. FASTENERS ARE PRE-TENSIONED IN ACCORDANCE WITH RCSC SPECIFICATION, PROGRESSING SYSTEMATICALLY FROM THE MOST RIGID POINT TOWARD FREE EDGES	--	AISC 360 TABLE N5.6-2	INSPECT AND TEST 100% OF SHOP AND FIELD BOLTED CONNECTIONS
REQUIRED INSPECTIONS AFTER BOLTING			
1. DOCUMENT ACCEPTANCE OR REJECTION OF BOLTED CONNECTIONS	C	AISC 360 TABLE N5.6-3	
REQUIRED INSPECTION OF STEEL ELEMENTS OF COMPOSITE CONSTRUCTION PRIOR TO CONCRETE PLACEMENT			
1. PLACEMENT AND INSTALLATION OF STEEL DECK	--	AISC 360 TABLE N6.1, AWS D1.1	
2. PLACEMENT AND INSTALLATION OF STEEL HEADED STUD ANCHORS	--	AISC 360 TABLE N6.1, AWS D1.1	PERFORM BEND TEST ON 1% OF CONNECTORS AND STUDS SELECTED AT RANDOM
			PERFORM RING TEST ON 100% OF CONNECTORS AND STUDS
3. DOCUMENT ACCEPTANCE OR REJECTION OF STEEL ELEMENTS	--	AISC 360 TABLE N6.1	

PDG

POPLI DESIGN GROUP

555 Penbrooke Drive • Penfield, NY 14526
main: 585.388.2060 • fax: 585.388.2070

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PENFIELD, NEW YORK

DOCUMENT PHASE

CONSTRUCTION DOCUMENTS

REVISIONS			
NO.	DATE	BY	DESCRIPTION

PROJECT:
ONONDAGA BEACH
FEASIBILITY STUDY &
DESIGN SERVICES

CLIENT:
ONONDAGA COUNTY

DRAWING TITLE
SPECIAL INSPECTIONS

DRAWING NO.	drawn by PS checked JMF proj. mgr. MSM proj. no. AR19003.00
S003	

ISSUE DATE
03/17/2020

FIRST FLOOR					FIRST FLOOR
0'-0" FOUNDATION					0'-0" FOUNDATION
-3'-0"					-3'-0"
BASE PLATES	BP2: A-2 BP3: A-1, A-3	BP1: B-2 BP2: B-1, B-3	BP1: D-2 BP2: D-1, D-3	BP1	
Column Locations	A-1, A-2, A-3	B-1, B-2, B-3	D-1, D-2, D-3	E-1, E-2, E-3	

COLUMN SCHEDULE

1/8" = 1'-0"

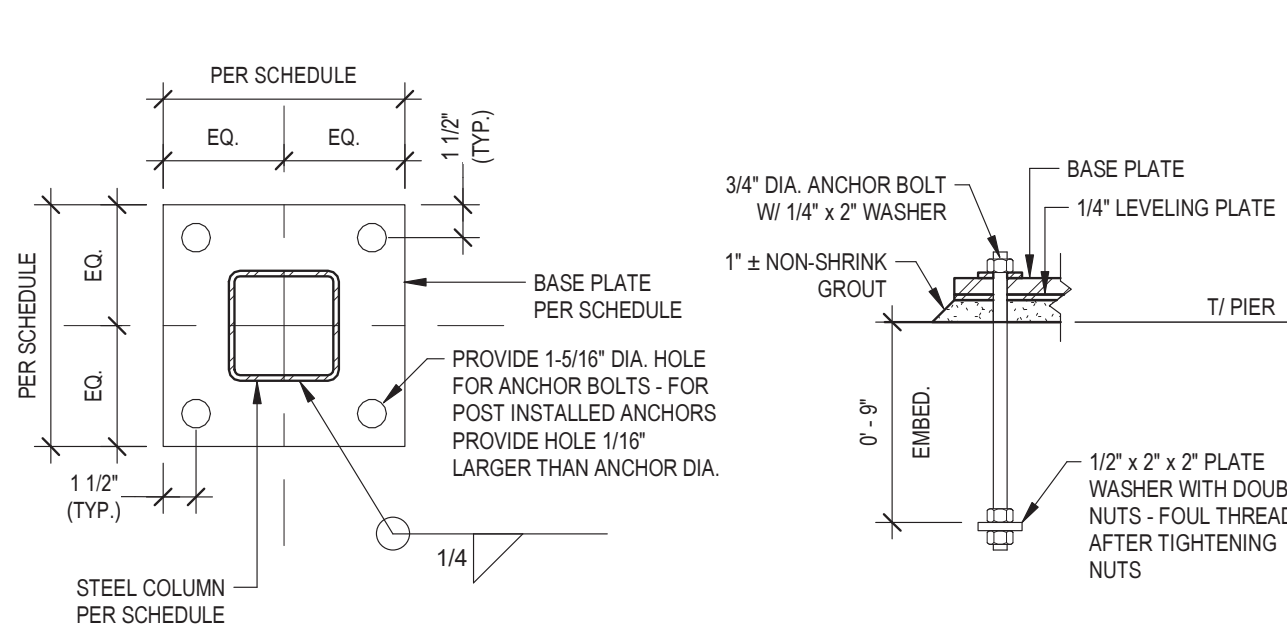
Mark	SIZE	REINFORCING
F1	5'-0" x 5'-0" x 12"	(5) #5 E.W. BOTTOM & (4) #4 E.W. TOP
F2	6'-0" x 6'-0" x 12"	(6) #5 E.W. BOTTOM & (5) #4 E.W. TOP
F3	7'-6" x 7'-6" x 12"	(7) #5 E.W. BOTTOM & (6) #4 E.W. TOP
F4	8'-0" x 8'-0" x 12"	(7) #5 E.W. BOTTOM & (6) #4 E.W. TOP

MARK	WIDTH	THICKNESS	REINFORCEMENT
WF1	2' 0"	1'-0"	(3) #5 CONT.
WF2	3' 0"	1'-0"	(4) #5 CONT.

MARK	SIZE	ANCHOR BOLT	REMARKS
BP1	3/4" x 11" x 11"	(4) 3/4" DIA. ANCHOR BOLTS	SEE DETAIL 1/S002
BP2	3/4" x 11" x 11"	(4) 3/4" DIA. ANCHOR BOLTS	SEE DETAIL 2/S002
BP3	3/4" x 11" x 11"	(4) 3/4" DIA. ANCHOR BOLTS	SEE DETAIL 3/S002

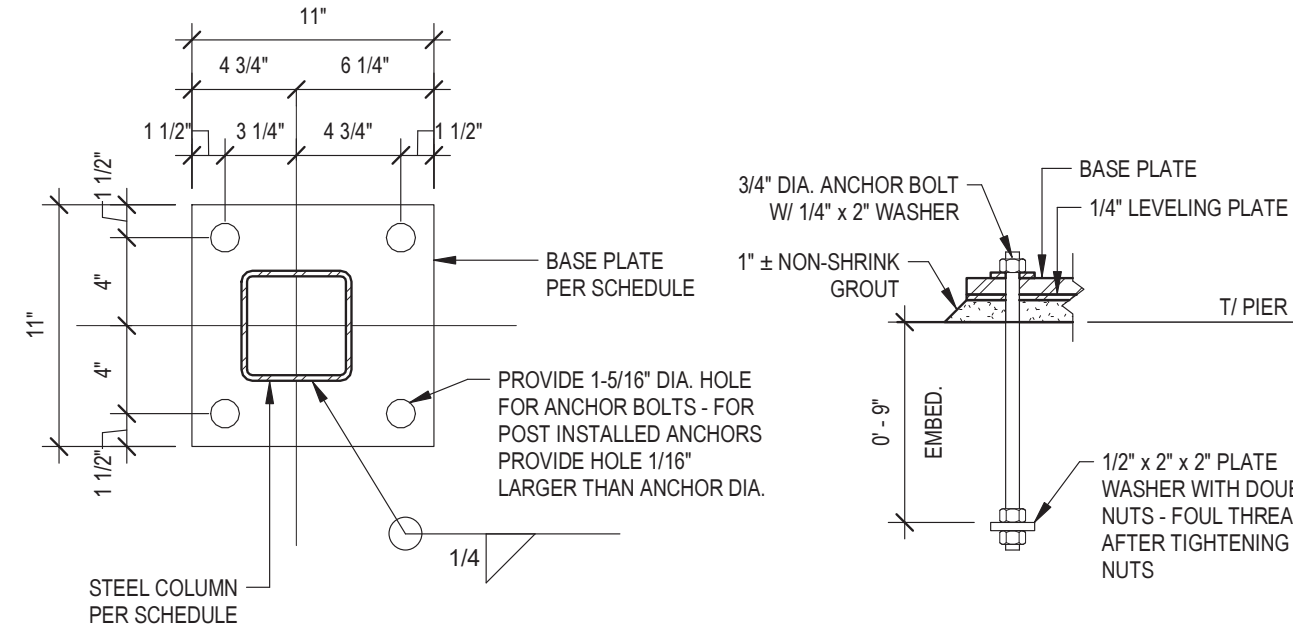
MARK	SIZE	REINFORCING
P1	18" x 18"	(8) #6 VERT. WITH #3 TIES AT 12" O.C.

MARK	SHEATHING AND ATTACHMENT	BLOCKING REQUIRED	SILL SIZE	SILL ATTACHMENT
SW1	19/32" (5/8") WOOD STRUCTURAL PANEL WITH #8 SCREWS @ 6" O.C. EDGES AND 12" O.C. FIELD	YES	600T150-54	1/2" DIA. ANCHOR BOLT W/ 4" EMBEDMENT @ 48" O.C.
SW2	19/32" (5/8") WOOD STRUCTURAL PANEL WITH #8 SCREWS @ 6" O.C. EDGES AND 12" O.C. FIELD	YES	600T150-54	1/2" DIA. ANCHOR BOLT W/ 4" EMBEDMENT @ 32" O.C.
SW3	19/32" (5/8") WOOD STRUCTURAL PANEL WITH #8 SCREWS @ 4" O.C. EDGES AND 12" O.C. FIELD	YES	600T150-54	1/2" DIA. ANCHOR BOLT W/ 4" EMBEDMENT @ 48" O.C.
SW4	19/32" (5/8") WOOD STRUCTURAL PANEL WITH #8 SCREWS @ 4" O.C. EDGES AND 12" O.C. FIELD	YES	600T150-54	1/2" DIA. ANCHOR BOLT W/ 4" EMBEDMENT @ 16" O.C.



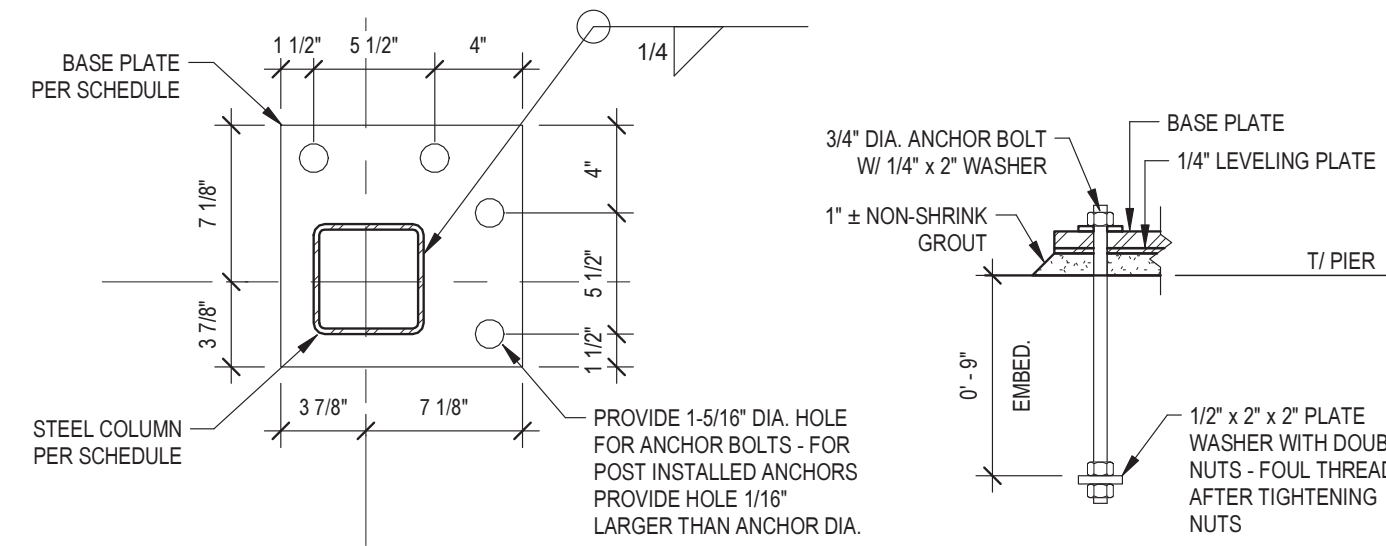
1 TYPICAL HSS COLUMN BASE PLATE

1 1/2" = 1'-0"



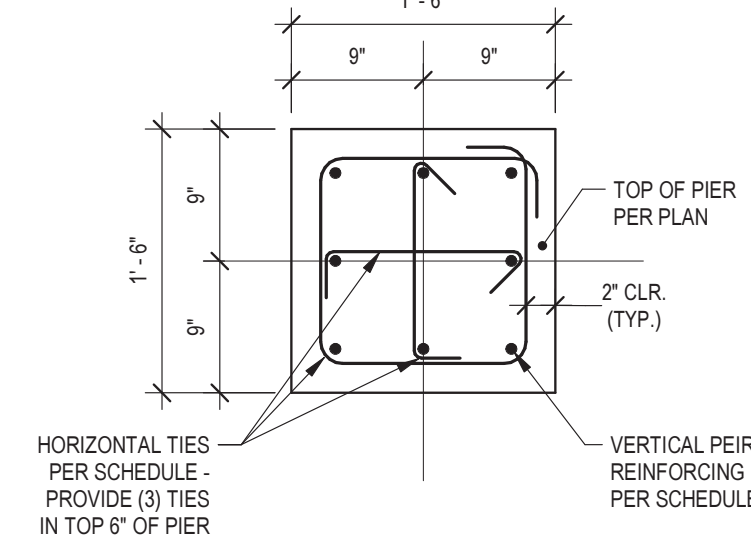
2 OFFSET HSS COLUMN BASE PLATE

1 1/2" = 1'-0"



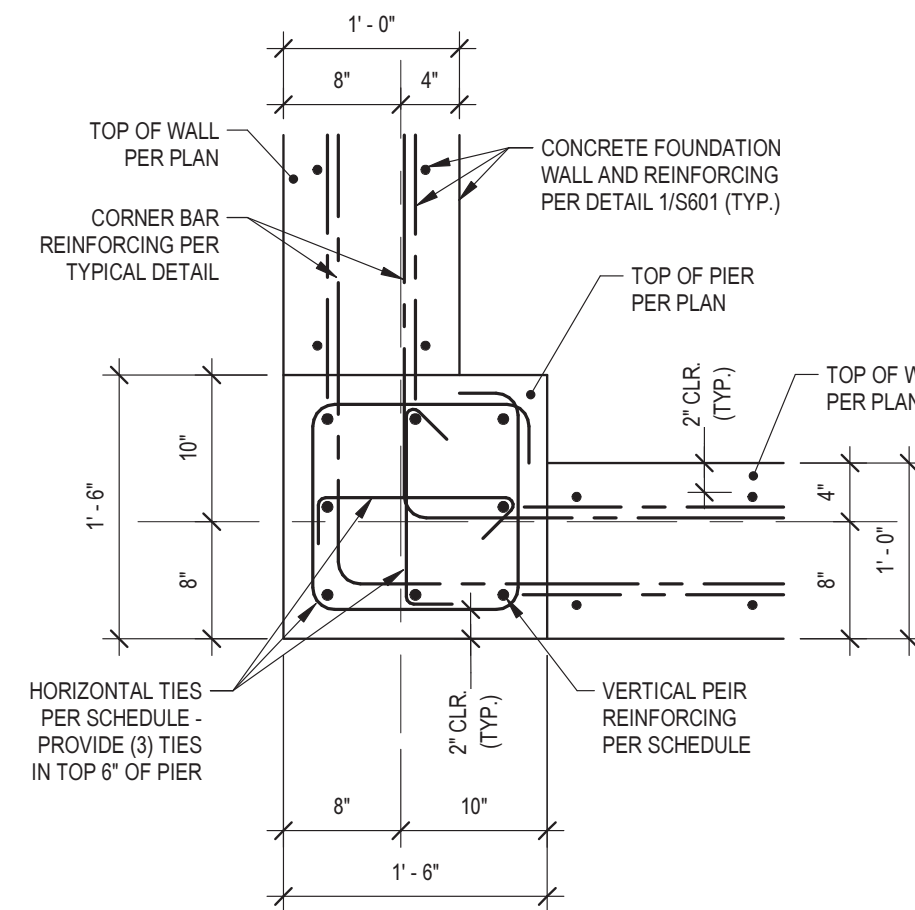
3 CORNER HSS COLUMN BASE PLATE

1 1/2" = 1'-0"



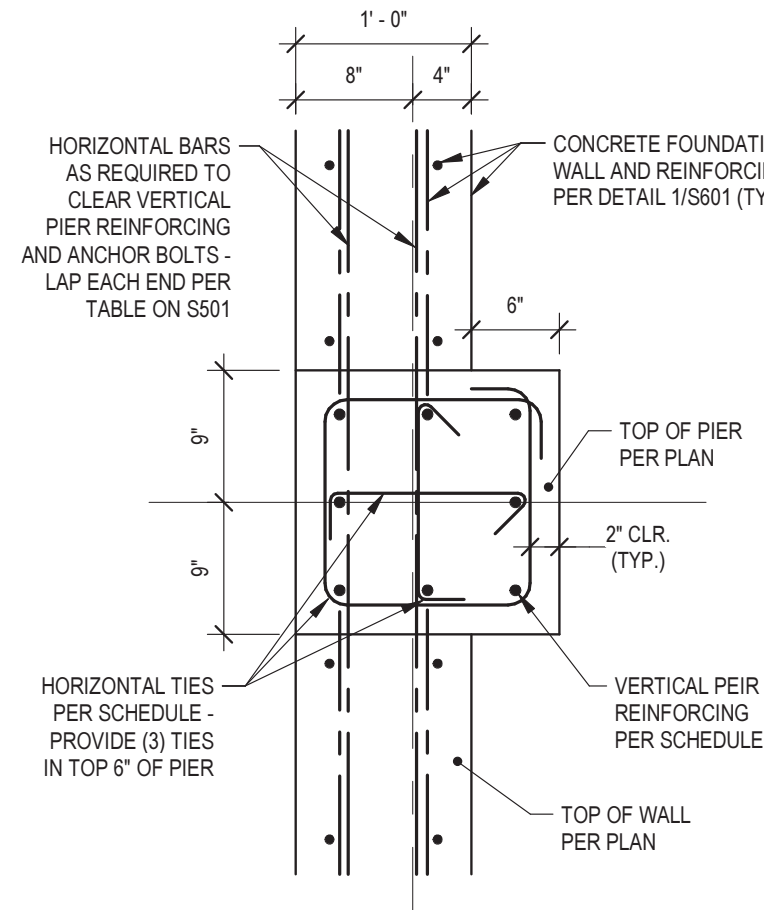
4 PIER AT 8" FOUNDATION WALL

1" = 1'-0"



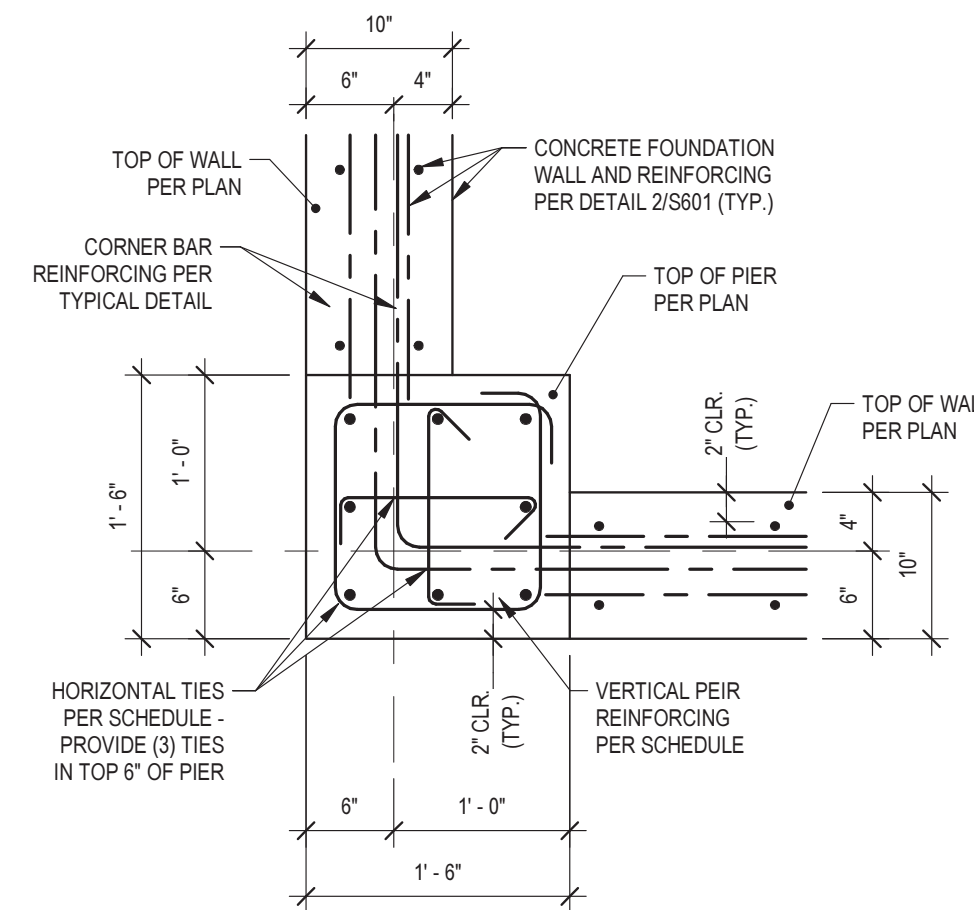
5 PIER AT 12" FOUNDATION WALL CORNER

1" = 1'-0"



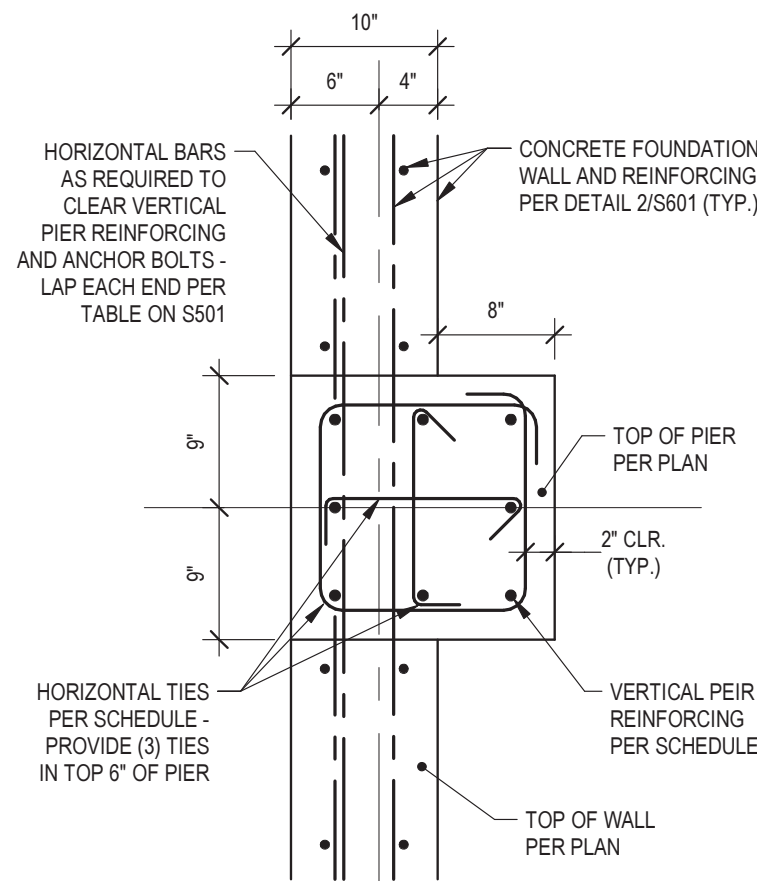
6 PIER AT 12" FOUNDATION WALL

1" = 1'-0"



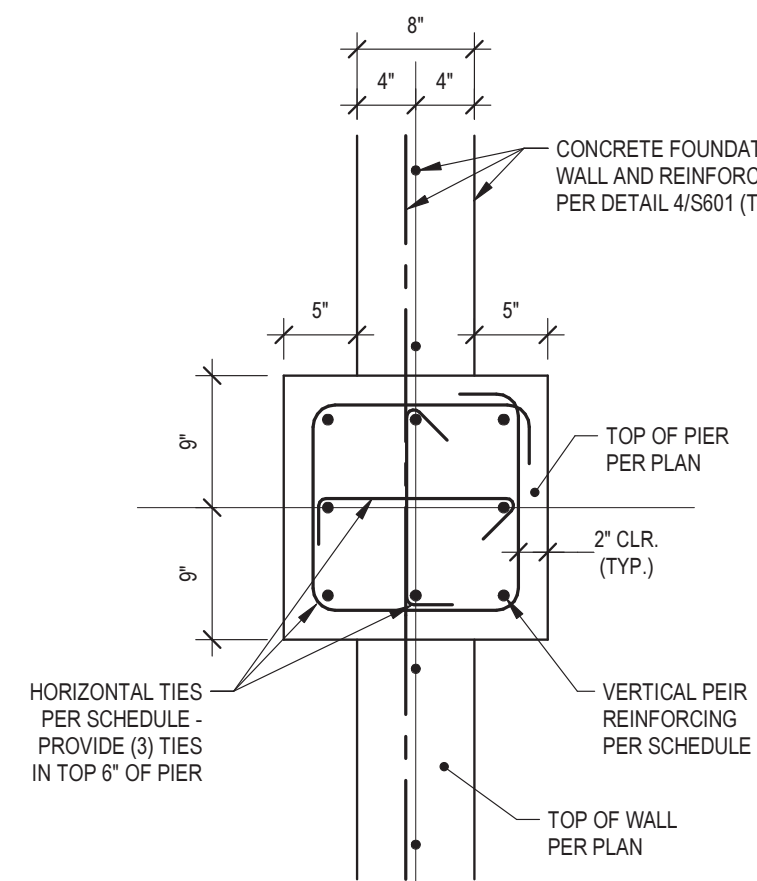
7 PIER AT 10" FOUNDATION WALL CORNER

1" = 1'-0"



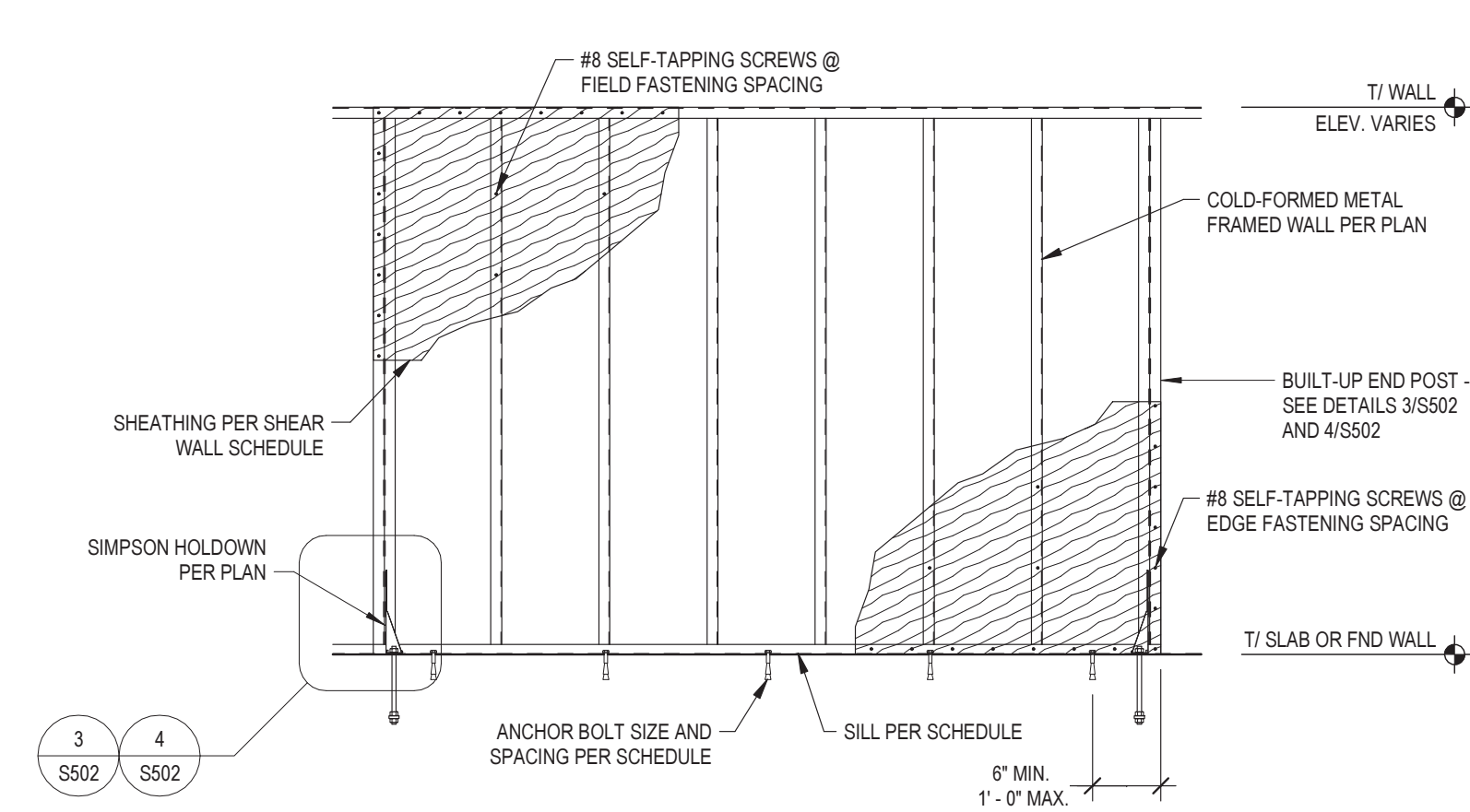
8 PIER AT 10" FOUNDATION WALL

1" = 1'-0"



9 PIER AT 8" FOUNDATION WALL

1" = 1'-0"



10 TYPICAL SHEAR WALL ELEVATION

1/2" = 1'-0"

DOCUMENT PHASE

CONSTRUCTION DOCUMENTS

REVISIONS

NO.	DATE	BY	DESCRIPTION

PROJECT:

ONONDAGA BEACH
FEASIBILITY STUDY &
DESIGN SERVICES

CLIENT:

ONONDAGA COUNTY

DRAWING TITLE

SCHEDULES AND TYPICAL
PIER AND SHEAR WALL
DETAILS

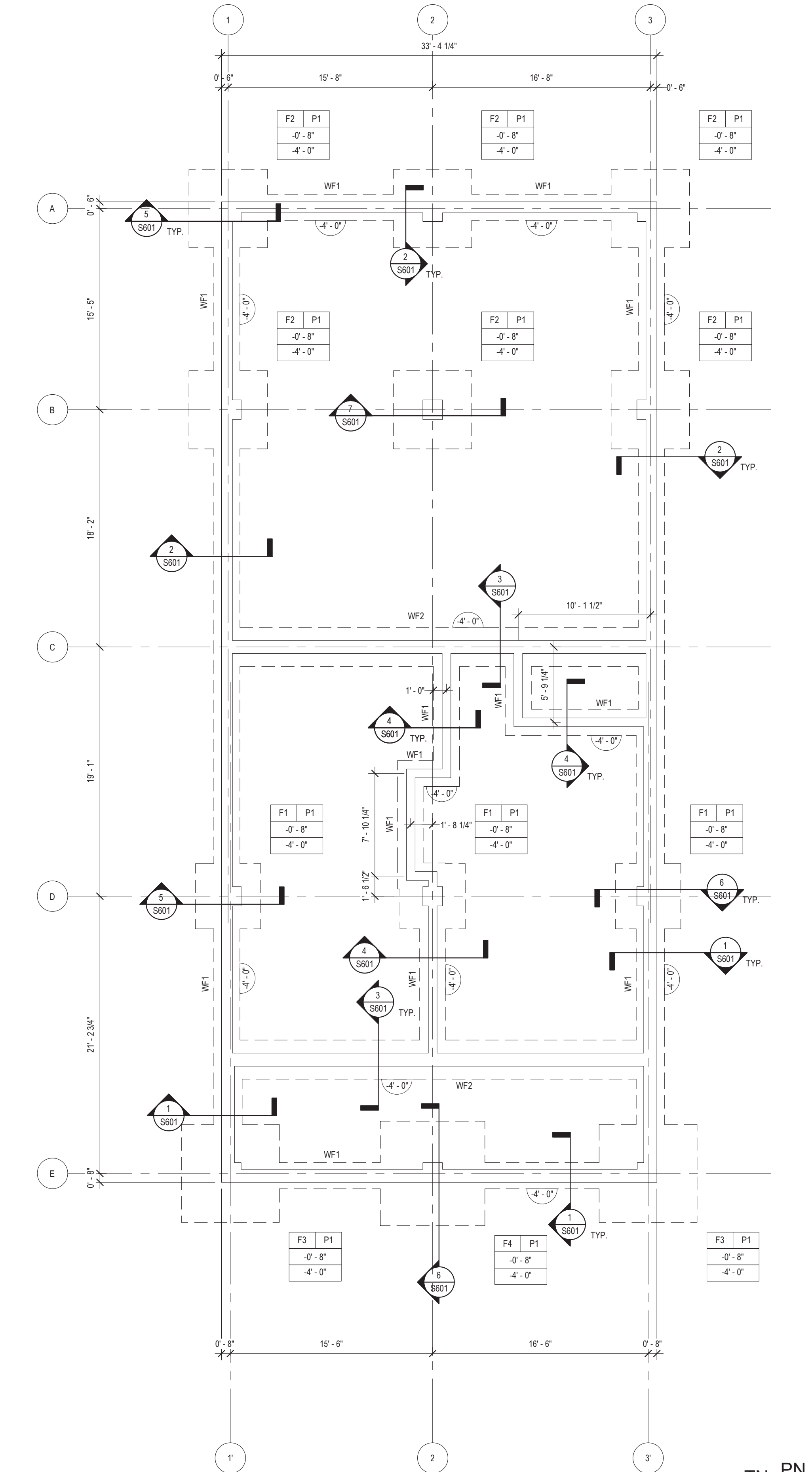
DRAWING NO.

S004

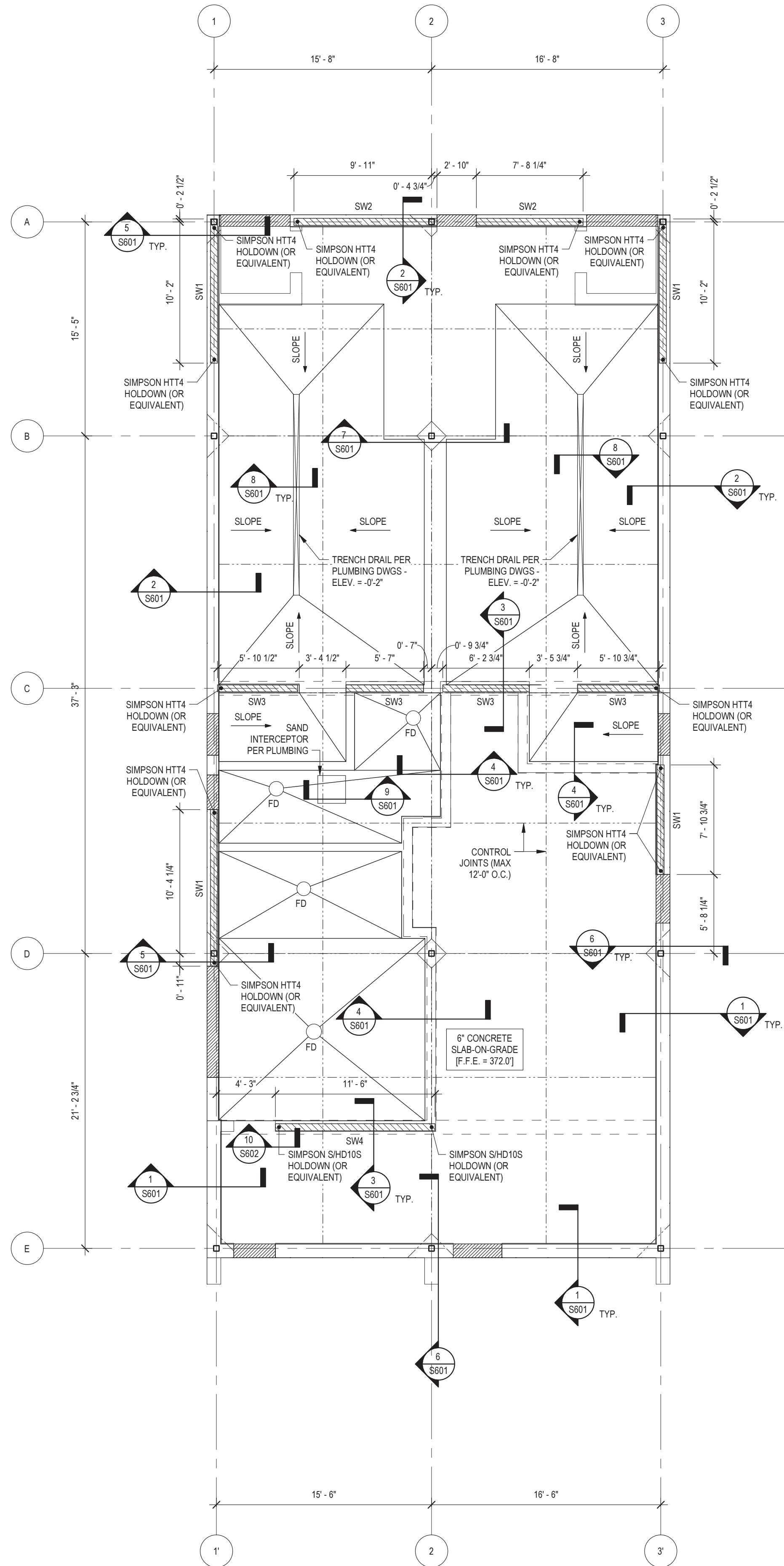
drawn by PS
checked JMF
proj. mgr. MSM
proj. no. AR19003.00

ISSUE DATE

03/17/2020



1 FOUNDATION PLAN
3/16" = 1'-0"



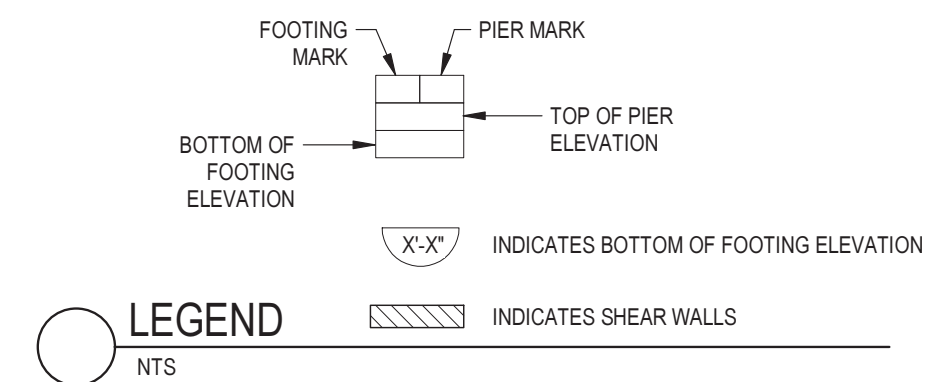
2 FIRST FLOOR AND SHEAR WALL PLAN
3/16" = 1'-0"

FOUNDATION PLAN NOTES:

1. TYPICAL TOP OF SLAB ELEVATION 372.0' UNLESS NOTED OTHERWISE (+/-) FROM TYPICAL FIRST FLOOR ELEVATION 0'-0".
2. TYPICAL TOP OF CONCRETE PIER SHALL BE AS INDICATD ON FOUNDATION PLANS.
3. ALL EXTERIOR AND INTERIOR FOUNDATIONS SHALL BEAR A MINIMUM OF 4'-0" BELOW FINISH GRADE. FOOTING ELEVATIONS SHOWN ARE BOTTOM OF FOOTING ELEVATIONS FROM FINISH FIRST FLOOR ELEVATION = 0'-0". REFER TO FOOTING SCHEDULE OF DRAWINGS S004.
4. REMOVE EXISTING TOPSOIL, FILL, ORGANIC, WET OR SOFT SOIL AND OTHER DELETERIOUS MATERIAL TO A MINIMUM DEPTH OF 1'-6" BELOW EXISTING FINISHED GRADE, EXTENDING A DISTANCE OF 5-FEET FROM THE BUILDING PAD PERIMETER. RE-ESTABLISH SUBGRADE ELEVATION WITHIN THIS AREA USING CRUSHED STONE PAD PLACED IN COMPACTED LAYERS OVER A STABILIZATION FABRIC. PLACE COMPACTED LIGHTWEIGHT STRUCTURAL FILL PER GEOTECH REPORT, TO RAISE EXISTING SITE GRADE TO TOP OF SLAB ELEVATION. FOLLOW SURCHARGE PROGRAM AS OUTLINED IN THE GEOTECHNICAL REPORT. SEE GEOTECHNICAL REPORT FOR MORE INFORMATION.
5. REFER TO AND COORDINATE WITH SITE DRAWINGS FOR ADDITIONAL SITE PREPARATION REQUIREMENTS, FILL AND BACKFILL OUTSIDE THE BUILDING, GRADING AND RESTORATION.
6. OWNER'S GEOTECHNICAL ENGINEER SHALL OBSERVE SURCHARGE PROGRAM (AS OUTLINED IN THE GEOTECHNICAL REPORT), FILL PLACEMENT AND COMPACTION, AND INSPECT FOUNDATION BEARING GRADES PRIOR TO CONSTRUCTION OF FORMWORK AND PLACEMENT OF CONCRETE.
7. REFER TO DRAWINGS S001 AND S002 FOR GENERAL NOTED AND DESIGN CRITERIA, DRAWING S003 FOR SPECIAL INSPECTION TABLE, S004 FOR SCHEDULES AND TYPICAL PIER AND SHEAR WALL DETAILS, DRAWINGS S601-S05 FOR TYPICAL DETAILS.

FIRST FLOOR FRAMING AND SHEAR WALL PLAN NOTES:

1. TYPICAL TOP OF SLAB ELEVATION 372.0' UNLESS NOTED OTHERWISE (+/-) FROM TYPICAL FIRST FLOOR ELEVATION 0'-0".
2. FLOOR SLAB TO BE 6" THICK 4,000 PSI CONCRETE WITH (1) LAYER OF WWF 6x6-W2.9xW2.9 OVER CONT. VAPOR RETARDER AND COMPACTED LIGHTWEIGHT SAND FILL (PERMANENT LIGHTWEIGHT STRUCTURAL FILL) PER GEOTECH REPORT.
3. TYPICAL WALL CONSTRUCTION SHALL BE 600S162-54 C.F.M.F STUDS AT 16" O.C. TOP TRACK SHALL BE A 600T250-54 C.F.M.F TOP DEFLECTION TRACK (UNLESS NOTED OTHERWISE ON PLAN AND DETAILS) WITH (2) #10 SCREW AT 16" O.C. TO ROOF FRAMING. SILL SHALL BE A 600T150-54 C.F.M.F TRACK WITH 1/2" DIA. EXPANSION ANCHORS EMBEDDED INTO CONCRETE 4" @ 48" O.C. (UNLESS NOTED OTHERWISE ON PLANS). ALL SILLS AND TRACKS SHALL BE FASTENED TO THE STUDS WITH (1) #10 SCREW AT EACH FLANGE.
4. FD - INDICATED FLOOR DRAIN. SLOPE FLOOR TO DRAIN WITH A MIN SLOPE OF 1/8" PER FOOT.
5. SWx - INDICATES SHEAR WALL SHEATHING PER SCHEDULE. SIDE OF WALL WITH MARK IS TO RECEIVE SHEAR WALL SHEATHING, OPPOSITE SIDE TO BE SHEATHED PER ARCHT.
6. ALL EXTERIOR EXPOSED STEEL, CONNECTIONS AND FASTENERS SHALL BE HOT DIPPED GALVANIZED.
7. REFER TO MECHANICAL, ELECTRICAL, PLUMBING AND ARCHITECTURAL DRAWINGS FOR LOCATIONS OF ALL FLOOR AND WALL OPENINGS, PENETRATIONS, DRAINS, AND EQUIPMENT.
8. REFER TO DRAWINGS S001 AND S002 FOR GENERAL NOTED AND DESIGN CRITERIA, DRAWING S003 FOR SPECIAL INSPECTION TABLE, S004 FOR SCHEDULES AND TYPICAL PIER AND SHEAR WALL DETAILS, DRAWINGS S601-S05 FOR TYPICAL DETAILS.



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FOUNDATION AND FIRST
FLOOR / SHEAR WALL
PLANS

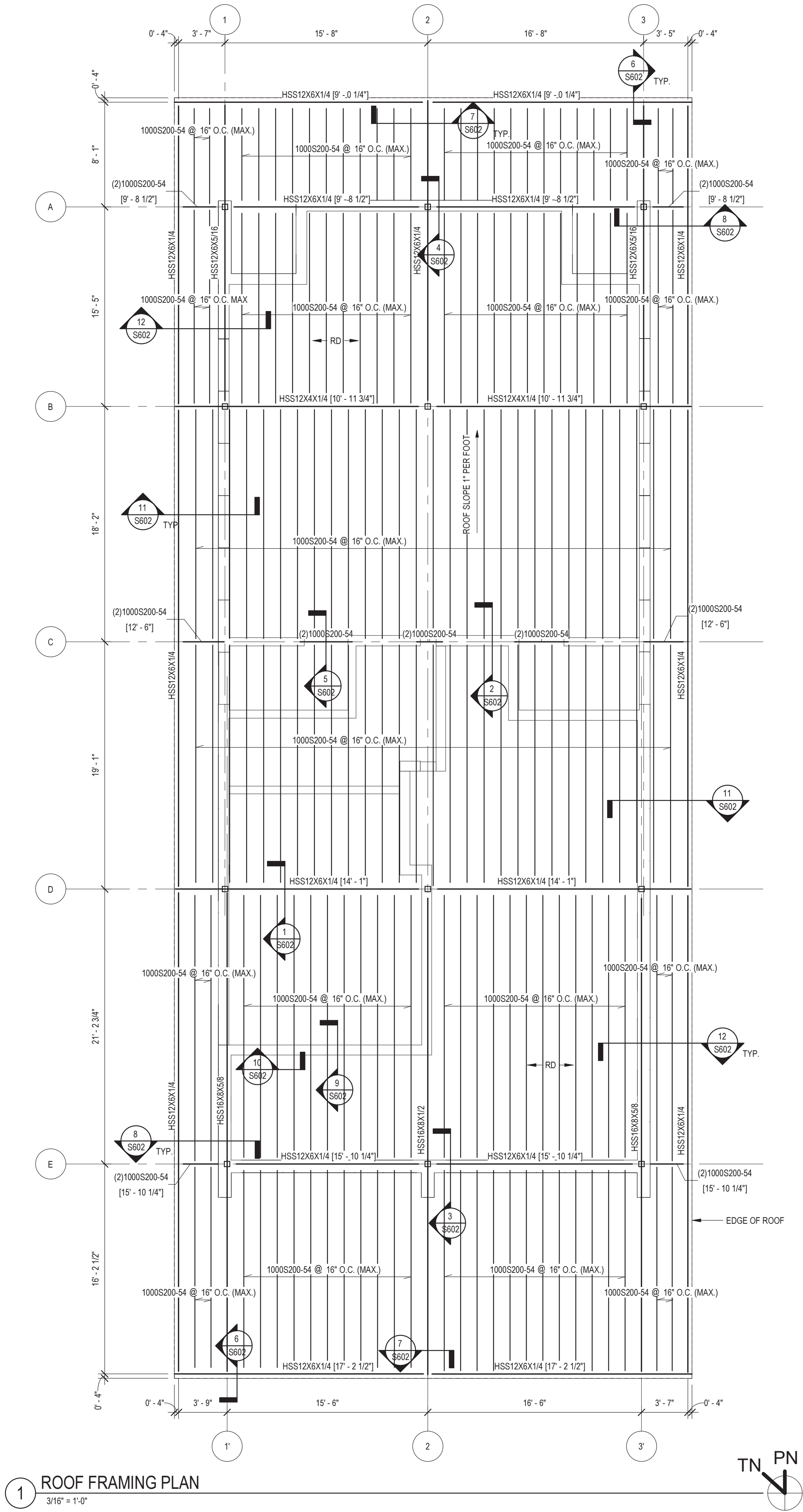
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ROOF FRAMING NOTES:

1. TYPICAL TOP OF STEEL NOTED ON PLAN AS (+/-) FROM TYPICAL FIRST FLOOR ELEVATION 0'-0".
2. TYPICAL ROOF CONSTRUCTION TO BE 1 1/2" x 20 GAUGE TYPE B G60 GALV. STEEL ROOF DECK SPANNING PERPENDICULAR TO JOISTS / BEAMS.
3. TYPICAL LINTEL SHALL BE A COLD-FORMED METAL FRAMING BOXED BEAM CONSISTING OF (2)600S160-54 JOISTS AND (2) 800T150-54 TRACKS, UNLESS NOTED OTHERWISE ON PLANS.
4. TYPICAL JAMB AT EACH END OF LINTEL SHALL CONSIST OF (2) C.F.M.F. 600S162-54 STUDS BACK TO BACK WITH (1) 800T150-54 TRACK FACING OPENING.
5. TYPICAL LINTEL TO JAMB CONNECTION SHALL BE (2) CLARKDIETRICH HS46 (OR EQUIVALENT) W/ (10) #10 SCREWS (UNLESS OTHERWISE NOTED IN PLANS OR DETAILS) AND (1) 16GA. CLIP ANGLE TOP AND BOTTOM W/ (4) #10 SCREWS AT EACH LEG.
6. REFER TO MECHANICAL, ELECTRICAL PLUMBING, AND ARCHITECTURAL DRAWINGS FOR LOCATIONS OF ALL ROOF OPENINGS, PENETRATIONS, DRAINS, AND EQUIPMENT.
7. REFER TO DRAWINGS S001 AND S002 FOR GENERAL NOTES AND DESIGN CRITERIA, DRAWING S003 FOR SPECIAL INSPECTION TABLES, DRAWING S004 FOR SCHEDULES AND DRAWINGS S001 - S002 FOR TYPICAL DETAILS.



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main: 585.388.2060 • fax: 585.388.2070

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ROOF FRAMING PLAN

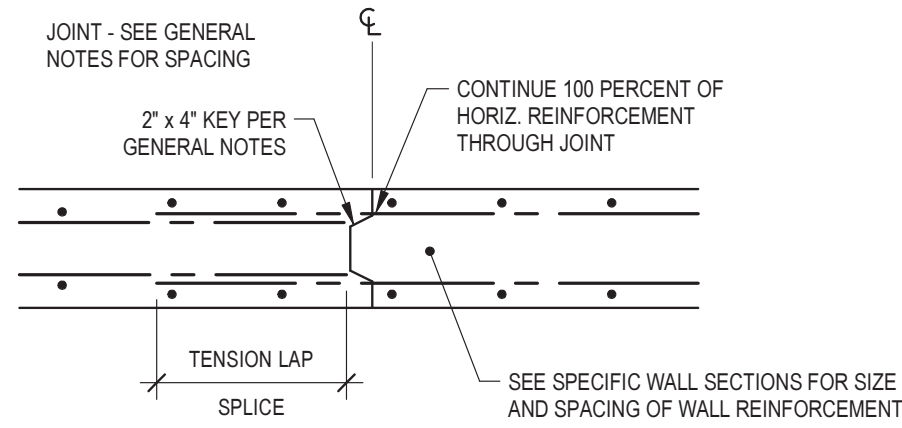
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proj. no. AR19003.00

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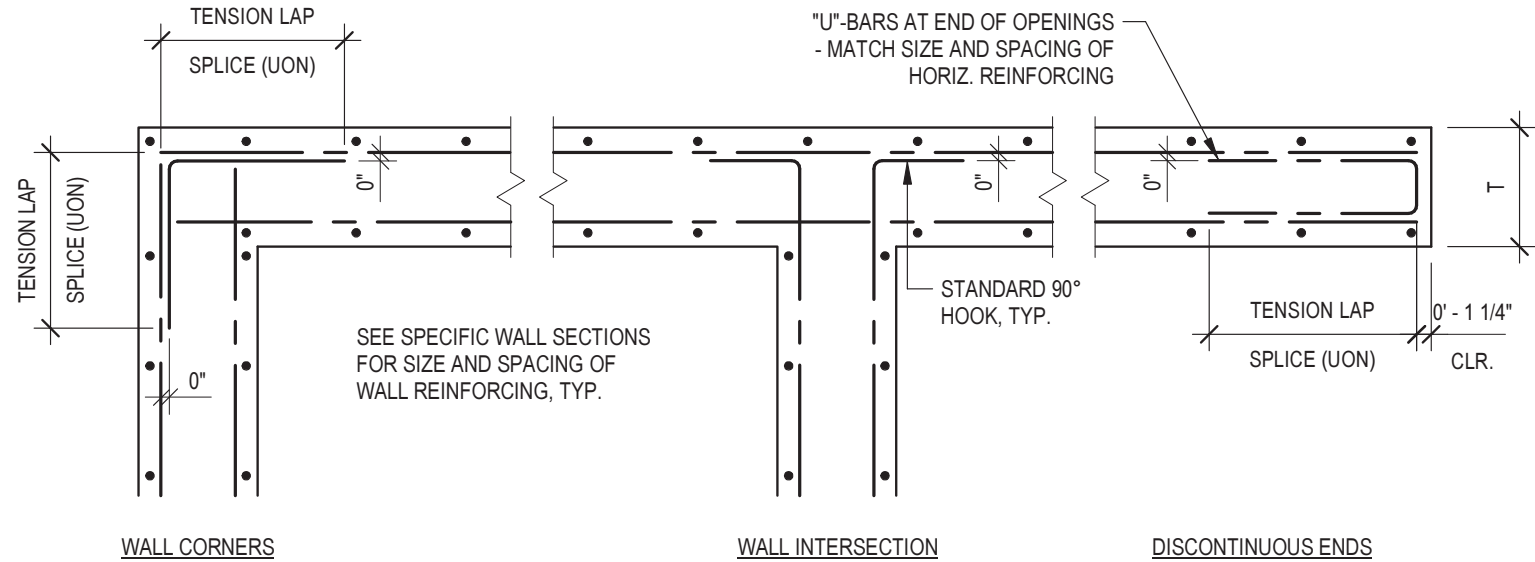
03/17/2020



- NOTES:
1. WATERSTOP REQUIRED FOR ALL SUB-GRADE WALLS RETAINING BACKFILL MATERIAL. OMIT OTHERWISE.
 2. ROUGHEN FIRST POUR TO A 1/4" AMPLITUDE OR FORM THE JOINT WITH A STAY-IN-PLACE PERFORATED METAL BULKHEAD TO ACHIEVE THE SAME RESULT.

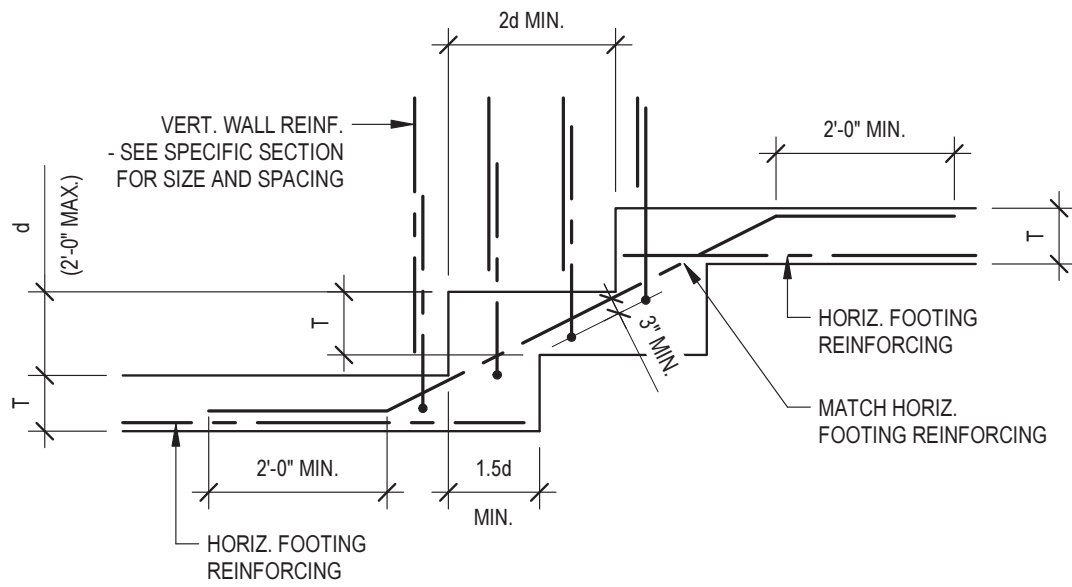
1 TYPICAL WALL CONSTRUCTION JOINT

3/4" = 1'-0"



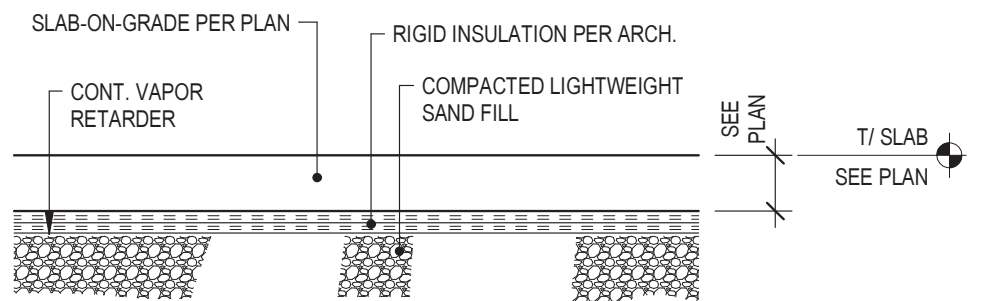
2 TYPICAL CONCRETE WALL REINFORCEMENT DETAILING

3/4" = 1'-0"



3 TYPICAL STEPPED FOOTING DETAIL

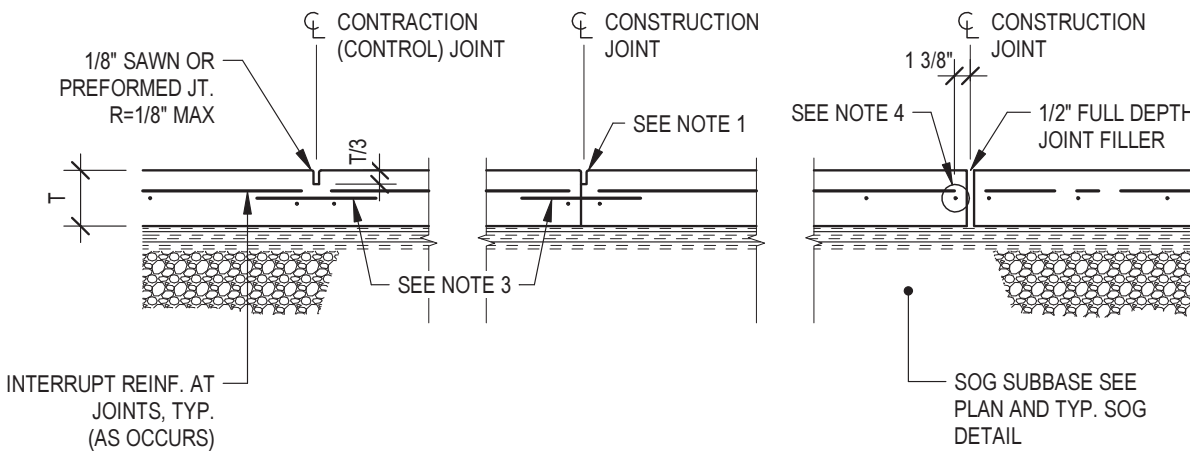
3/4" = 1'-0"



- NOTES:
1. PROVIDE CONTINUOUS PROTECTION AGAINST WATER INFILTRATION PRIOR TO INSTALLATION OF VAPOR RETARDER AND POROUS SUB BASE. MAINTAIN VAPOR RETARDER AND SUB BASE IN DRY CONDITION UNTIL BUILDING IS OCCUPIED.

4 TYPICAL SLAB-ON-GRADE CONSTRUCTION

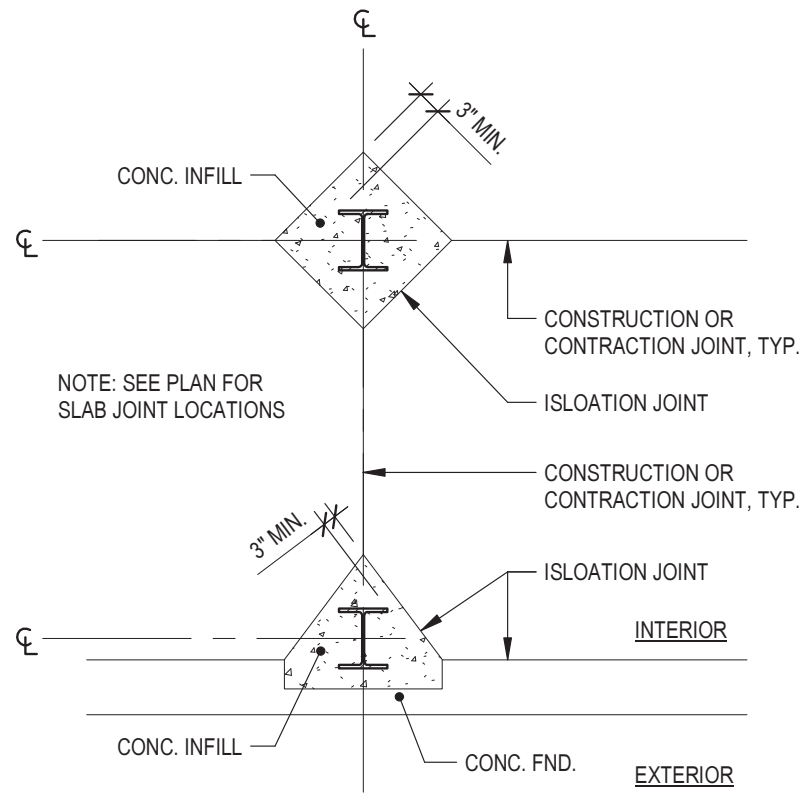
3/4" = 1'-0"



- NOTES:
1. LOCATE CONSTRUCTION JOINTS AT CONTRACTION JOINT LOCATIONS SHOWN ON PLAN. MATCH CONTRACTION JOINT PROFILE.
 2. MAXIMUM SPACING BETWEEN CONTRACTION JOINTS AS SHOWN ON PLAN.
 3. 3/4" x 1'-4" SMOOTH DOWEL AT 18-INCHES ON CENTER. SET AT 1/2 BELOW TOP OF SLAB. GREASE ONE END. OCCURS ONLY WHEN REBAR CALLED OUT. NOT TO BE APPLIED WITH EITHER WELDED WIRE FABRIC OR FIBERMESH REINFORCING
 4. FOR REBAR PROVIDE (1) #4 CONT ALONG JOINT. FOR WELDED WIRE FABRIC PROVIDE CONT WIRE ALONG JOINT. NOT REQUIRED FOR FIBERMESH REINFORCING

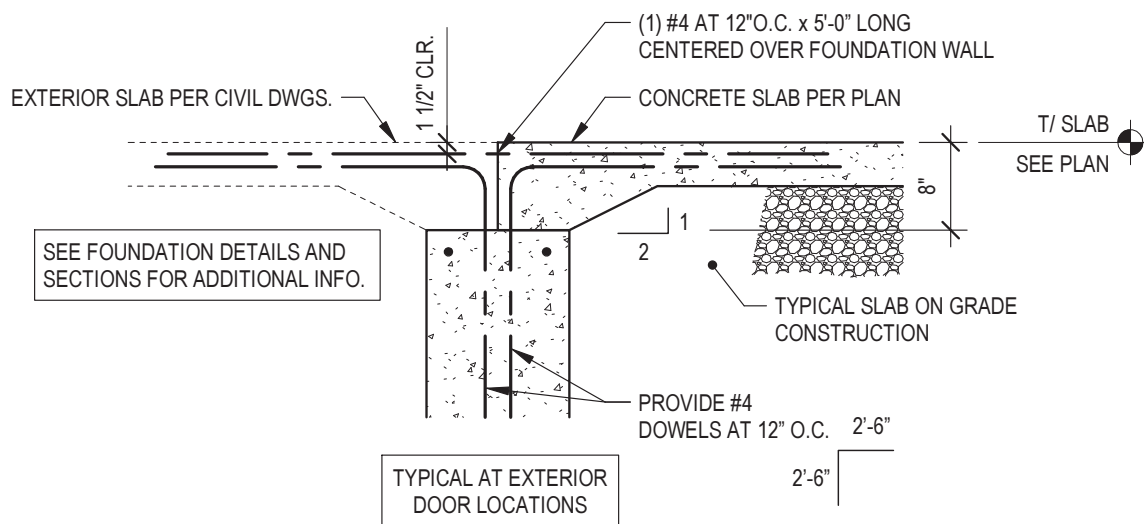
5 TYPICAL SLAB-ON-GRADE CONSTRUCTION JOINTS

3/4" = 1'-0"



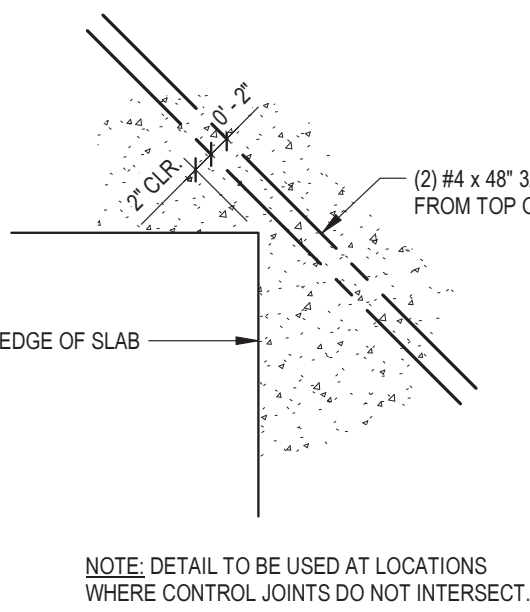
6 TYPICAL SLAB-ON-GRADE JOINTS AT COLUMNS

3/4" = 1'-0"



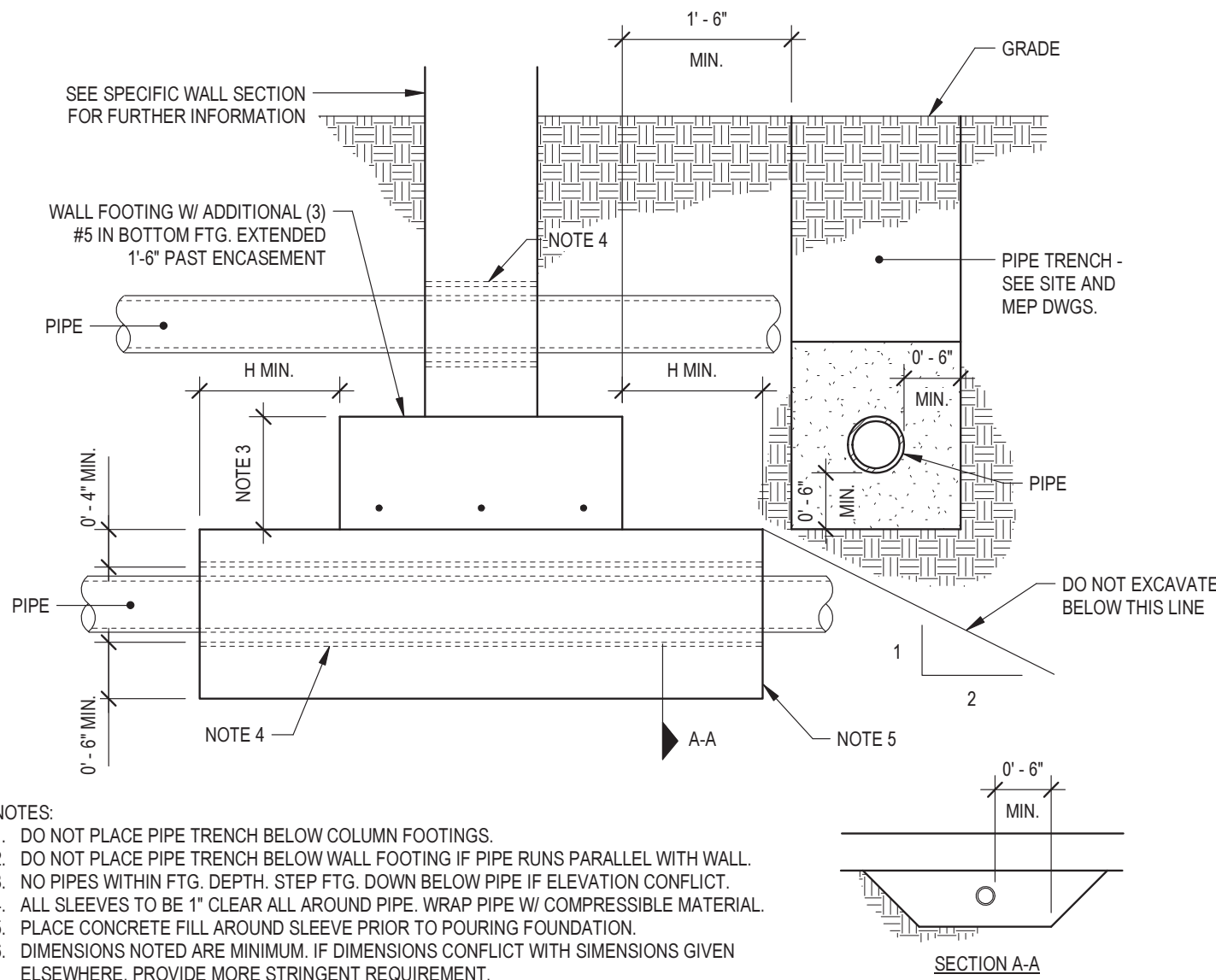
7 SLAB EDGE AT DOOR OPENING

3/4" = 1'-0"



8 ADDITIONAL REINFORCEMENT AT CORNERS IN SLAB-ON-GRADE

3/4" = 1'-0"



- NOTES:
1. DO NOT PLACE PIPE TRENCH BELOW COLUMN FOOTINGS.
 2. DO NOT PLACE PIPE TRENCH BELOW WALL FOOTING IF PIPE RUNS PARALLEL WITH WALL.
 3. NO PIPES WITHIN FTG. DEPTH. STEP FTG. DOWN BELOW PIPE IF ELEVATION CONFLICT.
 4. ALL SLEEVES TO BE 1" CLEAR ALL AROUND PIPE. WRAP PIPE W/ COMPRESSIBLE MATERIAL.
 5. PLACE CONCRETE FILL AROUND SLEEVE PRIOR TO POURING FOUNDATION.
 6. DIMENSIONS NOTED ARE MINIMUM. IF DIMENSIONS CONFLICT WITH SIMENSIONS GIVEN ELSEWHERE, PROVIDE MORE STRINGENT REQUIREMENT.

9 TYPICAL PIPE PENETRATION IN WALL

3/4" = 1'-0"

TENSION LAP SPLICE LENGTHS FOR BARS ENCLOSED IN TIES OR STIRRUPS									
BAR SIZE	CONCRETE COMPRESSIVE STRENGTH								
	3,000 PSI			4,000 PSI			5,000 PSI		
	BAR TYPE		STD HOOK DEV	BAR TYPE		STD HOOK DEV	BAR TYPE		STD HOOK DEV
	TOP	OTHER		TOP	OTHER		TOP	OTHER	
#3	28	22	6	25	19	6	22	17	6
#4	38	29	8	33	25	7	29	23	6
#5	47	36	10	41	31	8	36	28	7
#6	56	43	12	49	37	10	44	34	9
#7	81	63	13	71	54	12	63	49	10
#8	93	72	15	81	62	13	72	56	12
#9	105	81	17	91	70	15	81	63	13
#10	118	91	19	102	79	17	92	71	15
#11	131	101	22	114	87	19	102	78	17

TENSION LAP SPLICE LENGTHS FOR BARS NOT ENCLOSED IN TIES OR STIRRUPS												
BAR SIZE	CONCRETE COMPRESSIVE STRENGTH											
	3,000 PSI				4,000 PSI				5,000 PSI			
	BAR TYPE		STANDARD D	HOOK DEV	BAR TYPE		STANDARD D	HOOK DEV	BAR TYPE		STANDARD D	HOOK DEV
	TOP	OTHER			TOP	OTHER			TOP	OTHER		
#3	17	16	6		16	16	6		16	16	6	
#4	28	22	8		25	19	7		22	17	6	
#5	41	32	10		36	28	8		32	25	7	
#6	56	43	12		49	37	10		44	34	9	
#7	90	69	13		78	60	12		70	54	10	
#8	112	86	15		97	74	13		87	67	12	
#9	135	104	17		117	90	15		105	81	13	
#10	162	125	19		141	108	17		126	97	15	
#11	190	146	22		165	127	19		147	114	17	

- NOTES:
1. ALL TABULATED VALUES ARE GIVEN IN INCHES.
 2. DIVIDE TABULATED VALUES BY 1.30 TO ACHIEVE STRAIGHT BAR TENSION DEVELOPMENT LENGTHS.
 3. APPLY A 1.30 MULTIPLIER ON TABULATED VALUES FOR USE IN LIGHTWEIGHT CONCRETE.
 4. APPLY A 1.50 MULTIPLIER ON TABULATED VALUES FOR EPOXY COATED BARS WITH COVER LESS THAN 3 BAR DIAMETERS OR CLEAR SPACING LESS THAN 6 BAR DIAMETERS. APPLY A 1.20 MULTIPLIER ON ALL OTHER EPOXY COATED BARS.
 5. MULTIPLIERS FOR LIGHTWEIGHT CONCRETE AND EPOXY COATING ARE ADDITIVE.
 6. TOP BARS ARE DEFINED AS HORIZONTAL REINFORCEMENT WITH MORE THAN 12-INCHES OF CONCRETE CAST BELOW THE DEVELOPMENT LENGTH OR SPLICE.
 7. "SIDE LAP" ALL LAP SPLICES TO MAINTAIN SPECIFIED CONCRETE COVER. WHEN BARS OF DIFFERENT SIZE ARE LAP SPLICED, USE THE SPLICE LENGTH OF THE SMALLER BAR.
 8. NON-CONTACT SPLICES NOT PERMITTED.

COMPRESSION DEVELOPMENT AND LAP SPLICE LENGTHS						
BAR SIZE	CONCRETE COMPRESSIVE STRENGTH					
	3,000 PSI		4,000 PSI		5,000 PSI	
	DEV	SPLICE	DEV	SPLICE	DEV	SPLICE
#3	9	12	8	12	7	12
#4	11	15	10	15	9	15
#5	14	19	12	19	12	19
#6	17	23	15	23	14	23
#7	20	27	17	27	16	27
#8	22	30	19	30	18	30
#9	25	34	22	34	21	34
#10	28	39	25	39	23	39
#11	31	43	27	43	26	43

- NOTES:
1. ALL TABULATED VALUES ARE GIVEN IN INCHES.
 2. COMPRESSION SPLICES PERMISSIBLE ONLY WHERE SPECIFICALLY NOTED.
 3. TABLE IS APPLICABLE FOR NORMAL WEIGHT AND LIGHTWEIGHT CONCRETE.
 4. TABLE NOT APPLICABLE FOR EPOXY COATED REINFORCEMENT
 5. "SIDE LAP" ALL LAP SPLICES TO MAINTAIN SPECIFIED CONCRETE COVER.
 6. WHEN BARS OF DIFFERENT SIZE ARE LAP SPLICED, THE SPLICE LENGTH SHALL BE THE LARGER OF THE DEVELOPMENT LENGTH OF THE LARGER BAR, OR THE SPLICE LENGTH OF THE SMALLER BAR.

STRUCTURAL REINFORCED MASONRY LAP SPLICES (1500 PSI)				
REINFORCING SIZE	BLOCK SIZE W/ SINGLE BAR PER CELL			
	6"	8"	10"	12"
#3	27	27	27	27
#4	36	36	36	36
#5	45	45	45	45
#6	54	54	54	54
#7	63	63	63	63
#8	72	72	72	72
#9	82	82	82	82

10 REBAR SPLICE TABLES

3/4" = 1'-0"

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TYPICAL FOUNDATION
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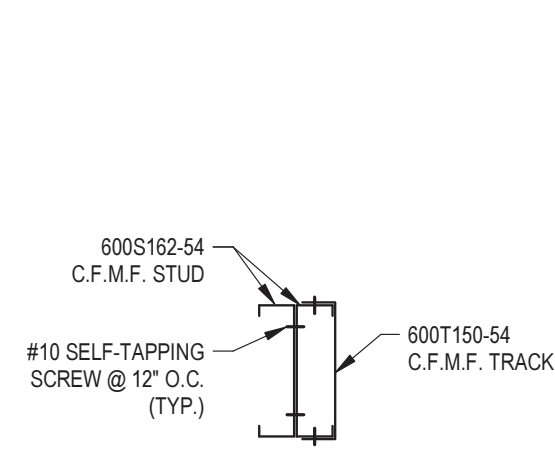
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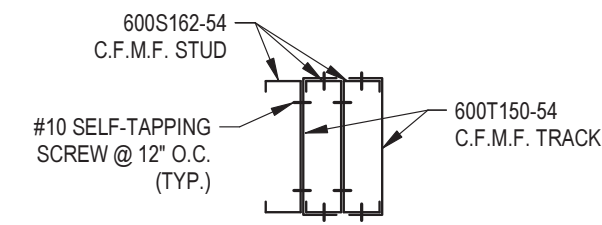
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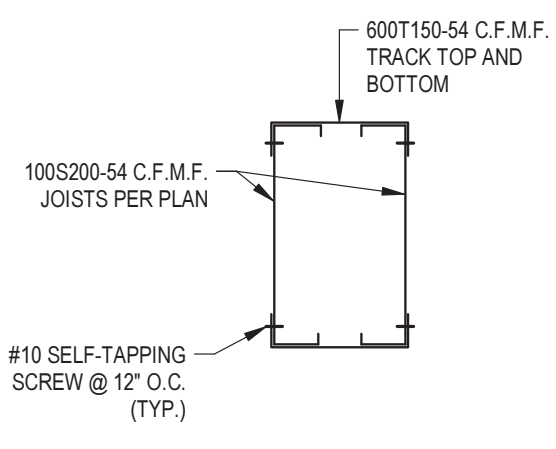
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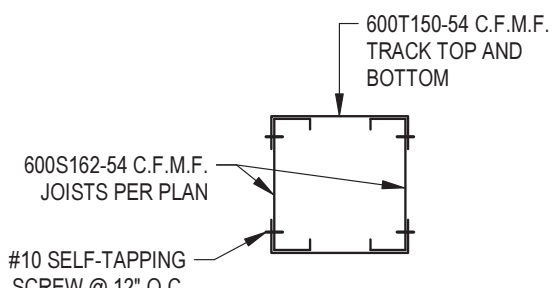
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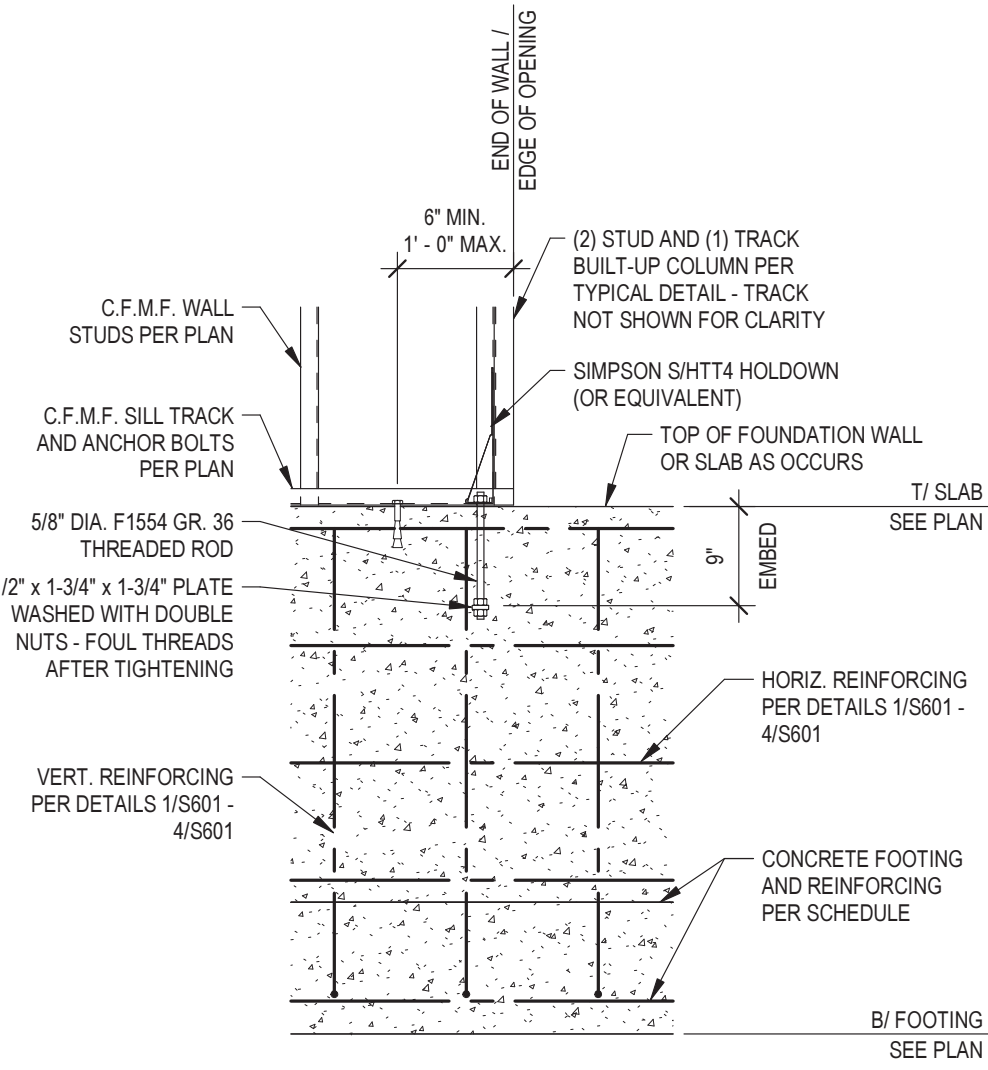
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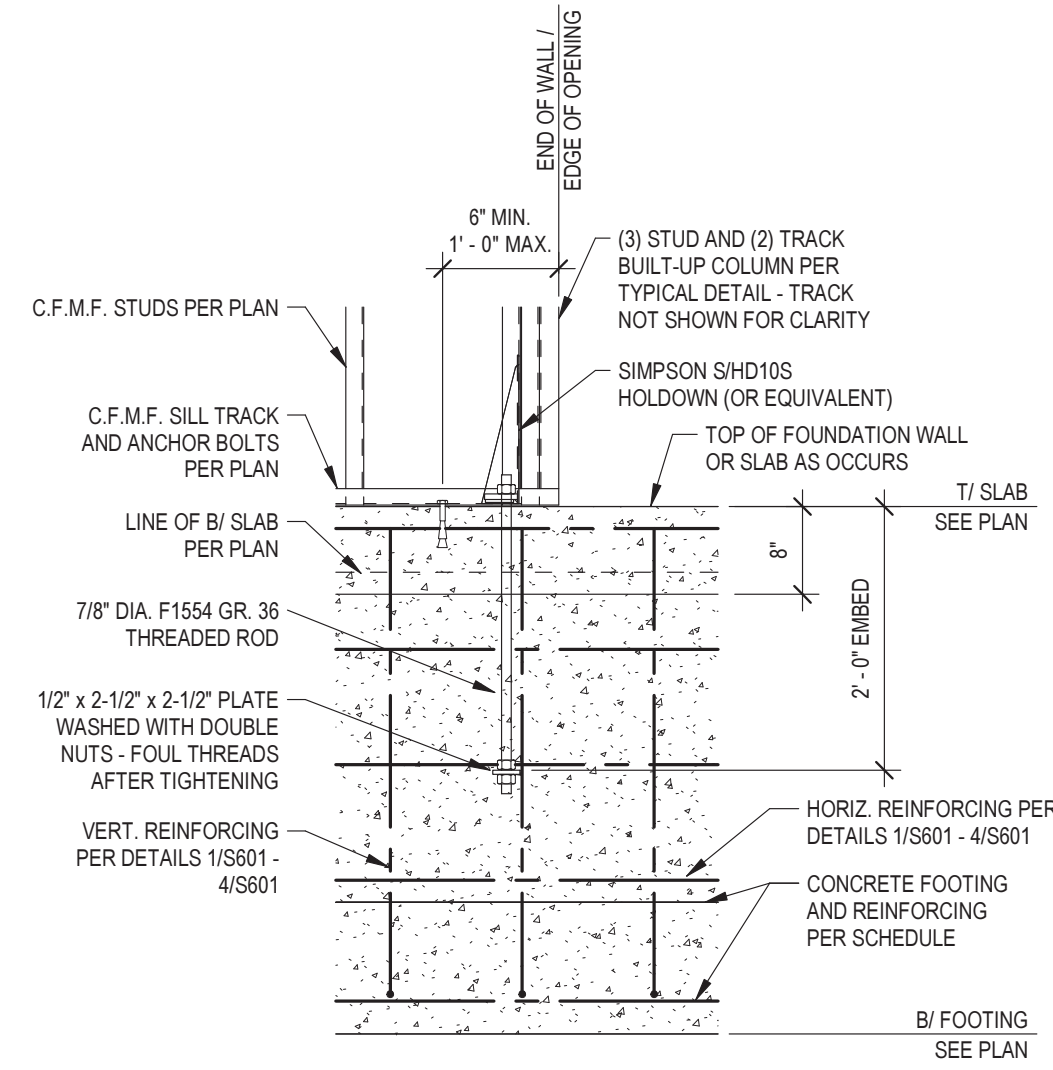
10" DEEP BOXED BEAM



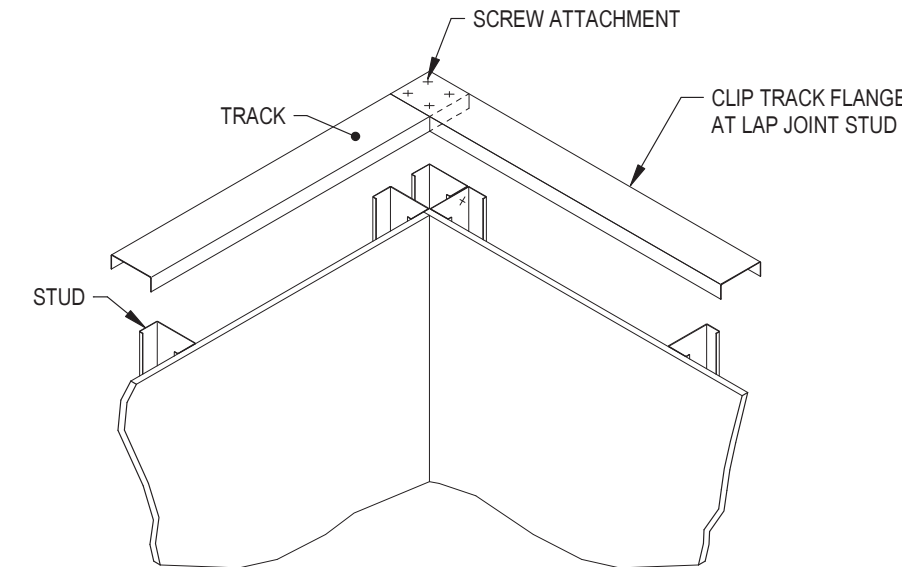
6" DEEP BOXED BEAM



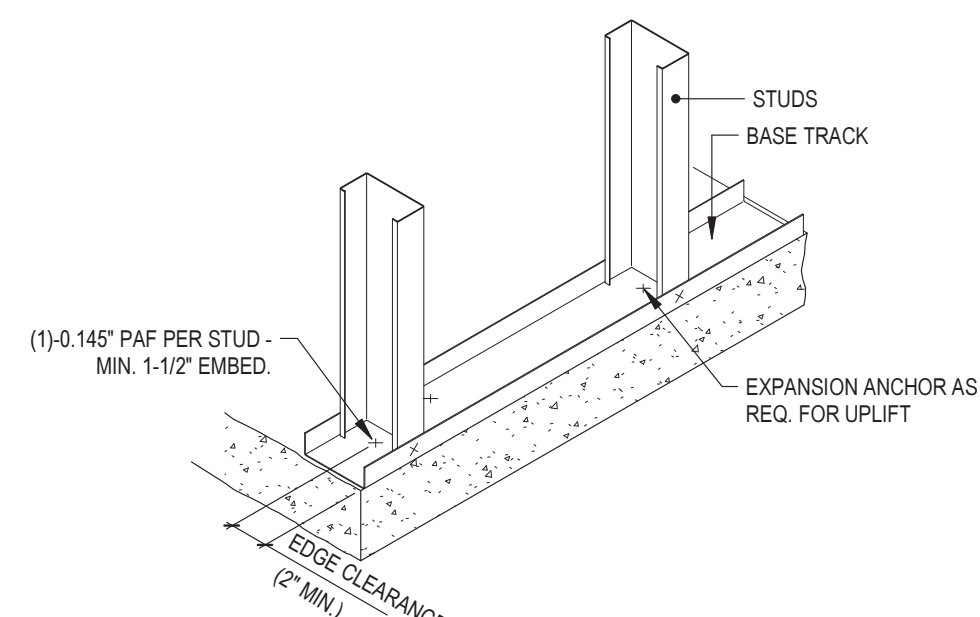
3 HTT4 HOLDDOWN ANCHOR EMBEDMENT



4 S/HD10S HOLDOWN ANCHOR EMBEDMENT
3/4" = 1'-0"

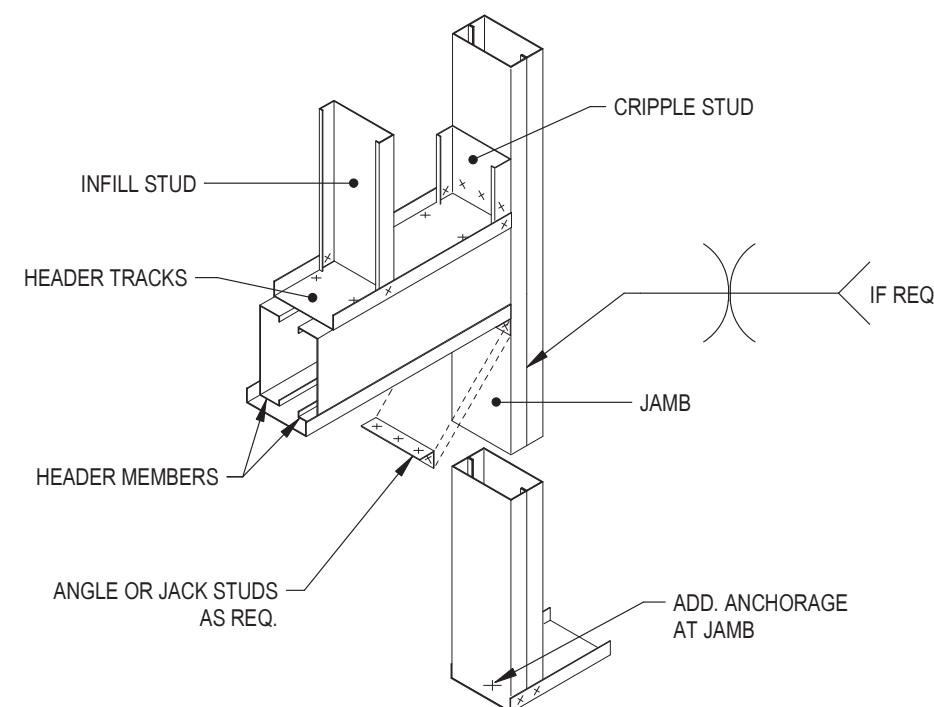


5 TYPICAL CFMF CORNER WALL CONNECTION
3/4" = 1'-0"



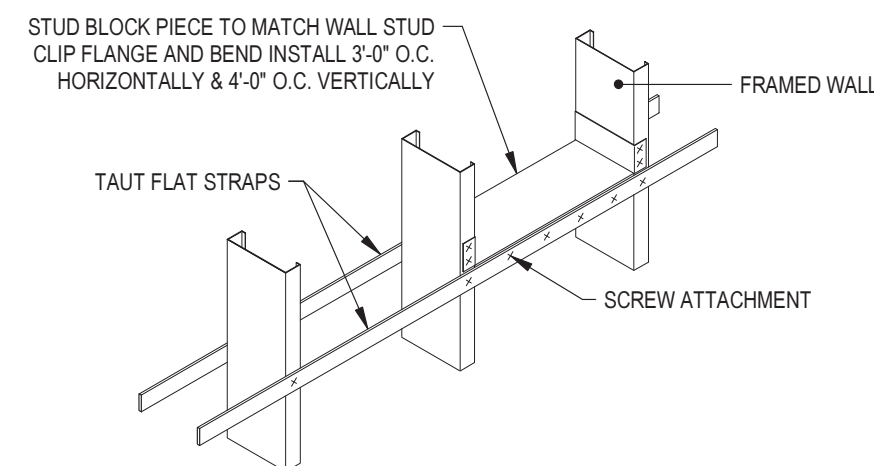
TYPICAL CFMF WALL CONNECTION TO CONCRETE SLAB

6 CONC
3/4" = 1'-0"



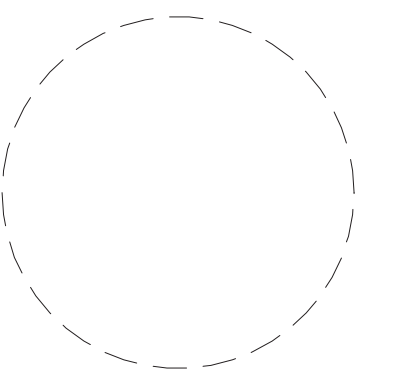
TYPICAL LOAD BEARING HEADER AT OPENING

7 TYPICAL
3/4" = 1'-0"



TYPICAL WALL REINFORCEMENT

8 TYPICAL
3/4" = 1'-0"



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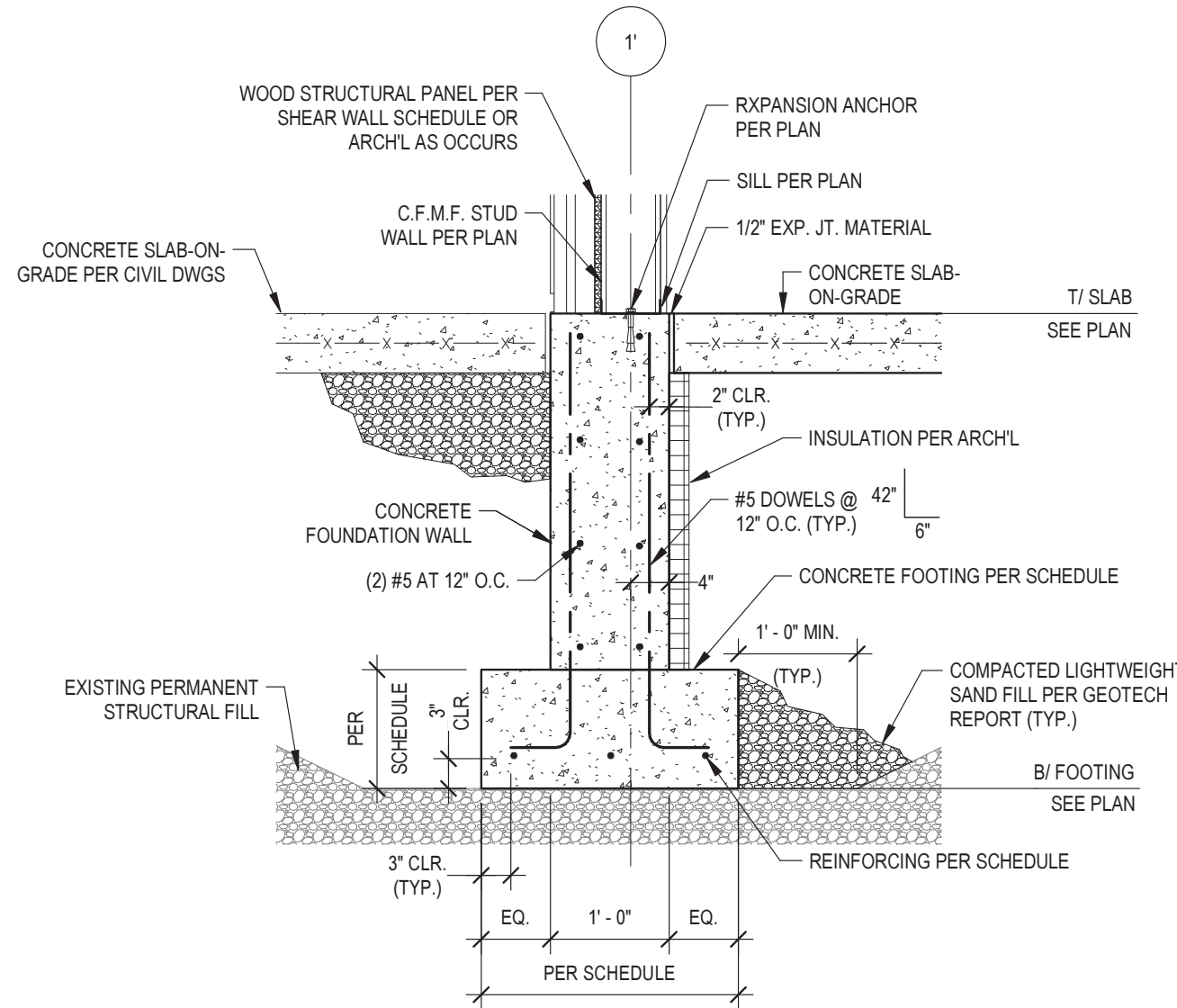
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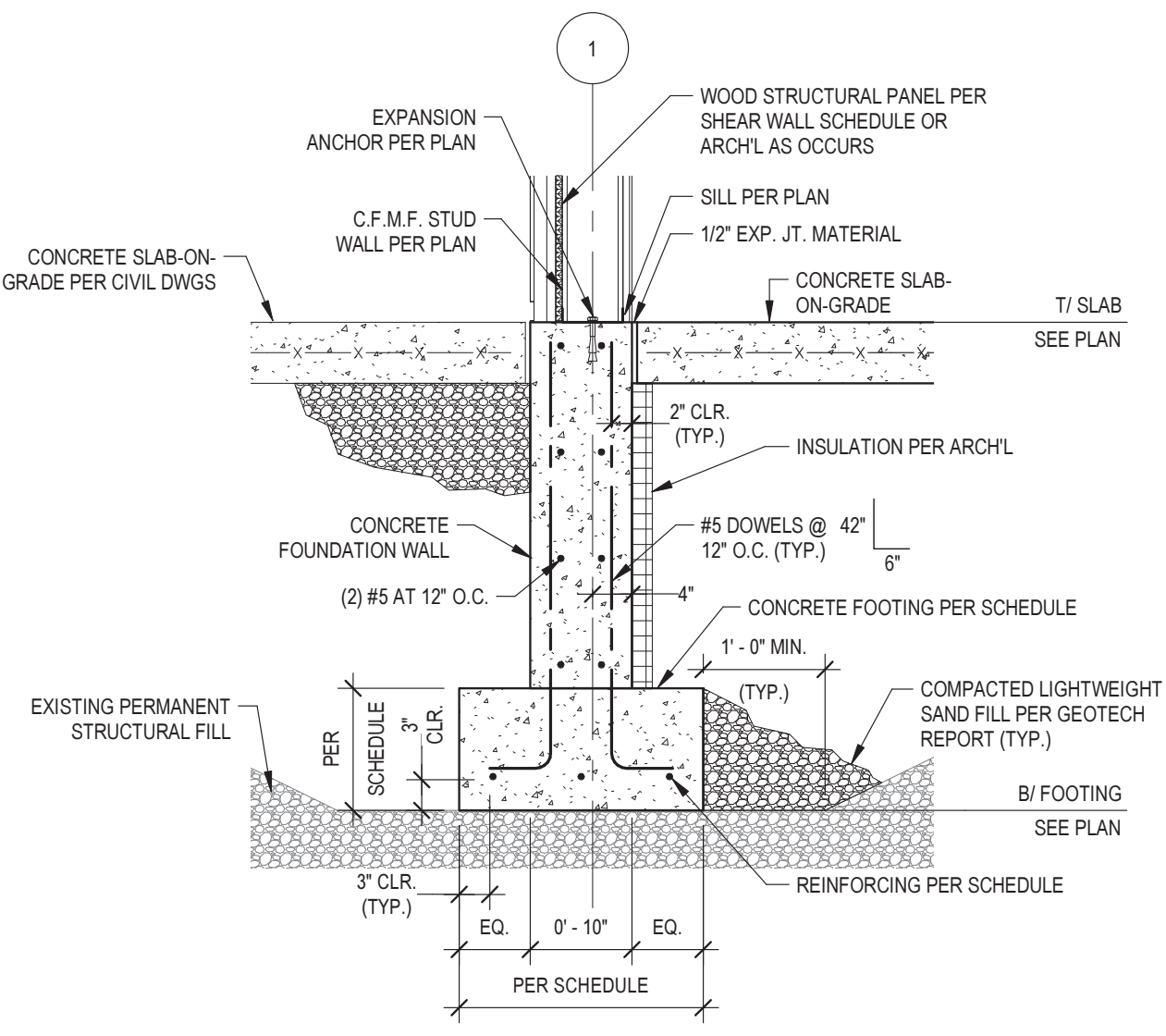
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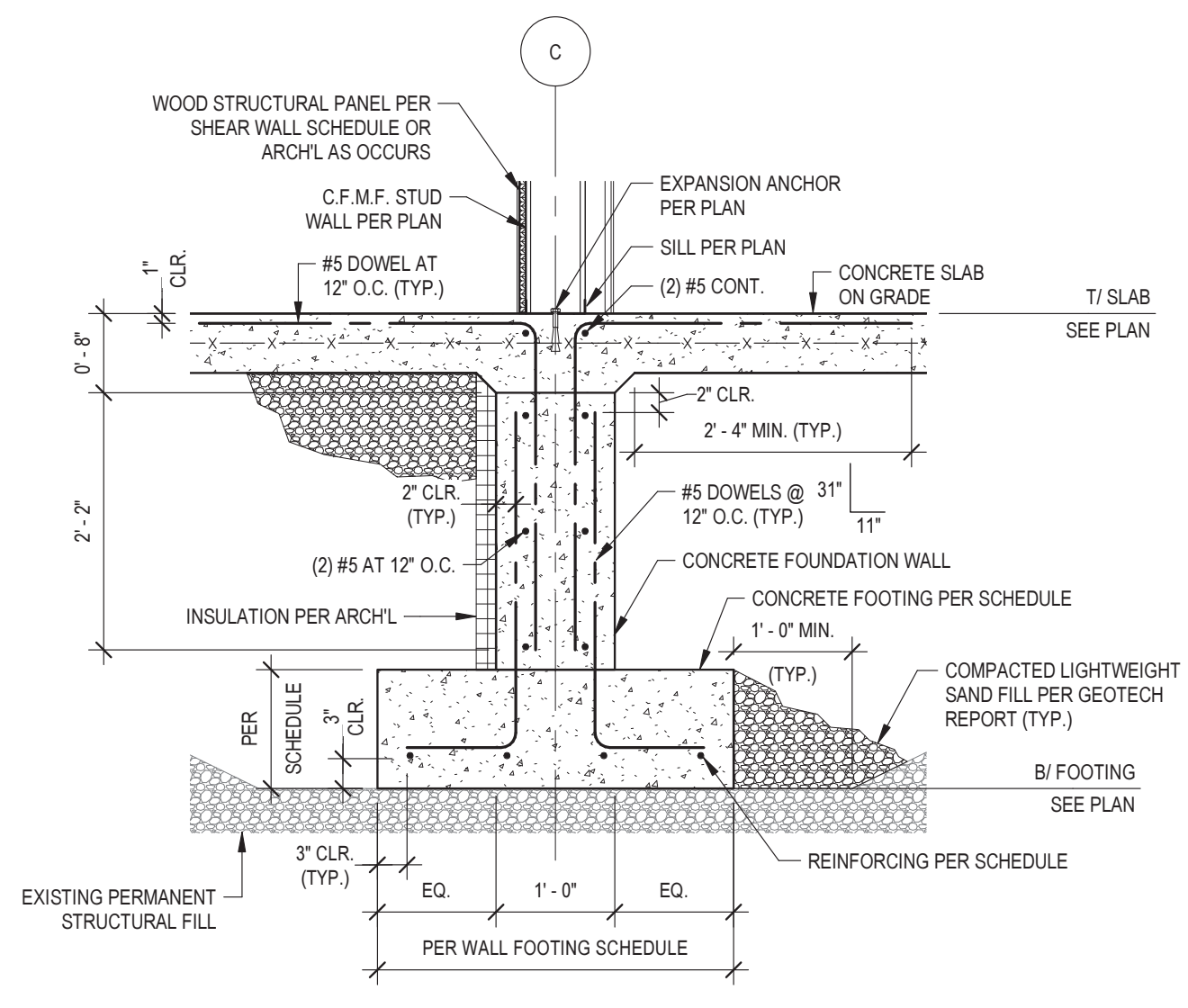
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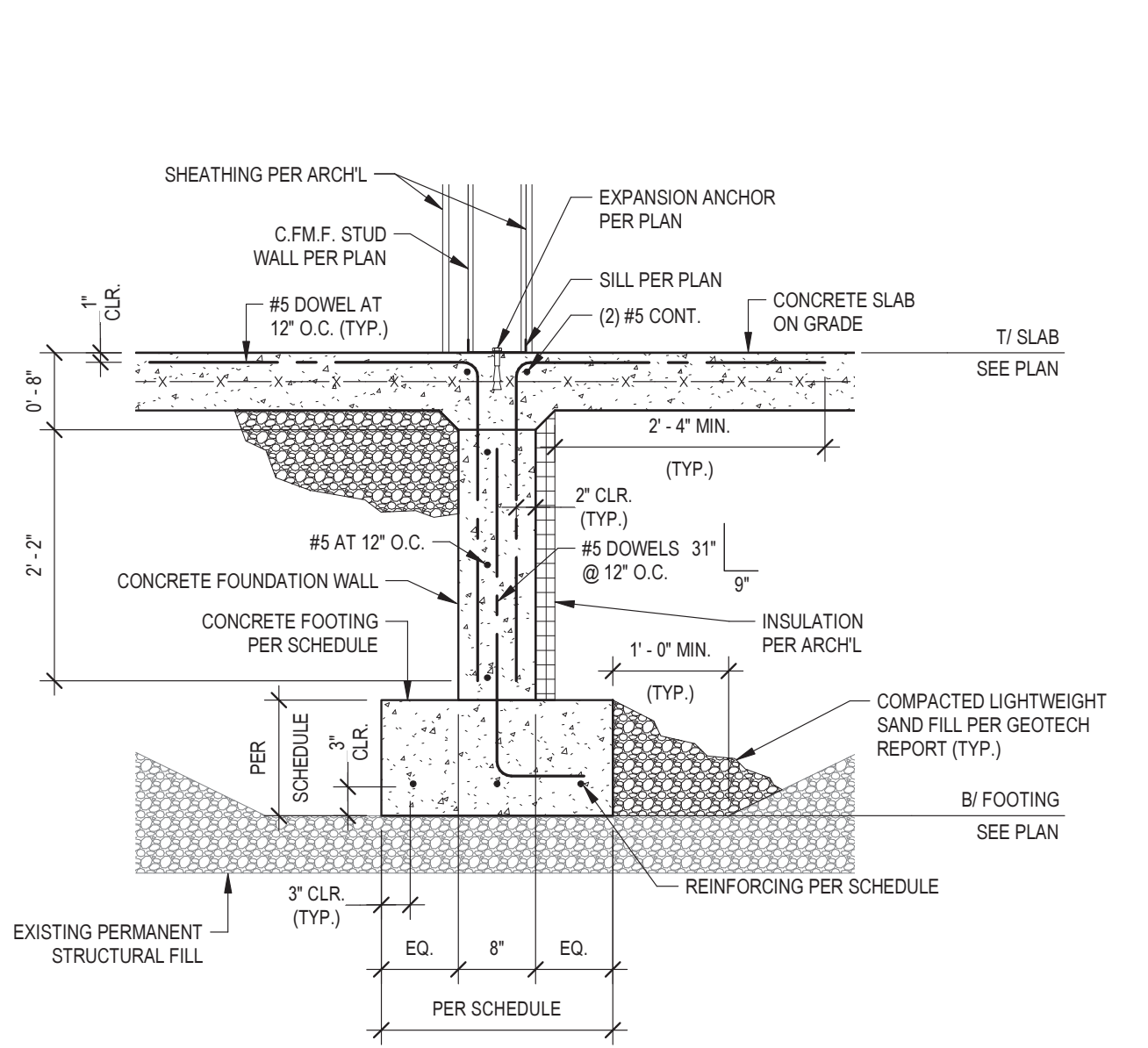
1 EXTERIOR WALL FOUNDATION
3/4" = 1'-0"



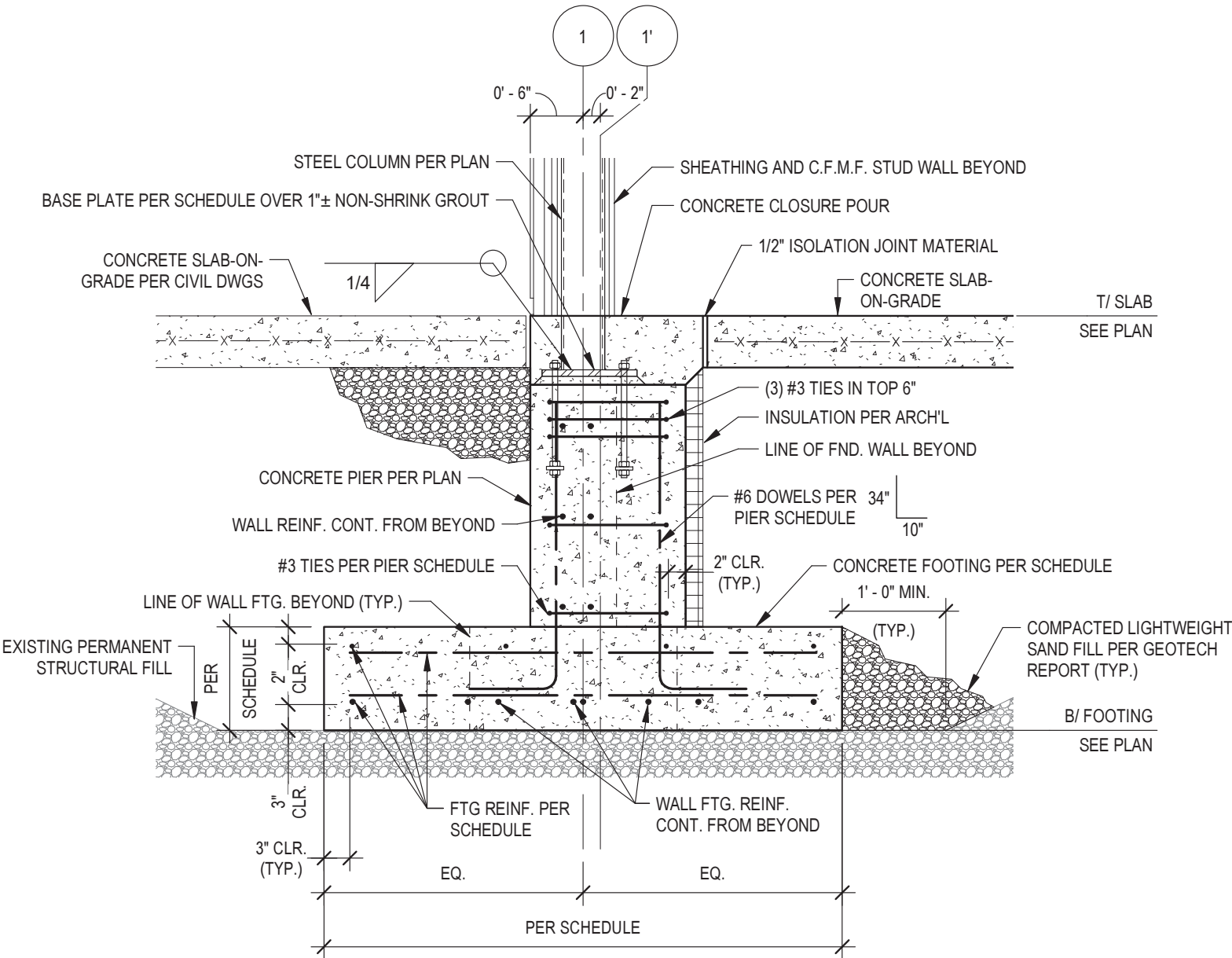
2 EXTERIOR WALL FOUNDATION
3/4" = 1'-0"



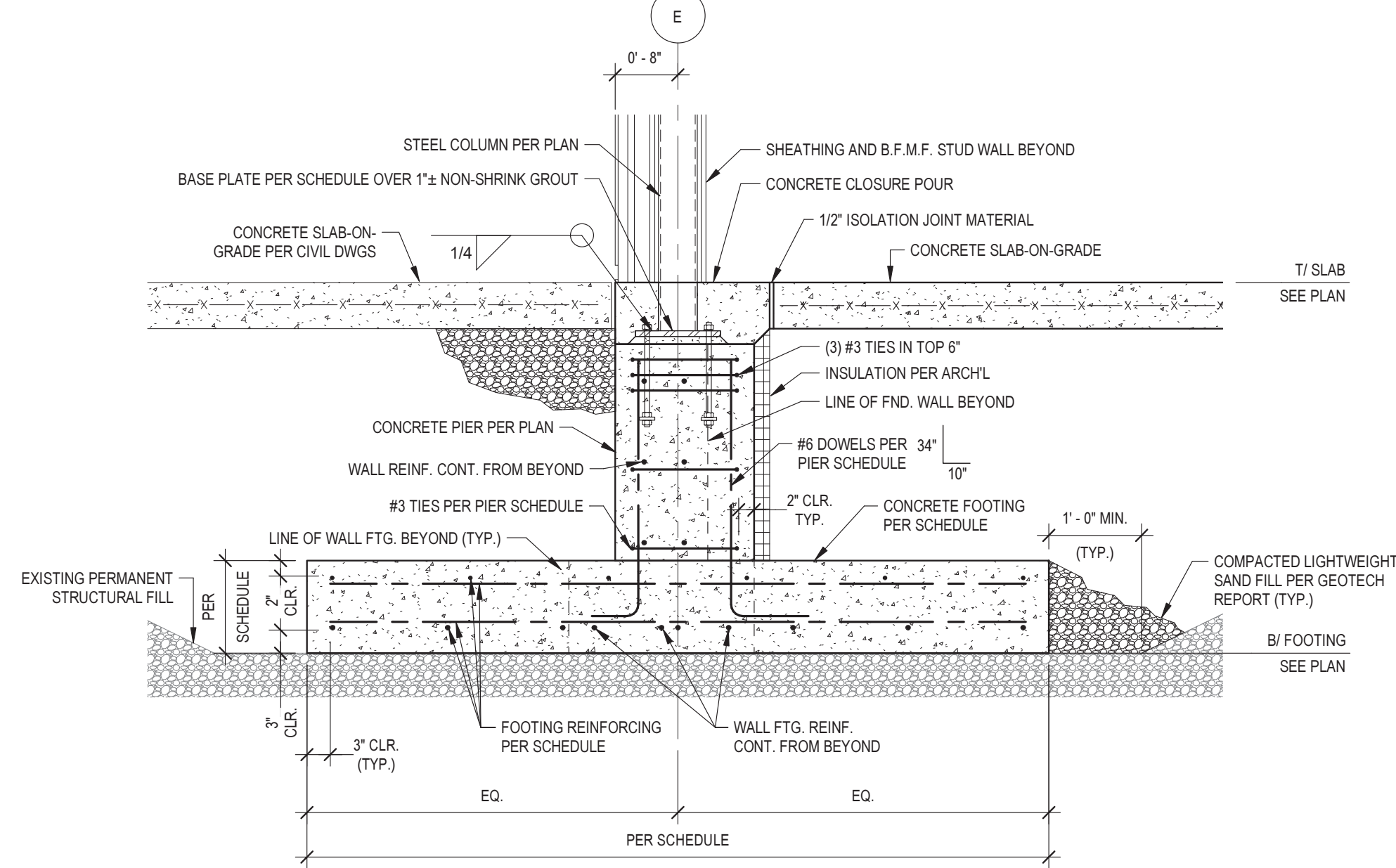
3 INTERIOR SHEAR WALL FOUNDATION
3/4" = 1'-0"



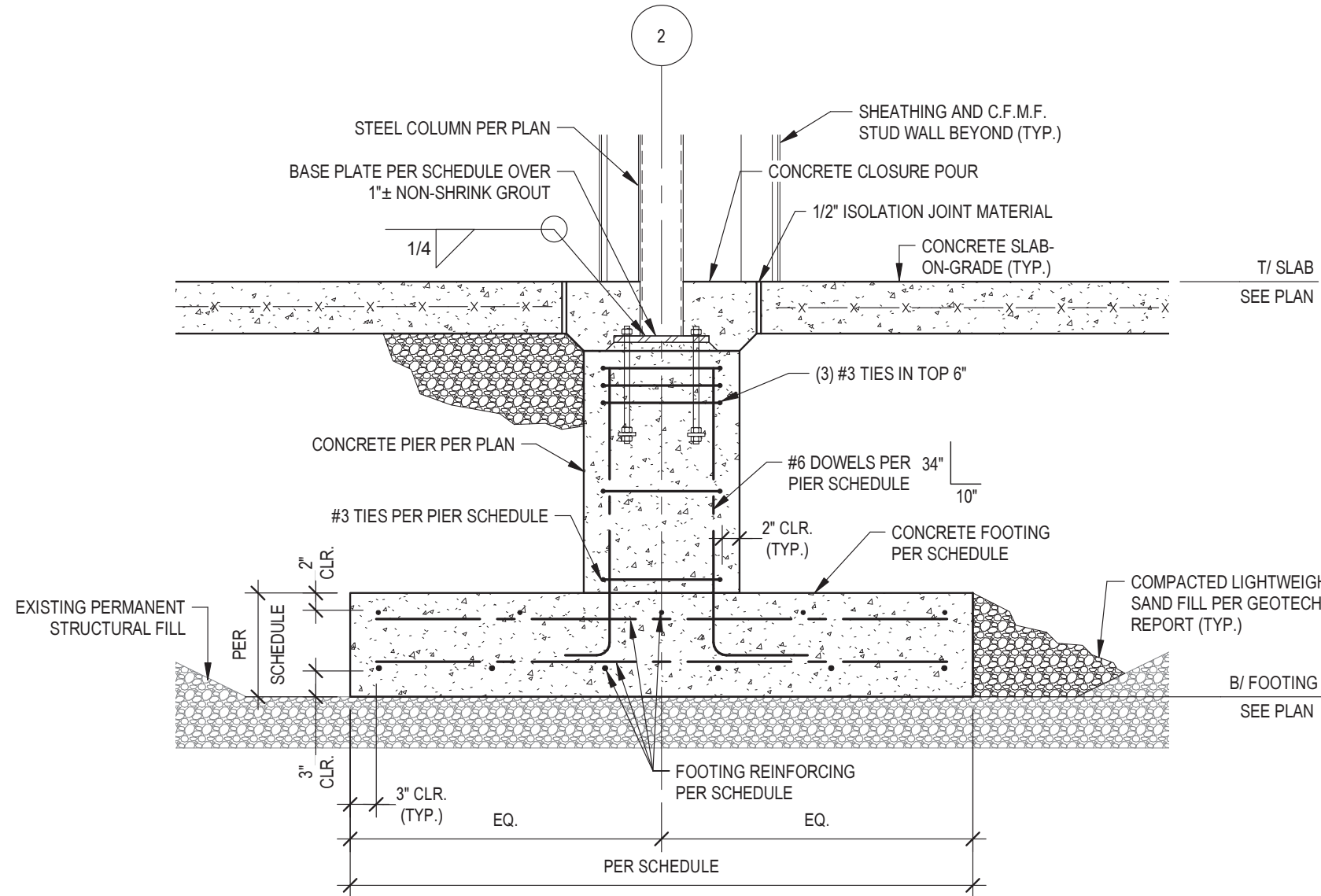
4 INTERIOR INSULATED WALL FOOTING
3/4" = 1'-0"



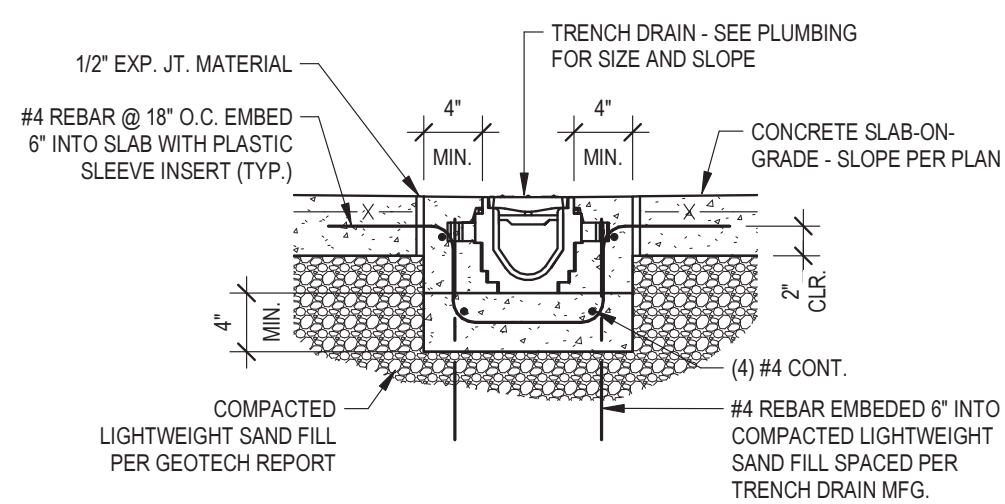
5 TYPICAL COLUMN AT EXTERIOR WALL
3/4" = 1'-0"



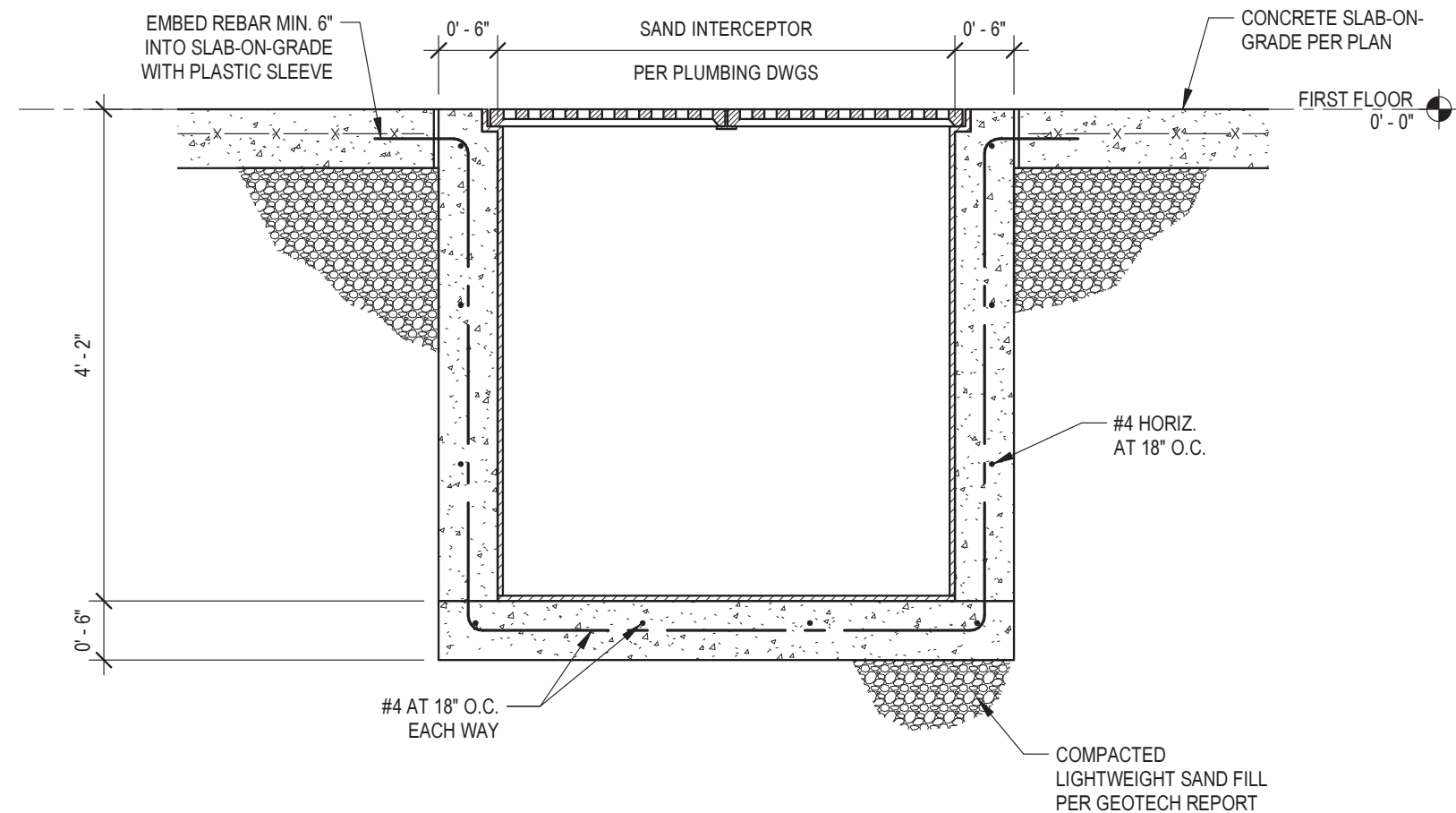
6 COLUMN AT EXTERIOR FOUNDATION WALL
3/4" = 1'-0"



7 INTERIOR COLUMN FOOTING
3/4" = 1'-0"



8 TRENCH DRAIN
1" = 1'-0"



9 SAND INTERCEPTOR
3/4" = 1'-0"

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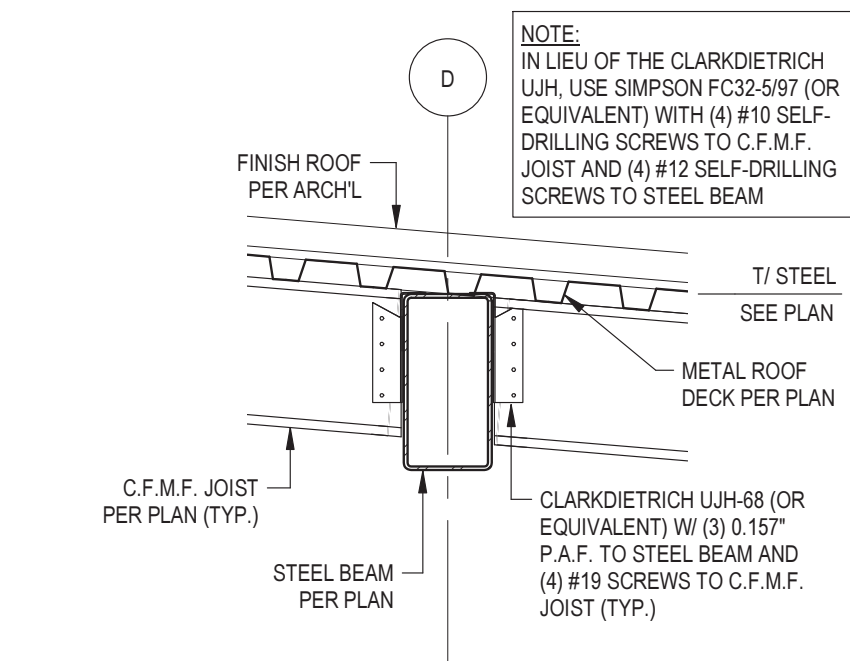
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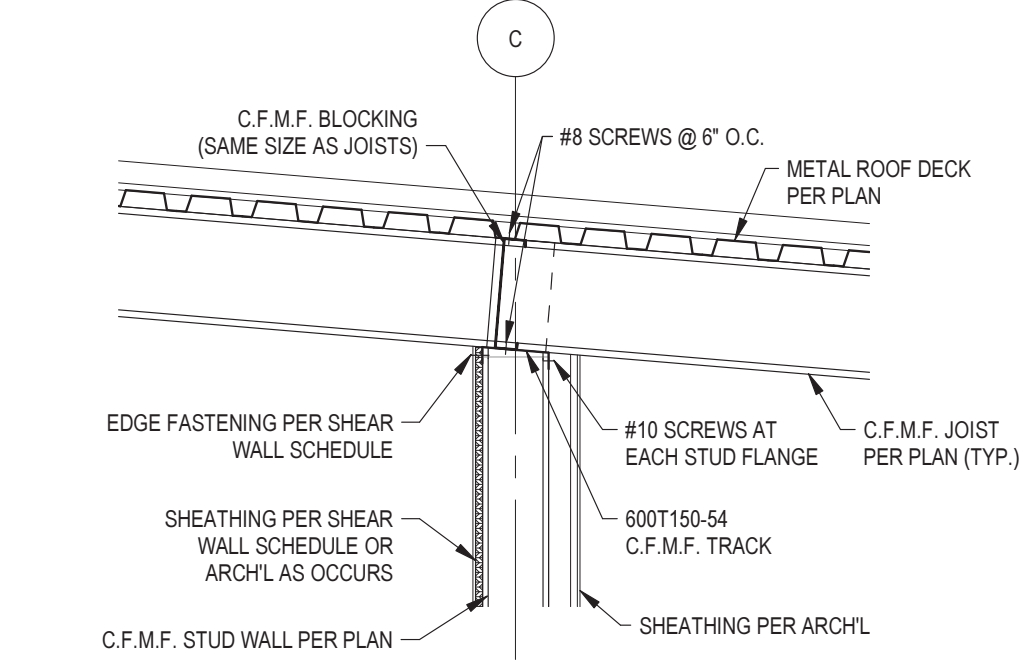
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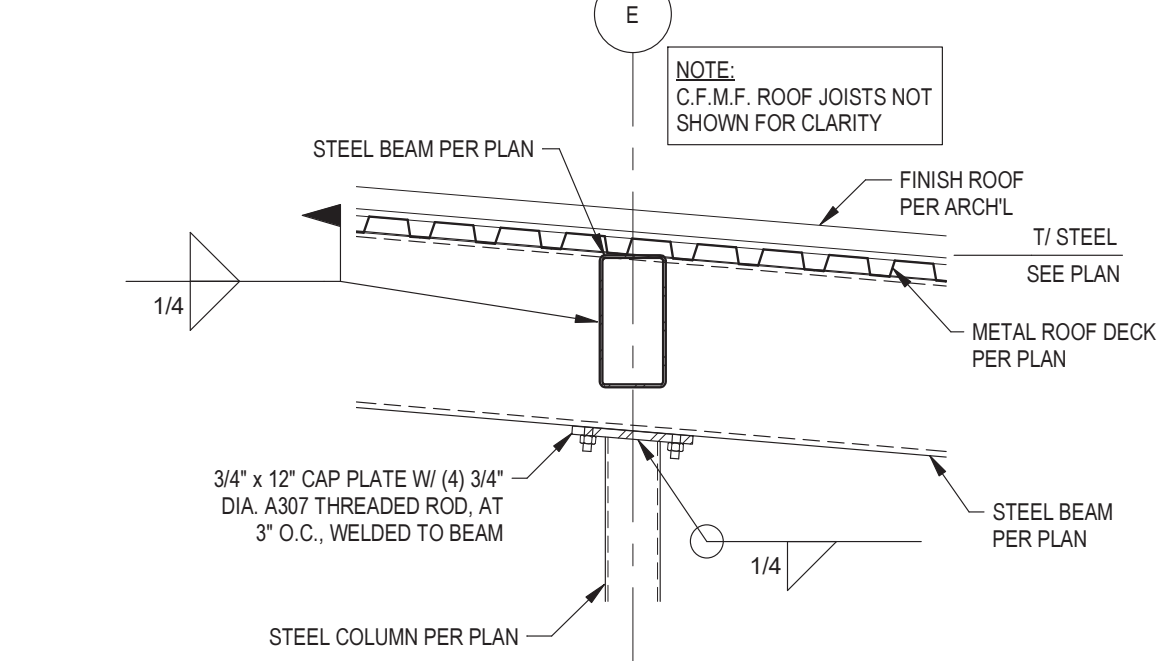
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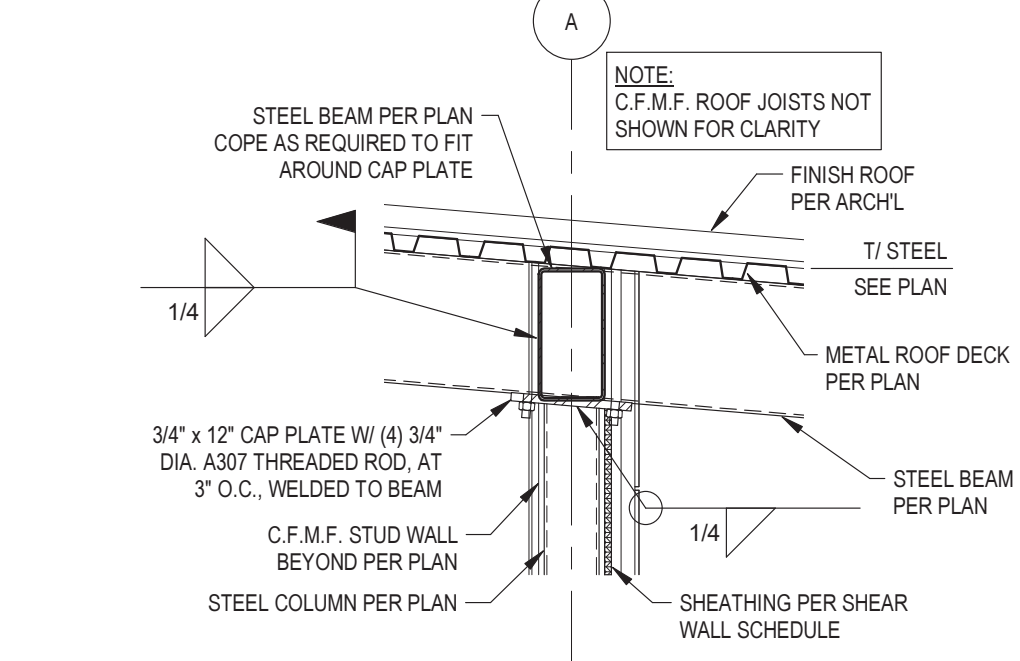
1 TYPICAL C.F.M.F. JOIST TO STEEL BEA
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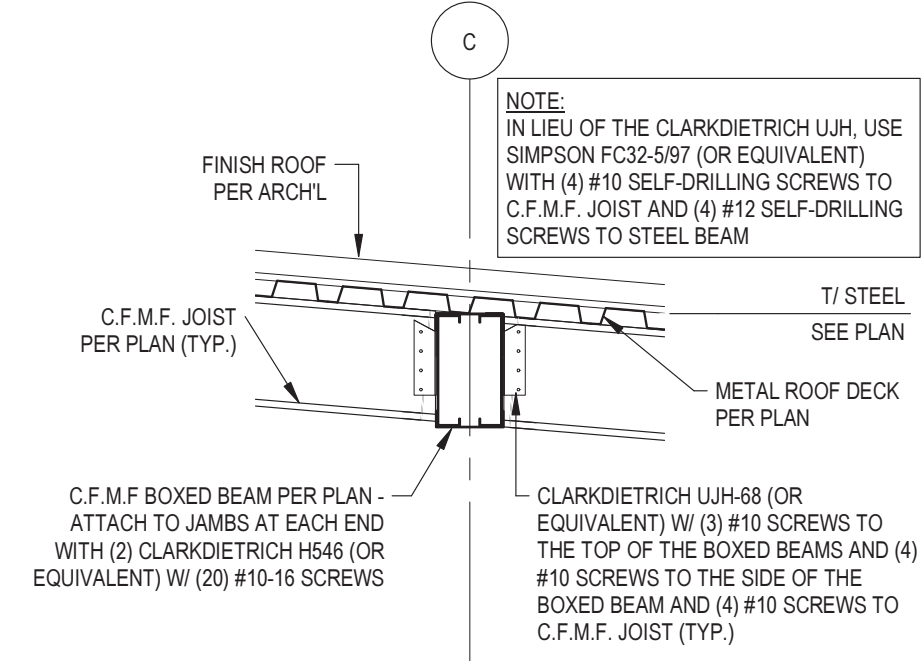
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3/4\"/>



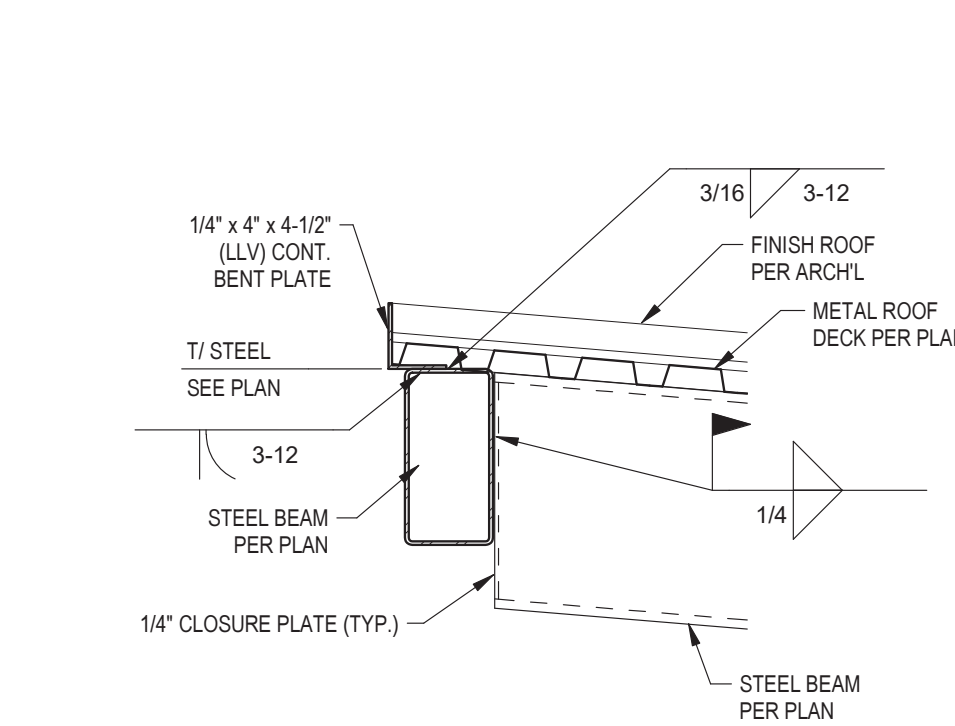
3 STEEL BEAM OVER STEEL COLUMN
3/4\"/>



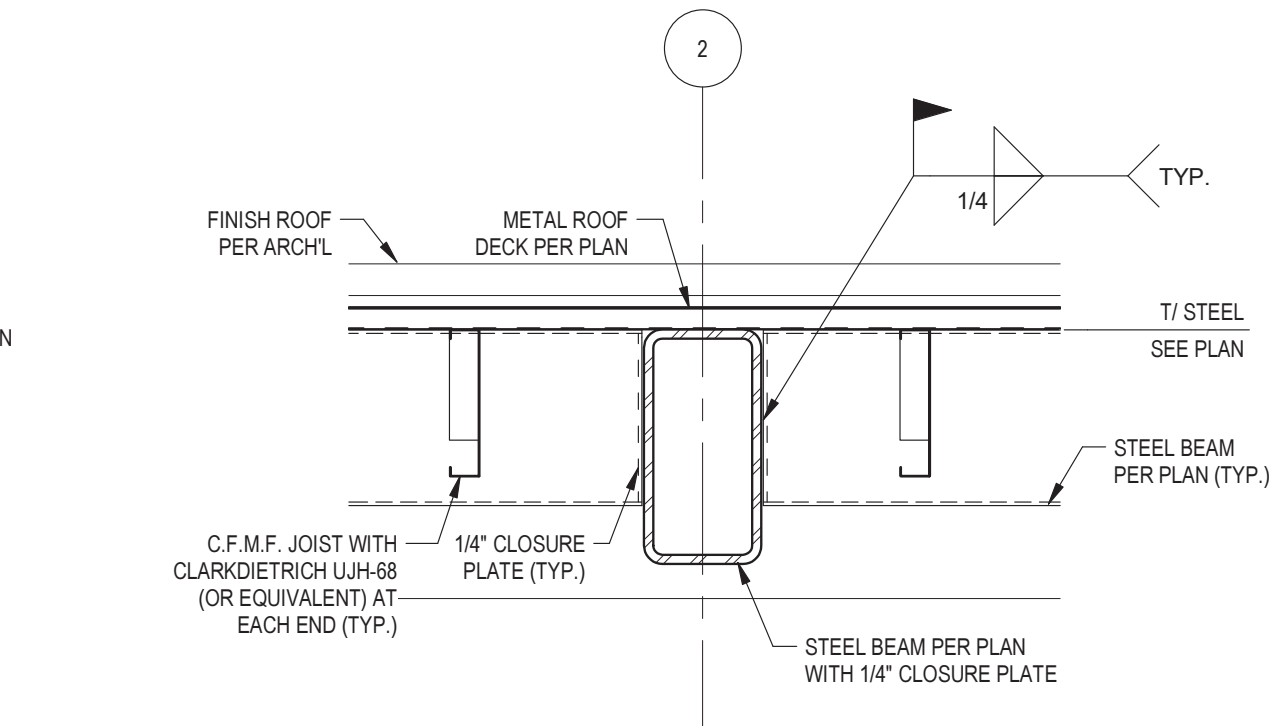
4 STEAL BEAM AT STEEL COLUMN
3/4\"/>



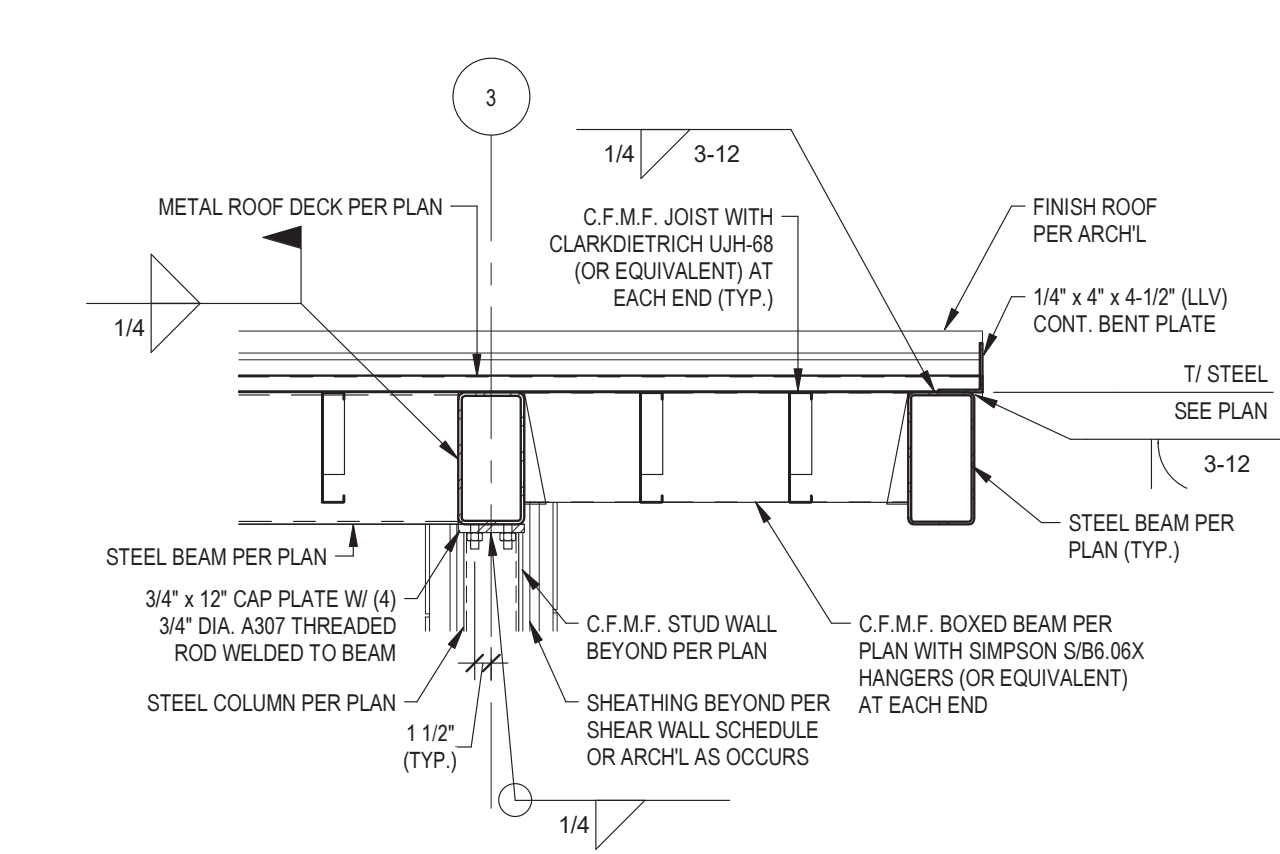
5 C.F.M.F. JOISTS AT C.F.M.F. BOXED BEAM
3/4\"/>



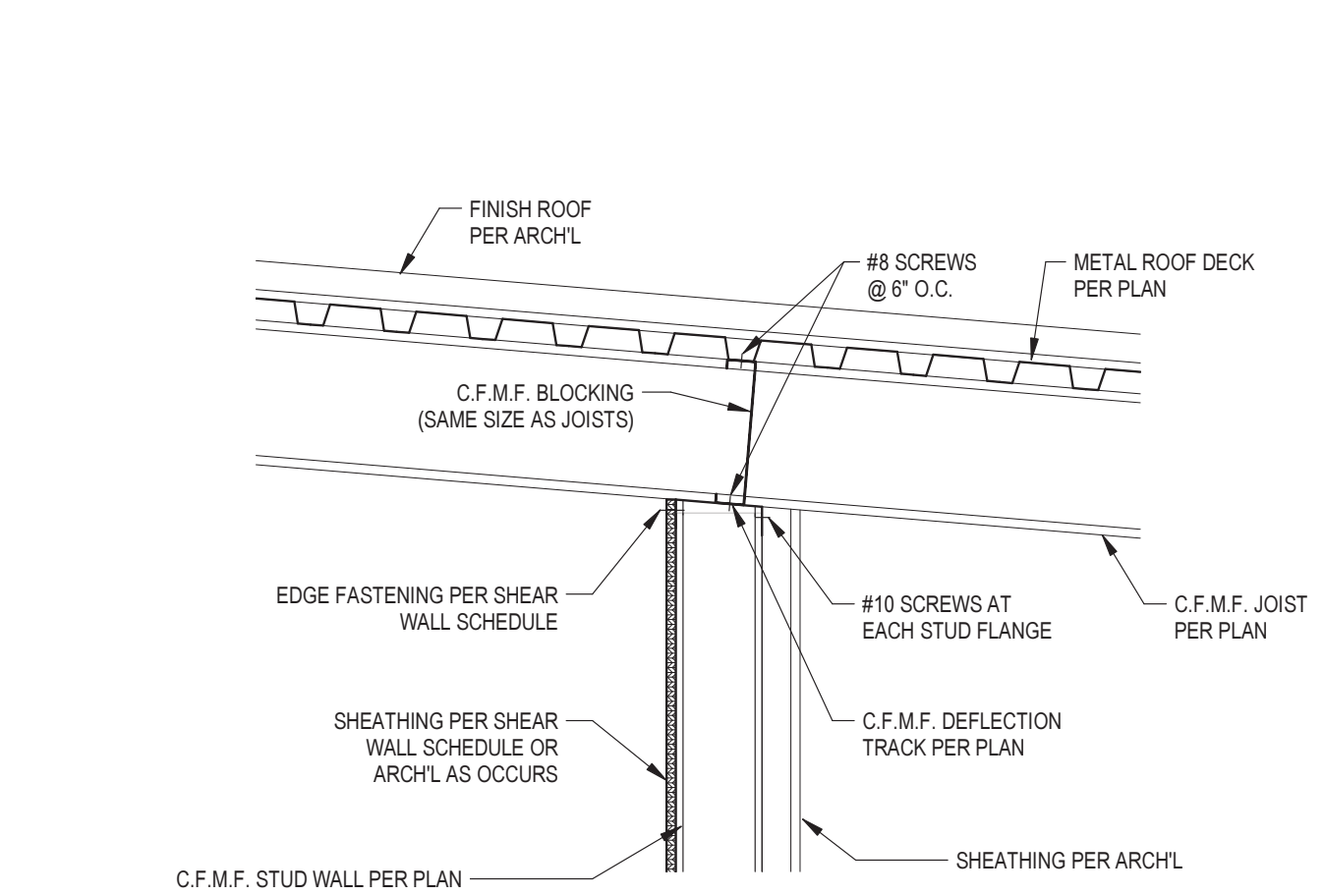
6 STEEL BEAM AT STEEL BEAM
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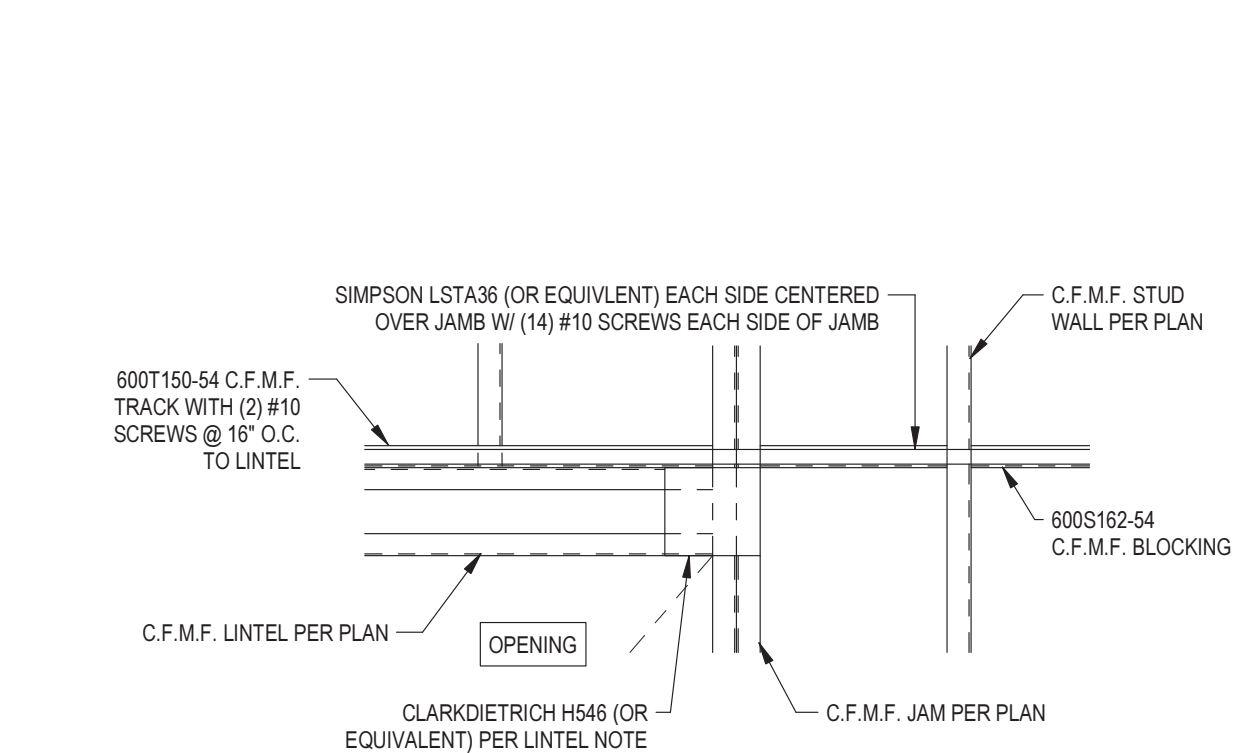
7 STEEL BEAM AT STEEL BEAM
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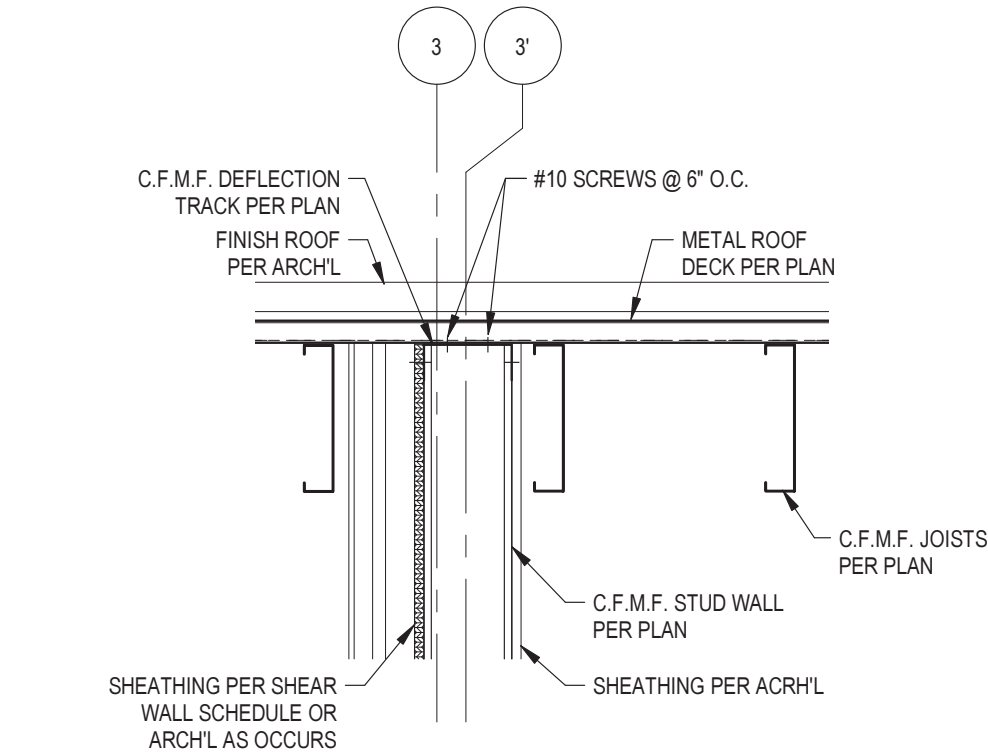
8 STEEL BEAM AND C.F.M.F. BOXED BEAM AT ROOF OVERHANG
3/4\"/>



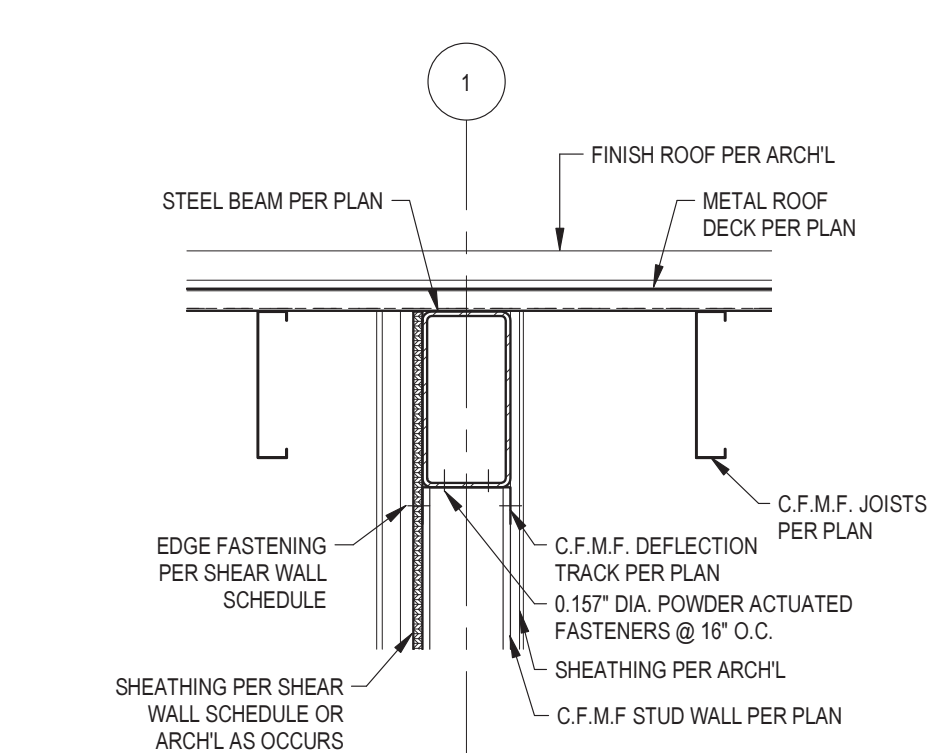
9 SHEAR WALL AT ROOF FRAMING
1\"/>



10 LINTEL AT SHEAR WALL OPENING
1\"/>



11 C.F.M.F. STUD WALL AT ROOF FRAMING
1\"/>



12 C.F.M.F. STUD WALL AT STEEL BEAM
1\"/>

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POPLI DESIGN GROUP

555 Penbrooke Drive • Penfield, NY 14526
main: 585.388.2060 • fax: 585.388.2070

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PENFIELD, NEW YORK

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CONSTRUCTION DOCUMENTS

REVISIONS			
NO.	DATE	BY	DESCRIPTION

PROJECT:
ONONDAGA BEACH
FEASIBILITY STUDY &
DESIGN SERVICES

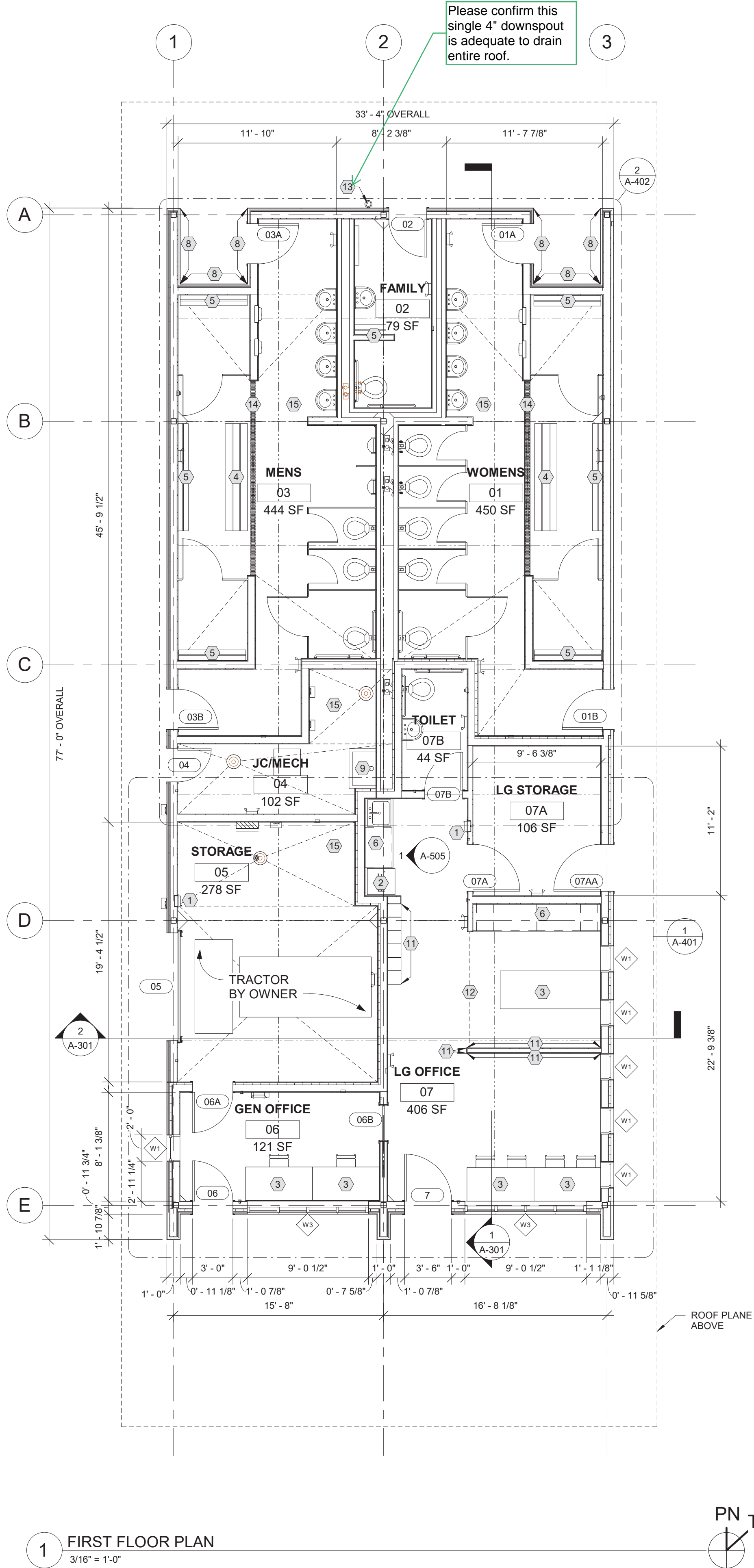
CLIENT:
ONONDAGA COUNTY

DRAWING TITLE

FRAMING DETAILS

DRAWING NO.	drawn by PS checked JMF proj. mgr. MSM proj. no. AR19003.00
S602	

ISSUE DATE
03/17/2020



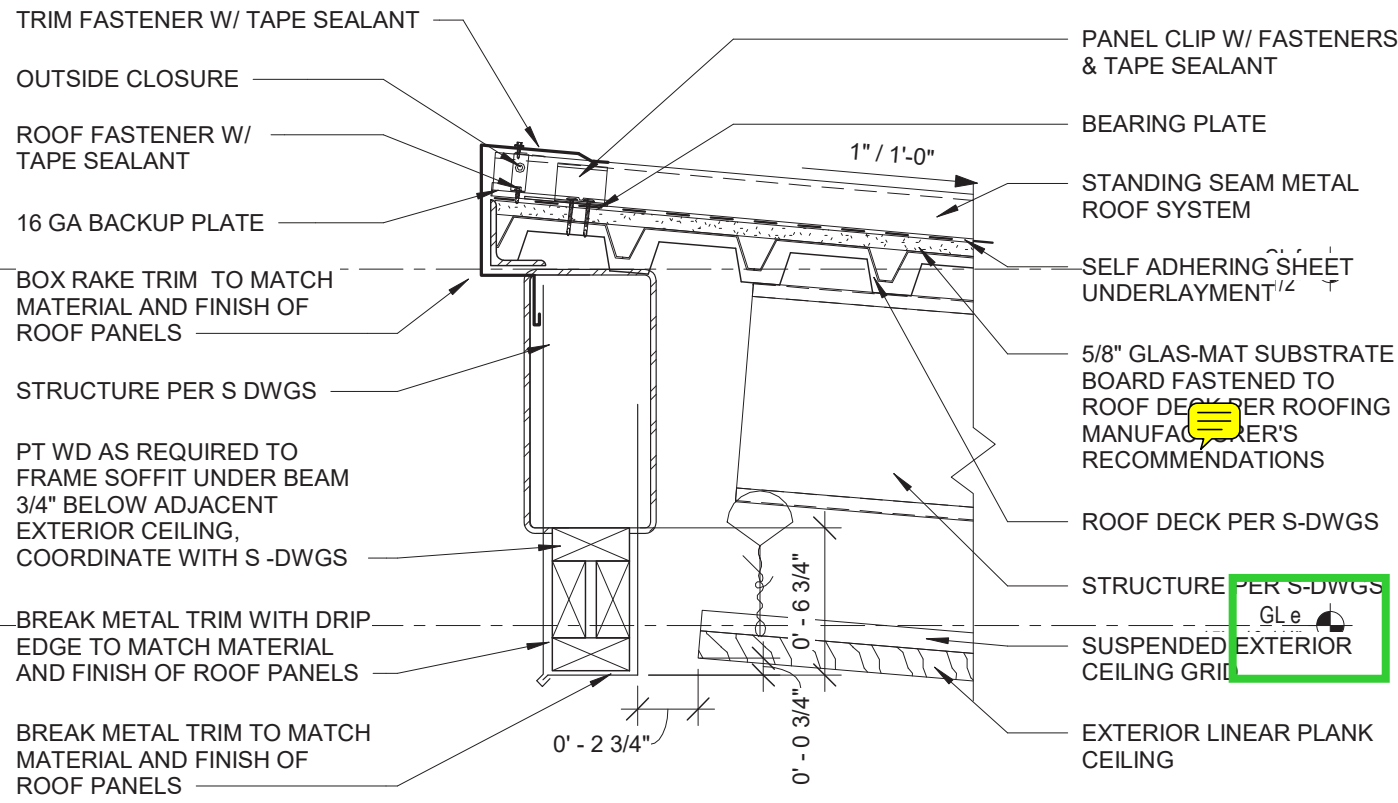
FLOOR PLAN GENERAL NOTES:

1. REFER TO CIVIL DRAWINGS FOR ADJACENT SIDEWALK, RAMPS, AND SURROUNDING SITE CONSTRUCTION. A- SERIES DRAWINGS REFER TO CONSTRUCTION WITHIN BUILDING FOOTPRINT AND ROOF ONLY.
2. REFER TO H- E- P- DRAWINGS FOR LOCATIONS OF FLOOR, CEILING AND WALL MOUNTED MECHANICAL AND ELECTRICAL ITEMS.
3. FURNITURE SHOWN FOR REFERENCE ONLY, FURNITURE BY OWNER.
4. VERIFY ALL DIMENSIONS IN FIELD PRIOR TO START OF WORK
5. REFER TO ROOM FINISH SCHEDULE FOR ROOM FINISHES
6. REFER TO ENLARGED FLOOR PLANS FOR PARTITION CALLOUTS, NOTES, ELEVATION TAGS, AND DIMENSIONS NOT SHOWN ON FLOOR PLAN.
7. REFER TO EXTERIOR ELEVATIONS FOR RAINSCREEN PANEL, COLOR, AND CONFIGURATION

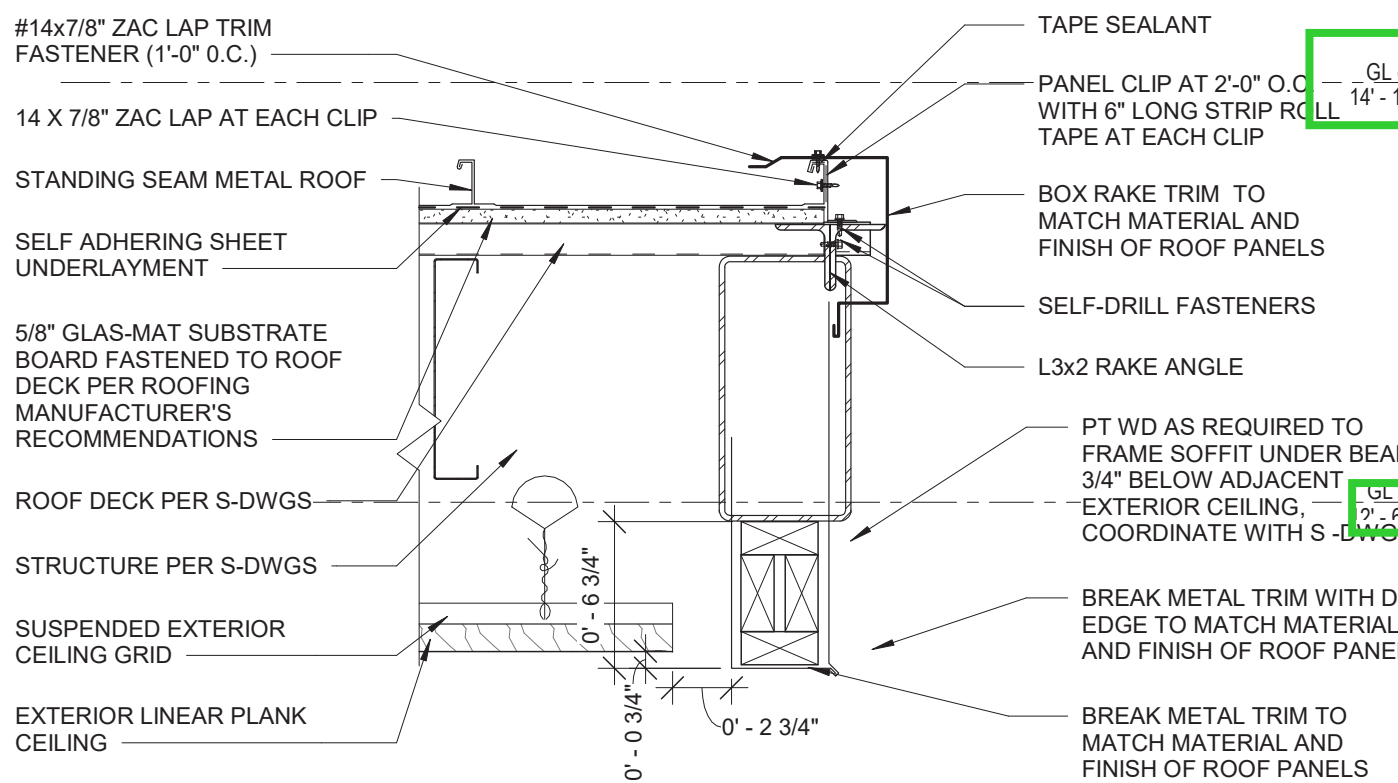
FLOOR PLAN KEYNOTES:

- 1 SEMI-RECESSED FIRE EXTINGUISHER CABINET AND EXTINGUISHER
- 2 REFRIGERATOR PROVIDED BY OWNER, FOR REFERENCE ONLY. COORDINATE SIZE WITH OWNER
- 3 FURNITURE PROVIDED BY OWNER, FOR REFERENCE ONLY
- 4 18" HIGH, 20" DEEP WD BENCH ON STEEL PEDESTALS
- 5 18" HIGH, 9-1/2" DEEP WD BENCH ON STEEL WALL BRACKETS
- 6 CASEWORK, REFER TO INTERIOR ELEVATIONS AND CASEWORK DETAILS
- 7 POST SIGN IN STORAGE ROOM, "MAXIMUM FLAMMABLE LIQUID STORAGE 25 GALLONS" REFER TO SIGNAGE DIAGRAMS ON A601
- 8 USE RS-2 RAINSCREEN SYSTEM ON RESTROOM ENTRY ALCOVE WALL
- 9 FLOOR MOP SINK PER P- DRAWINGS
- 10 TWO TIER LOCKERS, (6) LOCKER UNITS, (12 LOCKERS TOTAL)
- 11 ACCENT WALL FINISH PER ACCENT WALL FINISH DETAILS ON A203
- 12 ANTIMICROBIAL CUBICLE CURTAIN & OVERHEAD TRACK PROVIDED BY OWNER, FOR REFERENCE ONLY
- 13 DOWNSPOUT CONNECTION TO STORM DRAIN LINE BELOW SLAB, COORDINATE WITH CIVIL DRAWINGS
- 14 TRENCH DRAIN PER P-DWGS
- 15 FLOOR SLAB SLOPED TO DRAIN THROUGHOUT ROOM PER S DWGS.

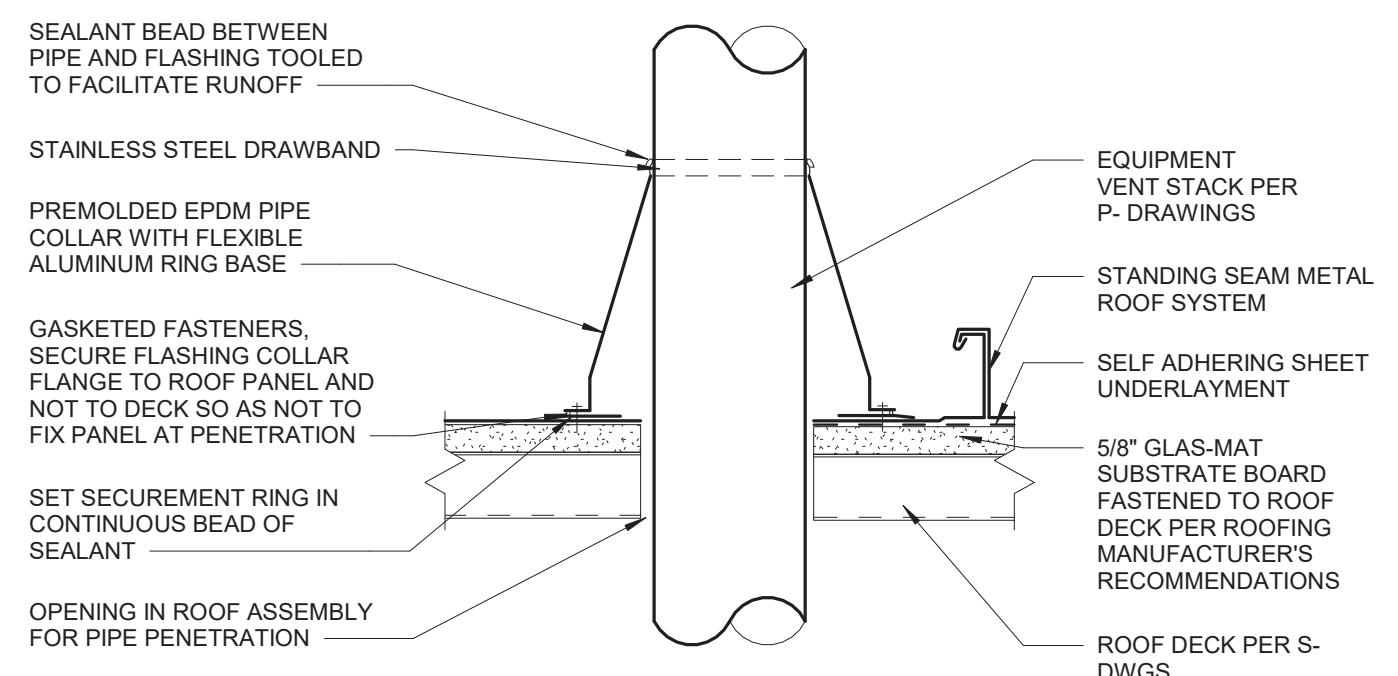
REVISIONS			
NO.	DATE	BY	DESCRIPTION



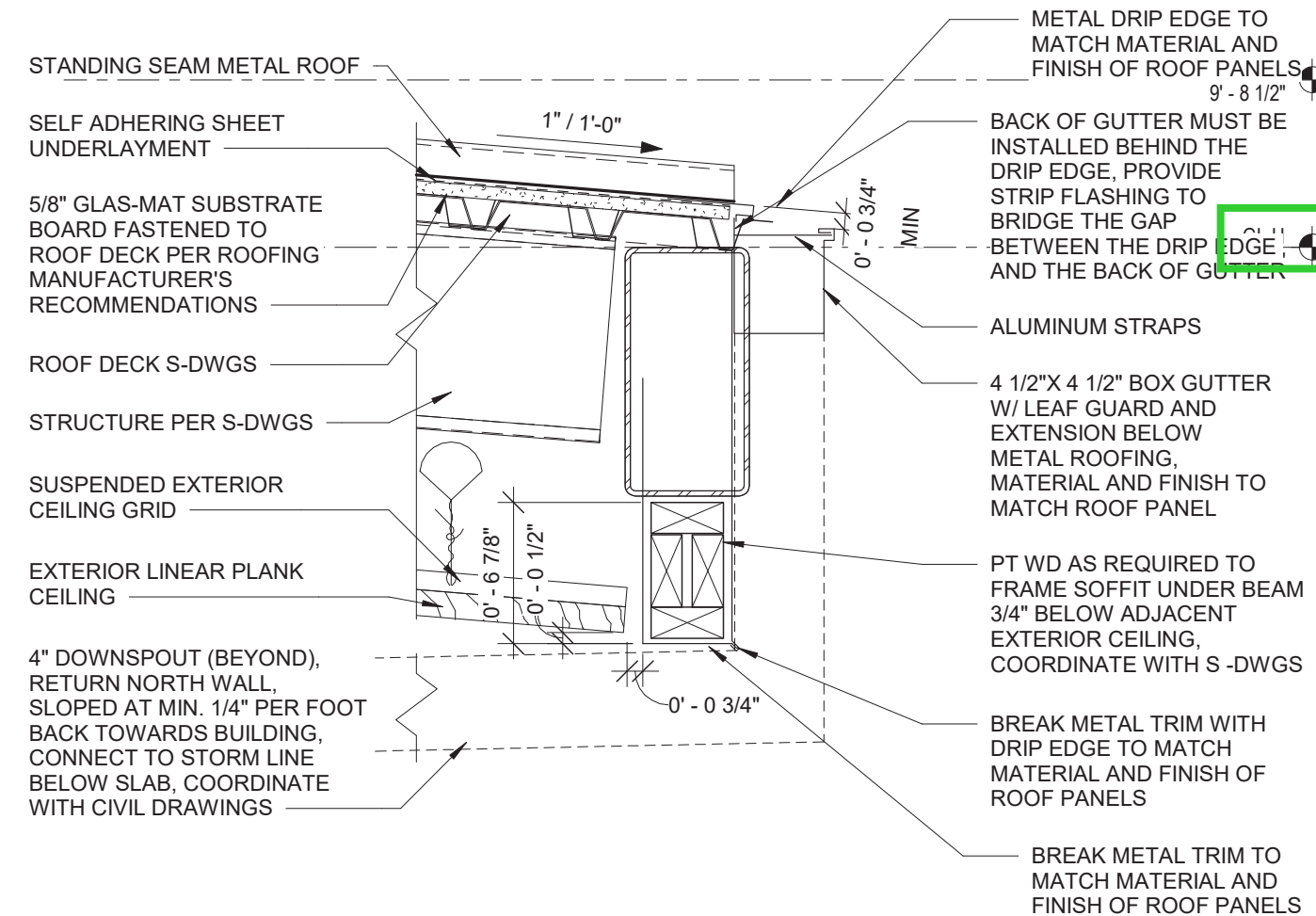
5 SOFFITT AND EAVE AT SOUTH EDGE
1 1/2" = 1'-0"



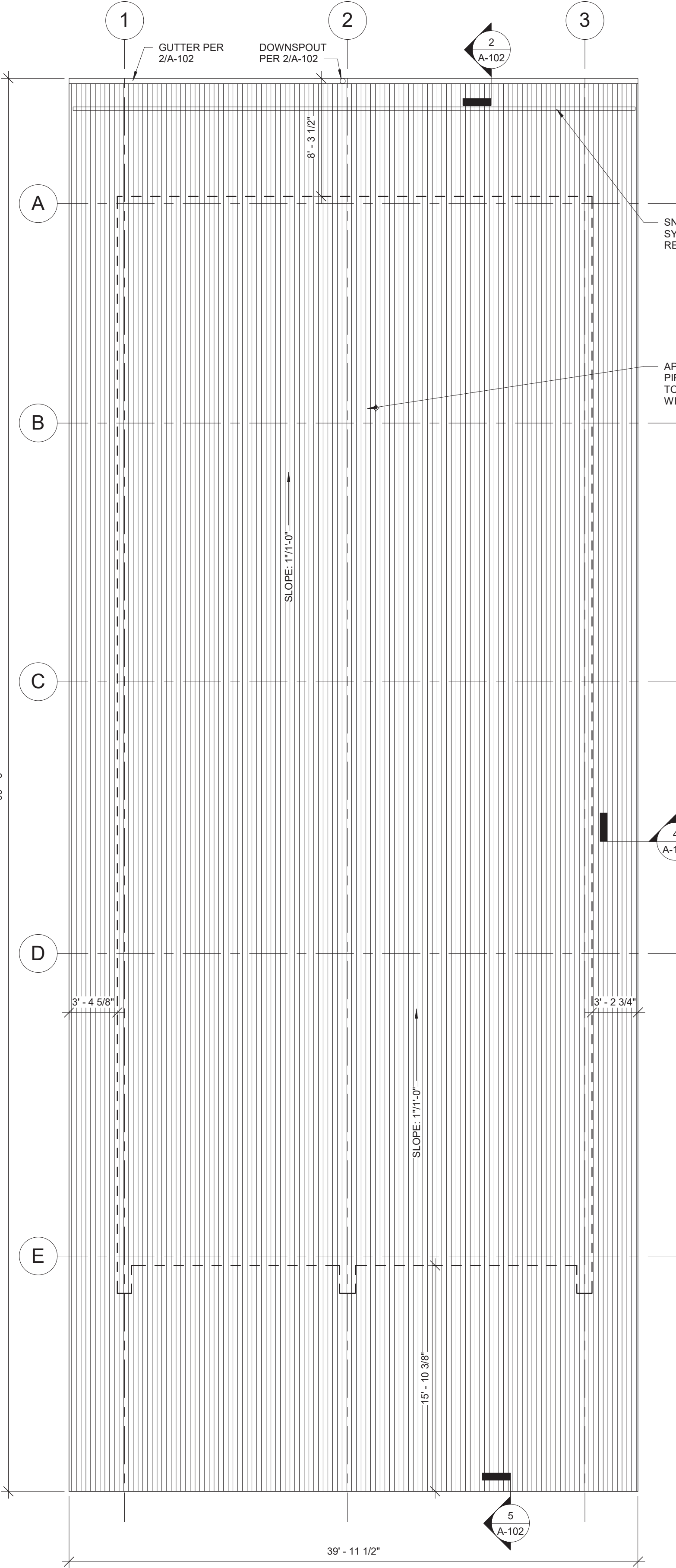
4 TYPICAL SOFFIT AND RAKE AT ROOF EDGE
1 1/2" = 1'-0"



3 PIPE PENETRATION DETAIL
3" = 1'-0"



2 TYPICAL SOFFITT, GUTTER, AND EAVE NORTH ROOF EDGE
1 1/2" = 1'-0"



1 ROOF PLAN
3/16" = 1'-0"

ROOF PLAN GENERAL NOTES:

1. REFER TO CIVIL DRAWINGS FOR ADJACENT SIDEWALK, RAMPS, AND SURROUNDING SITE CONSTRUCTION. A- SERIES DRAWINGS REFER TO CONSTRUCTION WITHIN BUILDING FOOTPRINT AND ROOF ONLY
2. REFER TO H, E, P-DRAWINGS FOR LOCATIONS OF FLOOR, CEILING AND WALL MOUNTED MECHANICAL AND ELECTRICAL ITEMS.
3. VERIFY ALL DIMENSIONS IN FIELD PRIOR TO START OF WORK
4. ROOF SLOPE TO BE 1:12
5. STANDING SEAM ROOF: STANDING SEAMS ORIENTED TO PROJECT NORTH
6. COORDINATE STANDING SEAM LOCATIONS WITH ROOF PENETRATIONS SUCH THAT NO ROOF PENETRATIONS OR ASSOCIATED FLASHING, COPING & BOOT OCCUR AT STANDING SEAMS.
7. CONNECT DOWNSPOUT TO SITE DRAINAGE. REFER TO ELEVATIONS, PLUMBING DRAWINGS, AND CIVIL DRAWINGS

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POPLI DESIGN GROUP
555 Penbrooke Drive • Penfield, NY 14526
main: 585.388.2060 • fax: 585.388.2070

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CONSTRUCTION DOCUMENTS

REVISIONS			
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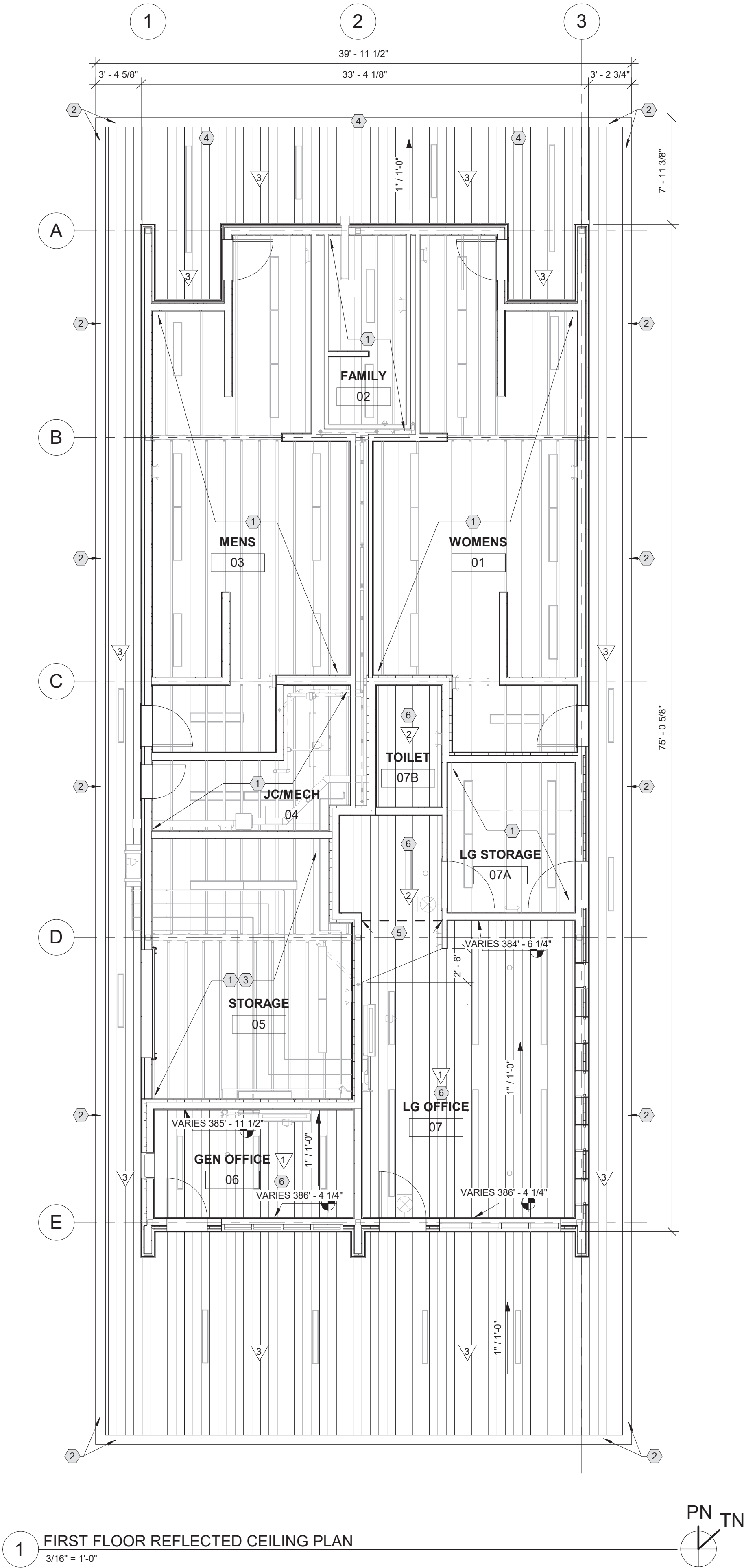
PROJECT:
ONONDAGA BEACH
FEASIBILITY STUDY &
DESIGN SERVICES

CLIENT:
ONONDAGA COUNTY

DRAWING TITLE
ROOF PLAN & ROOF
DETAILS

DRAWING NO.	drawn by KKS checked MSM proj. mgr. MSM proj. no. AR19003.00
A-102	

ISSUE DATE
12/31/2019



REFLECTED CEILING PLAN GENERAL NOTES:

1. REFER TO MECHANICAL, ELECTRICAL, PLUMBING & FIRE PROTECTION DRAWINGS FOR CEILING MOUNTED/RECESSED ITEMS.
2. IN CASE OF DISCREPANCIES BETWEEN CEILING PLANS & M/E/P DRAWINGS, NOTIFY ARCHITECT IMMEDIATELY.
3. LAY OUT CEILING GRIDS SYMMETRICALLY ABOUT THE ROOM AS INDICATED.
4. CONTRACTOR SHALL PROTECT OR MOVE CONTENTS OF ROOM PRIOR TO CEILING REMOVAL AND RESTORE CONTENTS UPON COMPLETION OF CEILING REPLACEMENT PER 018700 - FURNITURE & EQUIPMENT MOVING.
5. COORDINATE CEILING EMBEDDED LIGHT FIXTURES TO BE FLUSH WITH UNDERSIDE OF CEILING. REFER TO E-DWGS

REFLECTED CEILING PLAN KEYNOTES:

- 1 CEILING EXPOSED TO UNDERSIDE OF DECK. ALL STRUCTURE EXPOSED. FRAMING, CONDUIT, DUCTS, DIFFUSERS, AND GRILLES TO BE DRYFALL PAINTED PT-2.
- 2 WRAP STRUCTURAL ROOF PERIMETER MEMBERS IN BREAK METAL WITH DRIP EDGE PER DETAILS ON A102, COORDINATE WITH S- DWGS
- 3 ALL CONDUIT, LIGHT FIXTURES, PLUMBING, PIPING, AND ALL OTHER EQUIPMENT SUSPENDED OR MOUNTED TO UNDERSIDE OF DECK OR STRUCTURE TO BE MAINTAIN 10' - 0" CLEAR ABOVE FINISH FLOOR THROUGHOUT STORAGE ROOM
- 4 MAINTAIN MINIMUM HEADROOM CLEARANCE OF 7' - 0" ABOVE SIDEWALK FLOOR AT LOWEST POINT OF ROOF CANOPY, COORDINATE WITH CIVIL DWGS
- 5 END OF HIGH CEILING (TYPE 1) ABOVE LOW CEILING (TYPE 2)
- 6 ALL FRAMING, SUBSTRATE, INSULATION, CONDUITS, AND ABOVE CEILING SYSTEM(S) TO BE PAINTED PT-3

CEILING TYPES

- 1 INTERIOR WOOD PLANK CEILING
SUSPENDED FROM CEILING FRAMING,
FOLLOW 1:12 SLOPE OF ROOF DECK
- 2 INTERIOR WOOD PLANK CEILING SUSPENDED
FROM CEILING FRAMING, LEVEL UNDERSIDE
OF CEILING AT 8'-0" ABOVE FINISH FLOOR
- 3 EXTERIOR WOOD PLANK CEILING
SUSPENDED FROM UNDERSIDE OF ROOF
DECK, FOLLOW 1:12 SLOPE OF ROOF DECK

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**CONSTRUCTION
DOCUMENTS**

REVISIONS			
NO.	DATE	BY	DESCRIPTION

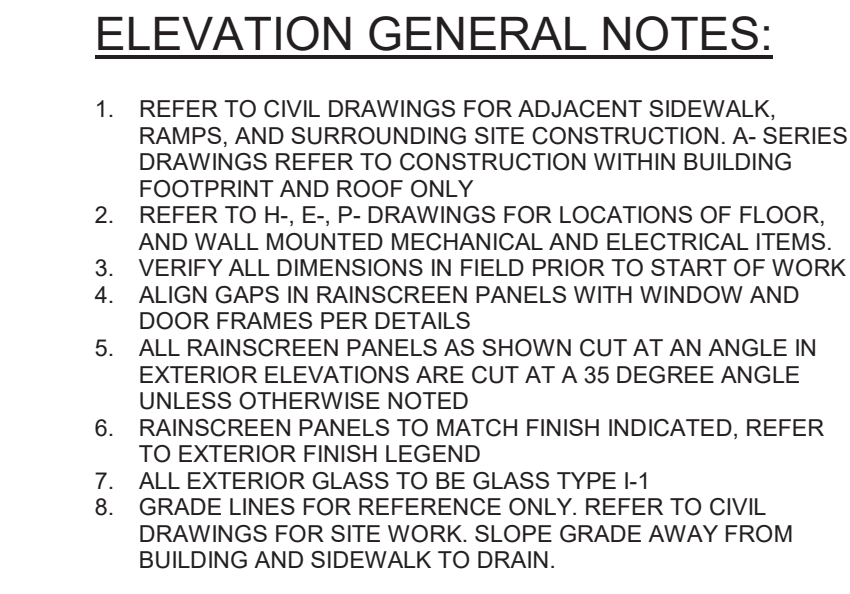
PROJECT:
**ONONDAGA BEACH
FEASIBILITY STUDY &
DESIGN SERVICES**

CLIENT:
ONONDAGA COUNTY

DRAWING TITLE
**FIRST FLOOR REFLECTED
CEILING PLAN**

DRAWING NO.	drawn by	KKS
A-131	checked	MSM
	proj. mgr.	MSM
	proj. no.	AR19003.00

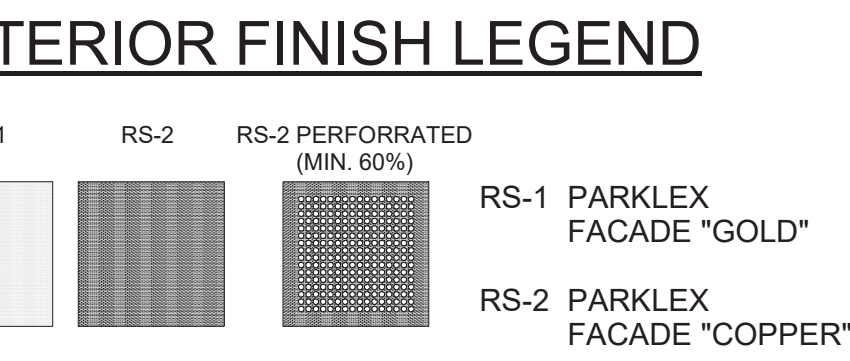
ISSUE DATE
12/31/2019






ELEVATION KEYNOTES:

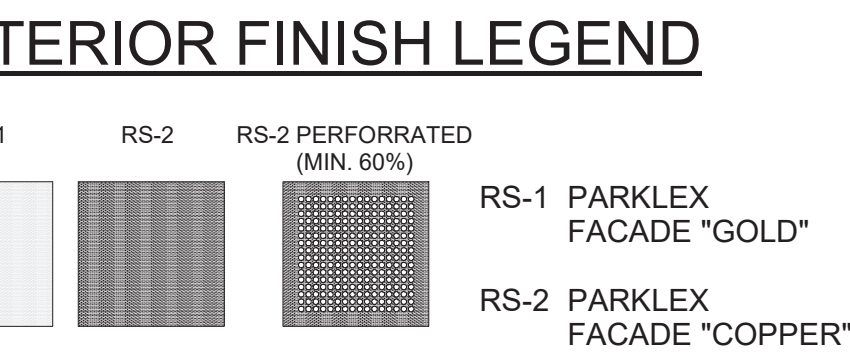
- ① BREAK METAL TRIM AROUND PERIMETER ROOF FRAMING. REFER TO DETAILS ON A-102
- ② 60% PERFORATED RAINSCREEN PANEL FOR VENTILATION. REFER TO WALL SECTION 2/A-303
- ③ MECHANICAL EQUIPMENT WALL PENETRATION, REFER TO M- DWGS
- ④ HOSE BIB WALL PENETRATION, REFER TO P- DWGS
- ⑤ WOOD PLANK EXTERIOR CEILING SYSTEM, REFER TO REFLECTED CEILING PLAN
- ⑥ LIGHT FIXTURE, REFER TO E- DWGS
- ⑦ ALIGN GAP IN RAINSCREEN PANEL WITH WINDOW FRAME, DOOR FRAME, OR OPENING
- ⑧ STANDING SEAM ROOF SYSTEM, REFER TO ROOF PLAN
- ⑨ CONTINUE RAINSCREEN PANEL SYSTEM IN BATHROOM ENTRY AREA WITH RAINSCREEN PANELS RS-2, COORDINATE WITH FLOOR PLANS
- ⑩ FRP DOOR, REFER TO DOOR SCHEDULE
- ⑪ ROLLING OVERHEAD SECTIONAL DOOR, REFER TO DOOR SCHEDULE
- ⑫ VENTING CASEMENT WINDOW IN STOREFRONT SYSTEM WITH REMOVABLE INSECT SCREEN.

that is this DIM from ground to bottom of roof....seems awful low






INTERIOR FINISH LEGEND

	RS-2	RS-2 PERFORMED (MIN. 60%)	
			RS-1 PARKLEX FACADE "GOLD"
			RS-2 PARKLEX FACADE "COPPER"



INTERIOR FINISH LEGEND

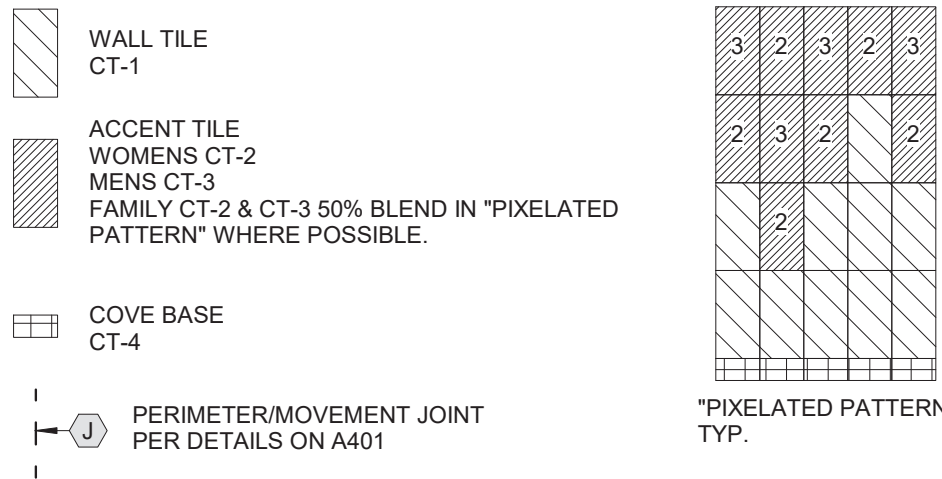
	RS-2	RS-2 PERFORMED (MIN. 60%)	
			RS-1 PARKLEX FACADE "GOLD"
			RS-2 PARKLEX FACADE "COPPER"



INTERIOR ELEVATIONS GENERAL NOTES:

1. REFER TO ENLARGED FLOOR PLANS AND ELEVATIONS ON A401 & A402 FOR LOCATIONS AND HEIGHTS OF FIXTURES.
2. REFER TO H-, E-, P-DRAWINGS FOR LOCATIONS OF FLOOR, CEILING AND WALL MOUNTED MECHANICAL AND ELECTRICAL ITEMS.
3. COORDINATE MOVEMENT JOINT LOCATIONS WITH LAYOUT OF METAL STUD FRAMING
4. TOP EDGE OF ALL TILE TO HAVE TRIM PER TOP OF TILE EDGE JOINT
5. ALL INTERSECTIONS & EDGES OF WALLS TO HAVE PERIMETER JOINT PER 5/A401
6. REFER TO "PIXELATED PATTERN" LEGEND FOR WALL TILE PATTERN IN FAMILY BATHROOM ONLY
7. PAINT STRUCTURE, UNDERSIDE OF ROOF DECK, AND ALL EXPOSED CONDUITS, DUCTS, AND CEILING HUNG COMPONENTS PER FINISH SCHEDULE, UNLESS OTHERWISE NOTED. DO NOT PAINT LIGHT FIXTURES, OCCUPANCY SENSORS, SMOKE DETECTORS, OR OTHER EQUIPMENT. REFER TO ELECTRICAL DRAWINGS AND REFLECTED CEILING PLAN
8. LIGHT FIXTURES NOT SHOWN IN INTERIOR ELEVATIONS FOR CLARITY. REFER TO ELECTRICAL DRAWINGS FOR LIGHT FIXTURE LAYOUT
9. MEN'S ROOM INTERIOR ELEVATIONS (NOT SHOWN) MIRROR LAYOUT OF WOMEN'S ROOM INTERIOR ELEVATIONS. USE ACCENT TILE CT-2 IN WOMEN'S ROOM. USE ACCENT TILE CT-3 IN MEN'S ROOM.
10. RETURN INTERIOR WALL FINISH INTO WALL VENTILATION OPENINGS. REFER TO DETAILS

TILE FINISH LEGEND



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CONSTRUCTION DOCUMENTS

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NO.	DATE	BY	DESCRIPTION

PROJECT:

ONONDAGA BEACH
FEASIBILITY STUDY &
DESIGN SERVICES

CLIENT:

ONONDAGA COUNTY

DRAWING TITLE

INTERIOR ELEVATIONS

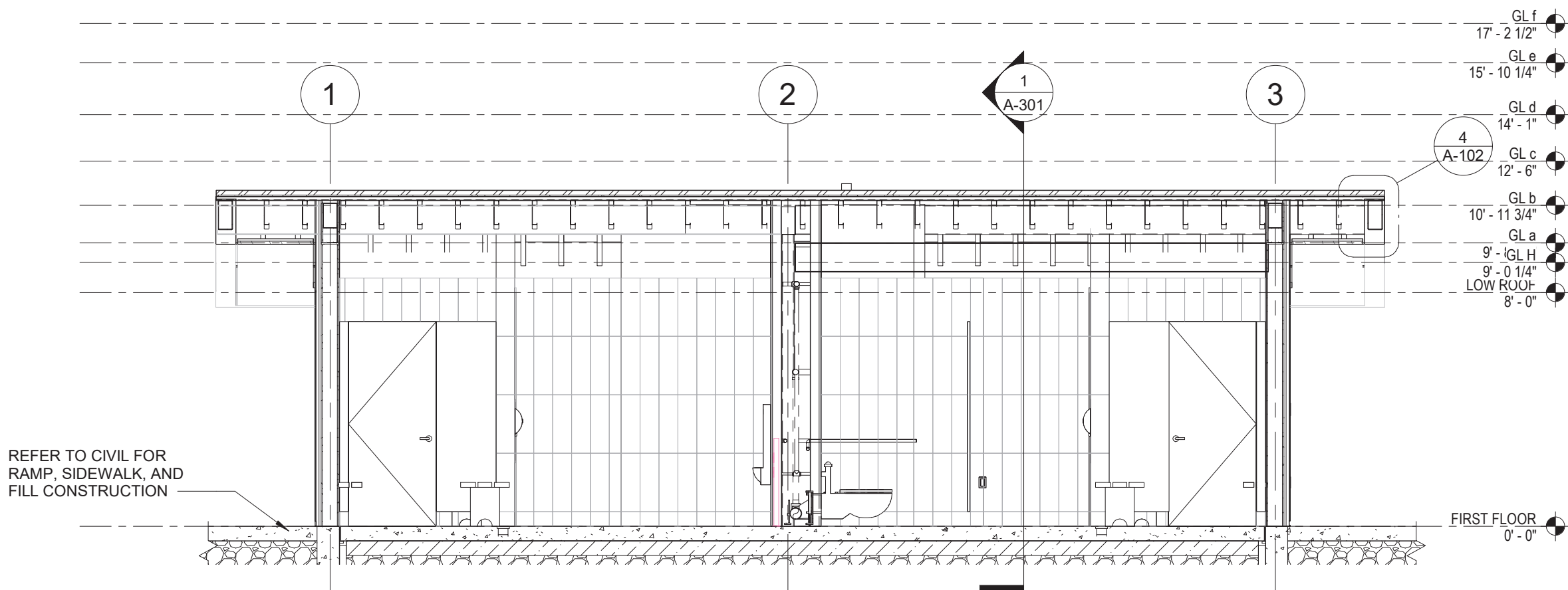
DRAWING NO.

A-202

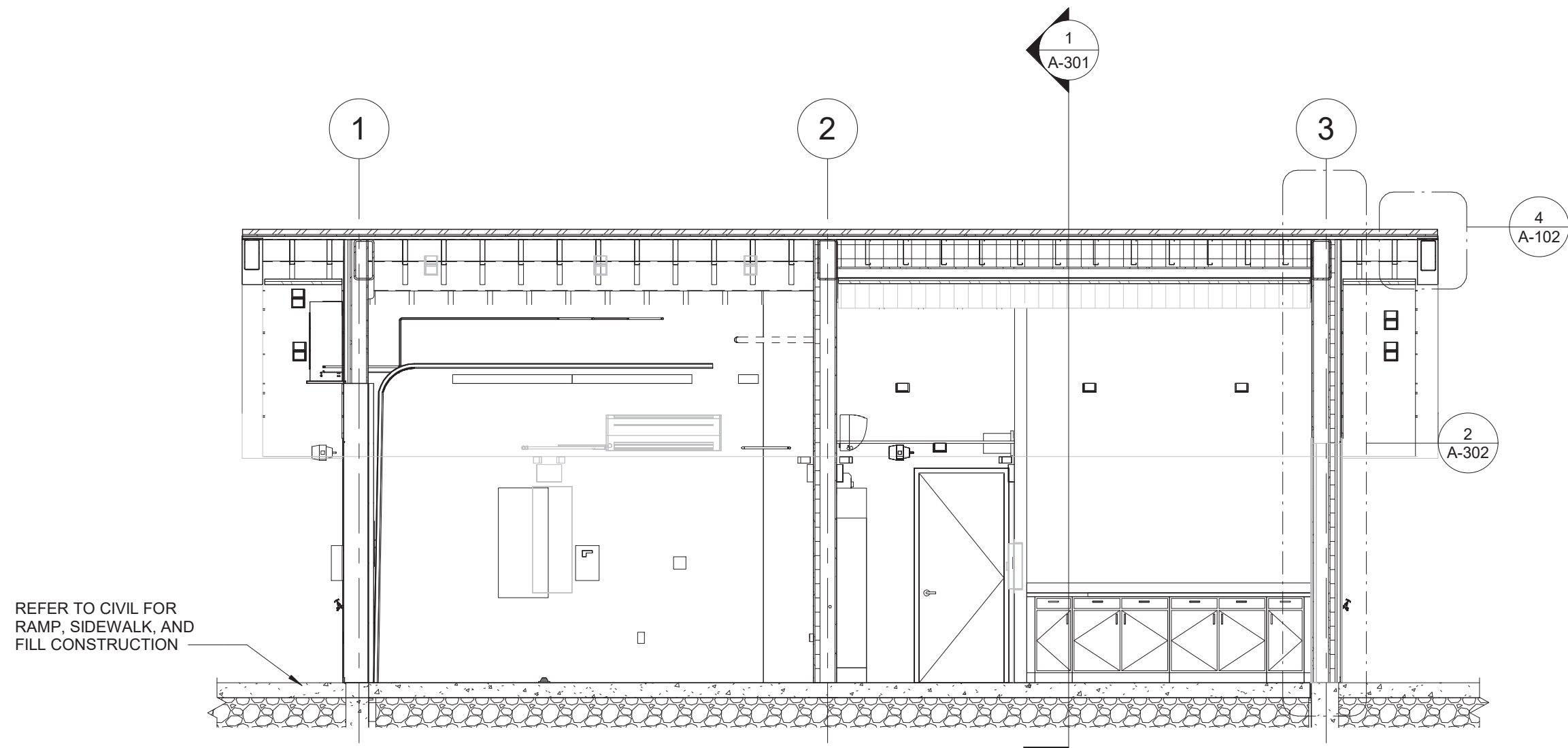
drawn by KKS
checked MSM
proj. mgr. MSM
proj. no. AR19003.00

ISSUE DATE

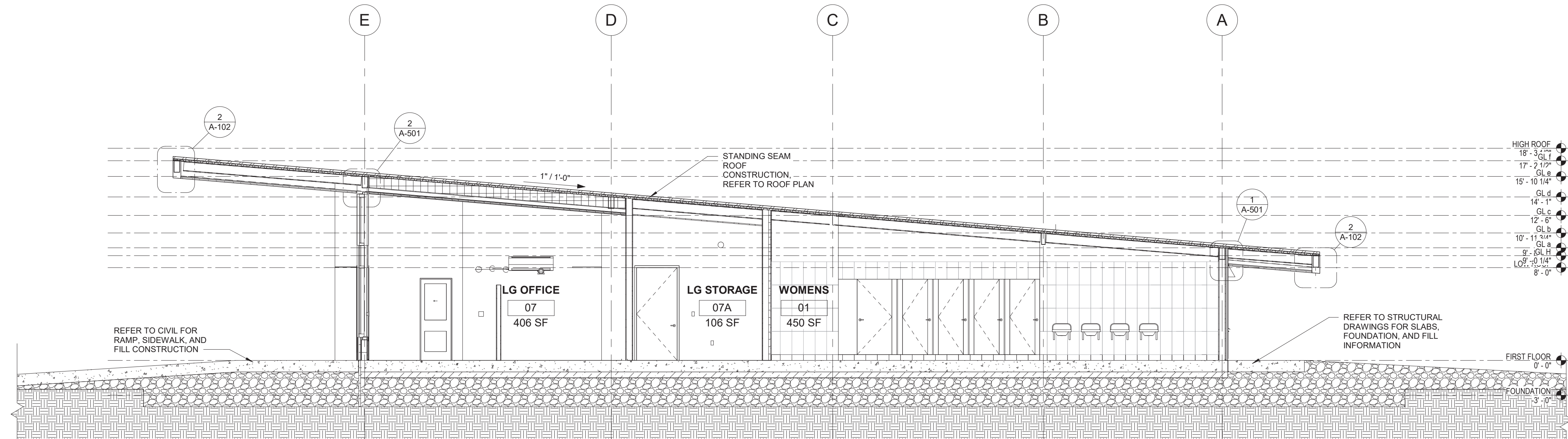
12/31/2019



3 CROSS SECTION - BATHROOMS
1/4" = 1'-0"



2 CROSS SECTION - OFFICES
1/4" = 1'-0"



1 LONG SECTION
3/16" = 1'-0"

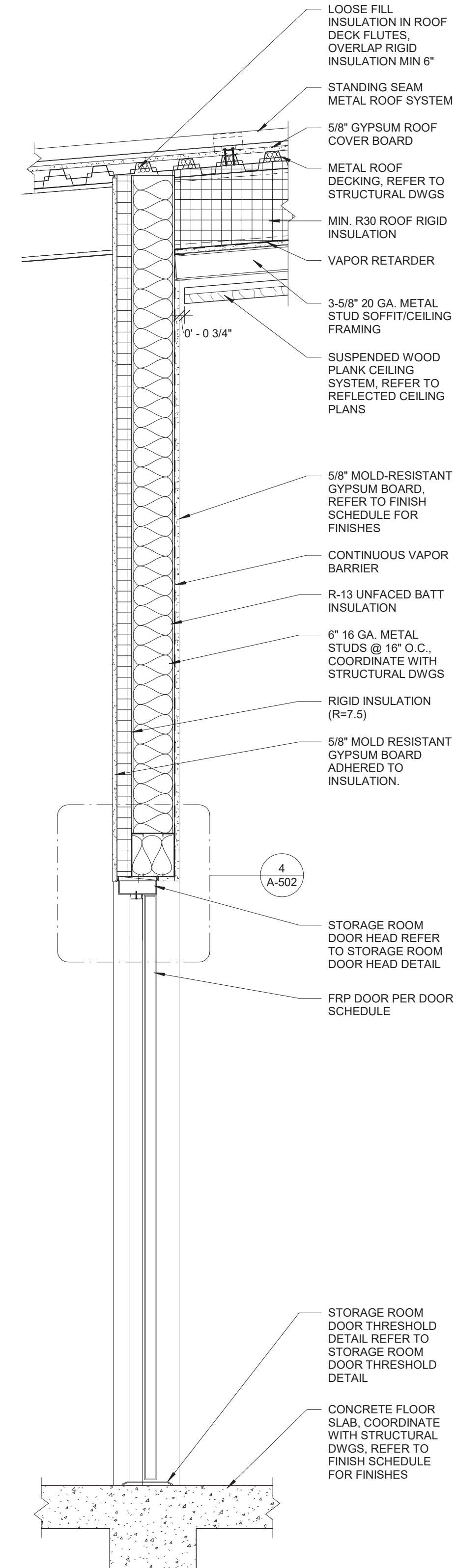
REVISIONS			
NO.	DATE	BY	DESCRIPTION

PROJECT:
ONONDAGA BEACH
FEASIBILITY STUDY &
DESIGN SERVICES
CLIENT:
ONONDAGA COUNTY

DRAWING TITLE
OVERALL BUILDING
SECTIONS

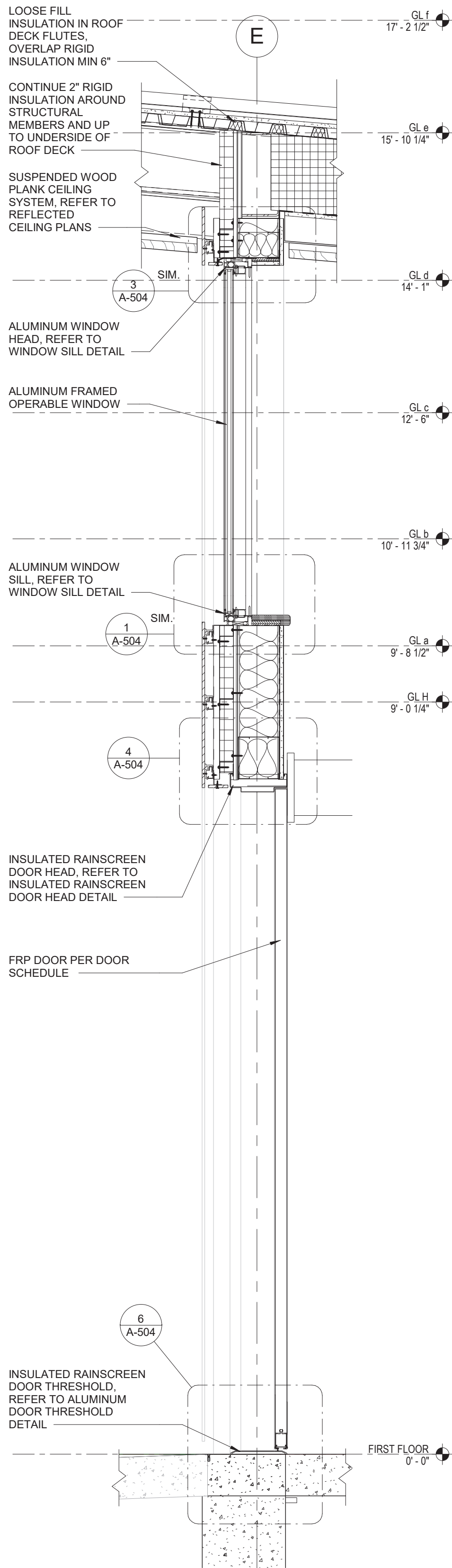
DRAWING NO.
A-301
drawn by KKS
checked MSMS
proj. mgr. MSM
proj. no. AR19003.00

ISSUE DATE
12/31/2019



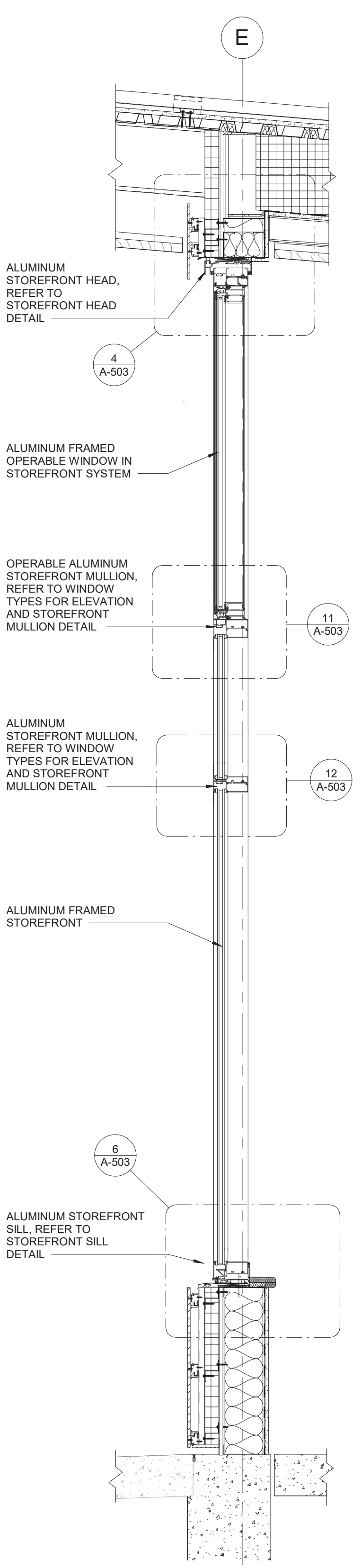
5 STORAGE ROOM DOOR SECTION
1" = 1'-0"

NOTE: REFER TO 1/A302 FOR TYPICAL INSULATED RAINSCREEN CONSTRUCTION



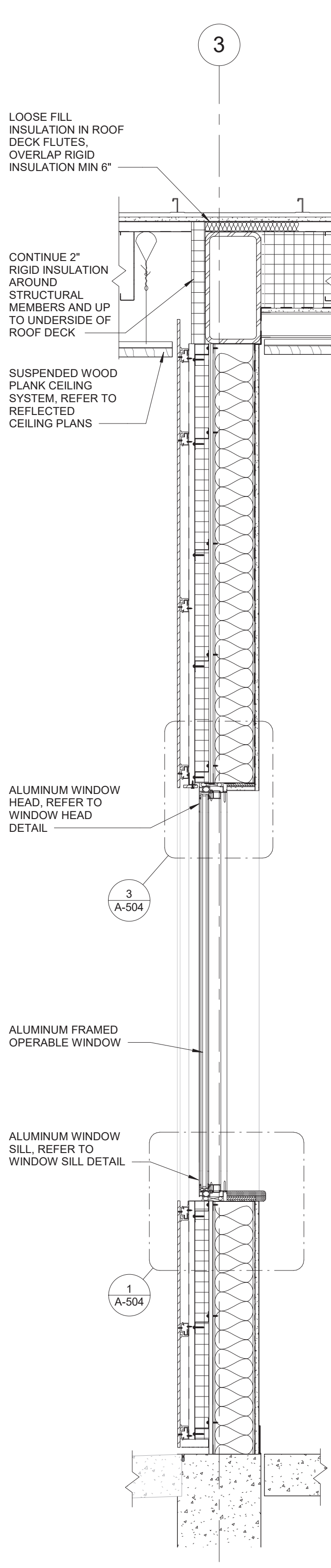
4 TYP DOOR IN SOUTH WALL SECTION
1" = 1'-0"

NOTE: REFER TO 1/A302 FOR TYPICAL INSULATED RAINSCREEN CONSTRUCTION

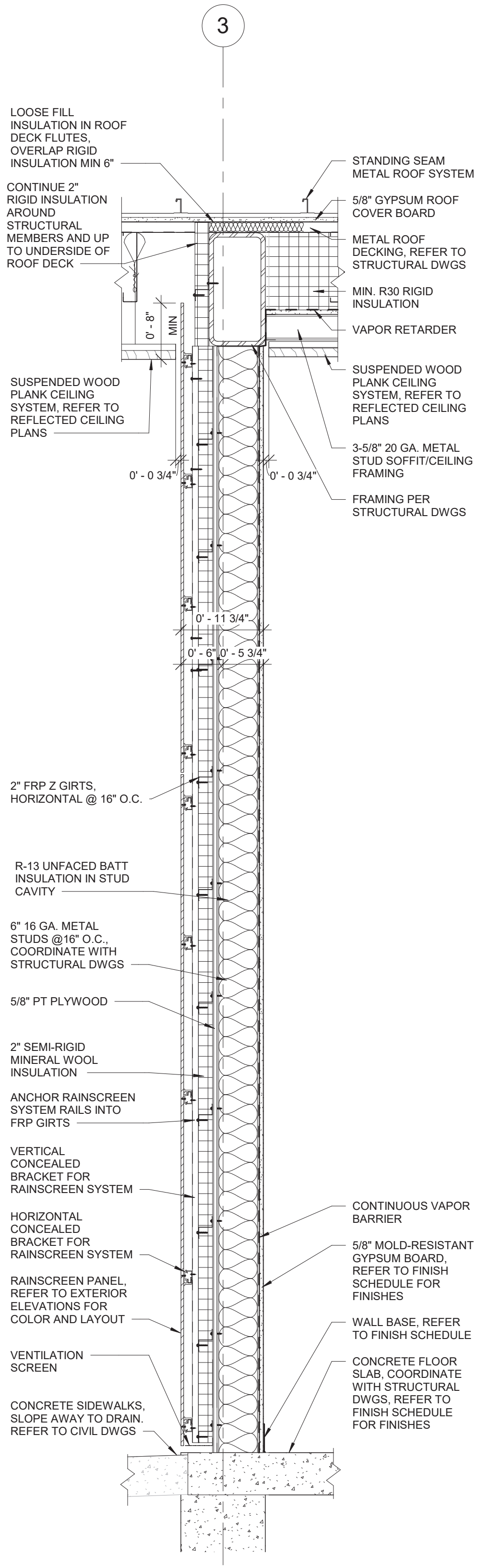


3 TYP STOREFRONT SECTION
1" = 1'-0"

NOTE: REFER TO 1/A302 FOR TYPICAL INSULATED RAINSCREEN CONSTRUCTION



2 TYP WINDOW SECTION
1" = 1'-0"



1 TYP INSULATED RAINSCREEN SECTION
1" = 1'-0"

DOCUMENT PHASE

CONSTRUCTION DOCUMENTS

REVISIONS			
NO.	DATE	BY	DESCRIPTION

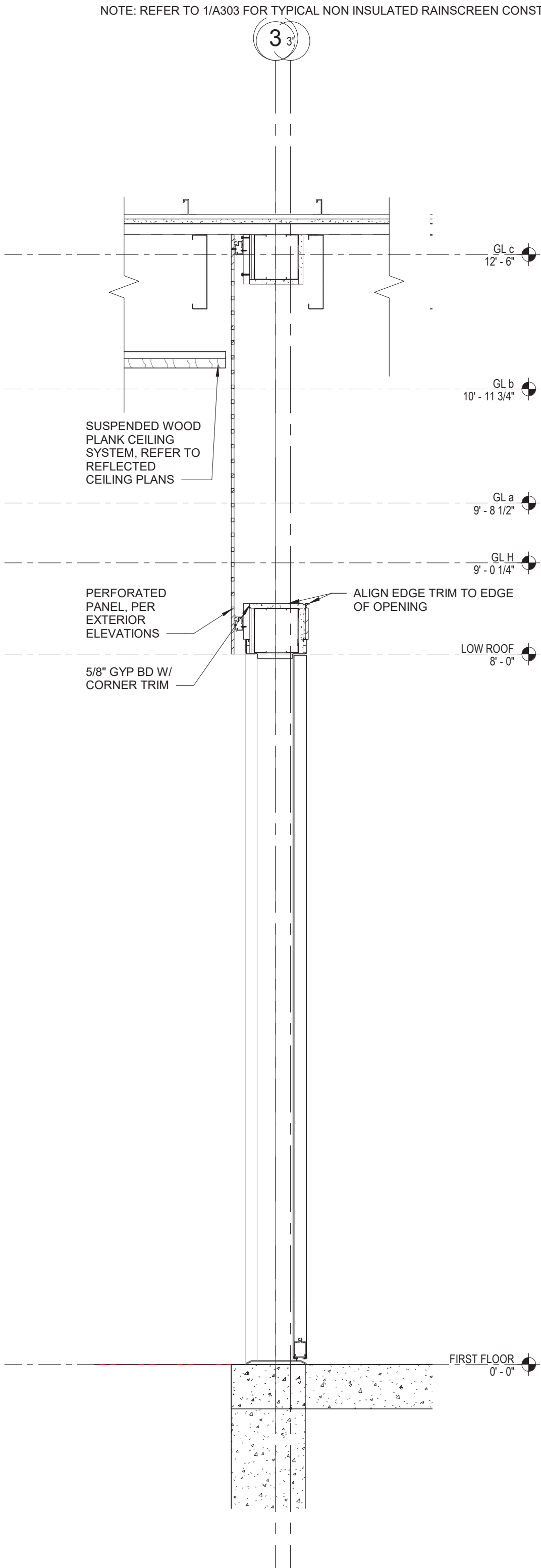
PROJECT:
ONONDAGA BEACH
FEASIBILITY STUDY &
DESIGN SERVICES

CLIENT:
ONONDAGA COUNTY

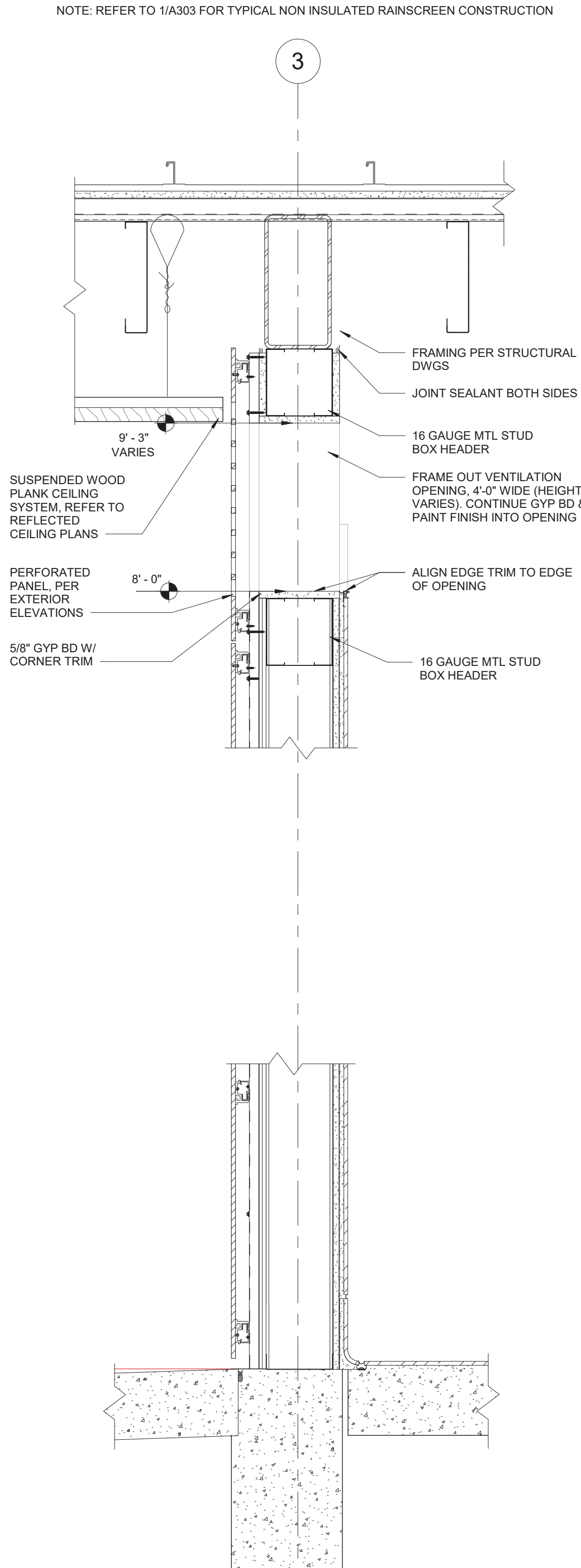
DRAWING TITLE
INSULATED WALL
SECTIONS

DRAWING NO.	drawn by KKS
A-302	checked MSM
	proj. mgr. MSM
	proj. no. AR19003.00

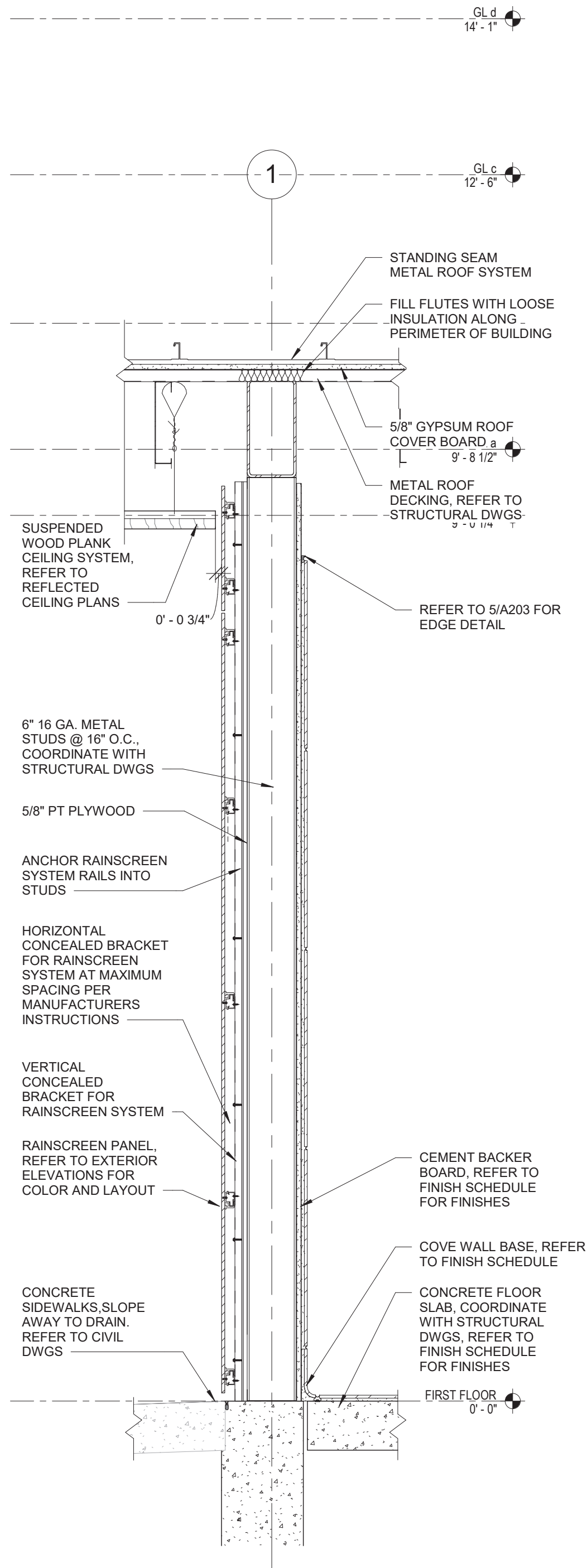
ISSUE DATE
12/31/2019



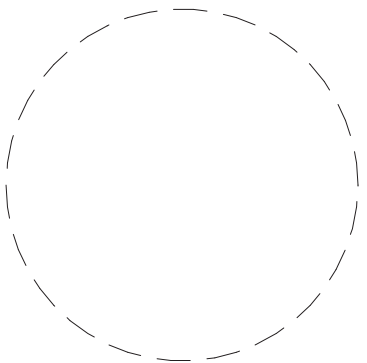
3 TYP VENTILATION OPENING SECTION @ DOOR
1" = 1'-0"



2 TYP VENTILATION OPENING SECTION
1 1/2" = 1'-0"



1 TYP NON-INSULATED RAINSCREEN WALL SECTION
1" = 1'-0"



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PROJECT:

ONONDAGA BEACH
FEASIBILITY STUDY &
DESIGN SERVICES

CLIENT:

ONONDAGA COUNTY

DRAWING TITLE

NON INSULATED WALL
SECTIONS

DRAWING NO.

A-303

drawn by

KKS

checked

MSM

proj. mgr.

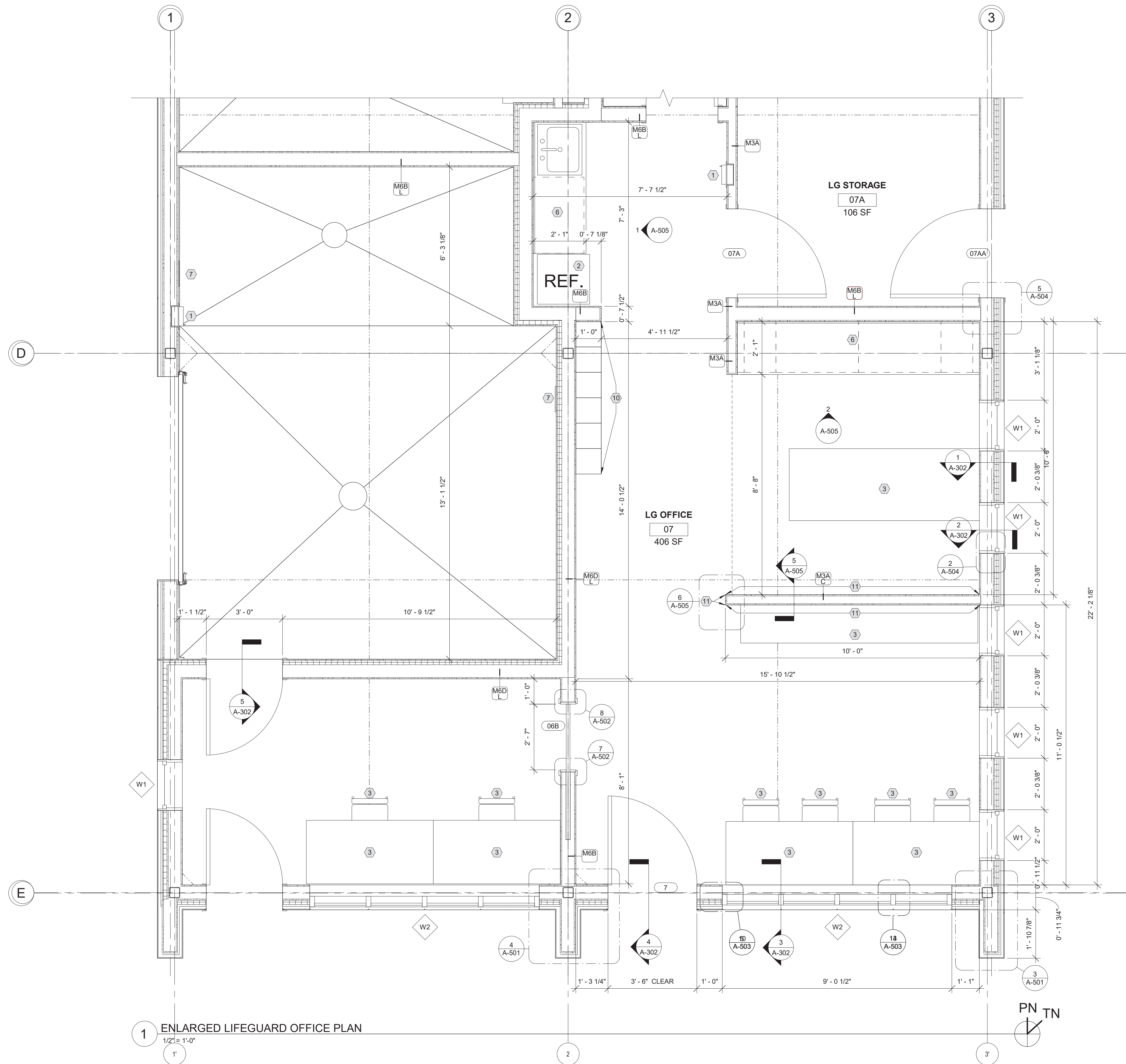
MSM

proj. no.

AR19003.00

ISSUE DATE

12/31/2019



1. REFER TO CIVIL DRAWINGS FOR ADJACENT SIDEWALK, RAMPS, AND SURROUNDING SITE CONSTRUCTION. A-SERIES DRAWINGS REFER TO CONSTRUCTION WITHIN BUILDING FOOTPRINT AND ROOF ONLY
2. REFER TO H-E, P-D DRAWINGS FOR LOCATIONS OF FLOOR, CEILING AND WALL-MOUNTED MECHANICAL AND ELECTRICAL ITEMS
3. FURNITURE SHOWN FOR REFERENCE ONLY. FURNITURE BY OWNER.
4. VERIFY ALL DIMENSIONS IN FIELD PRIOR TO START OF WORK
5. REFER TO ROOM FINISH SCHEDULE FOR ROOM FINISHES
6. REFER TO ENLARGED ROOM SCHEDULE FOR DIMENSIONS, DETAILS, EJECTA, NOTES, ELEVATION TAGS, AND DIMENSIONS NOT SHOWN ON FLOOR PLAN
7. REFER TO EXTERIOR ELEVATIONS FOR RAINSCREEN PANEL, COLOR, AND CONFIGURATION

- ① SEMI-RECESSED FIRE EXTINGUISHER CABINET AND EXTINGUISHER
- ② REFRIGERATOR PROVIDED BY OWNER, FOR REFERENCE ONLY.
COORDINATE SIZE WITH OWNER
- ③ FURNITURE PROVIDED BY OWNER, FOR REFERENCE ONLY
- ④ 18" HIGH, 20" DEEP WD BENCH ON STEEL PEDESTALS
- ⑤ 18" HIGH, 9-1/2" DEEP WD BENCH ON STEEL WALL BRACKETS
- ⑥ CASEWORK, REFER TO INTERIOR ELEVATIONS AND CASEWORK DETAILS
- ⑦ POST SIGN IN STORAGE ROOM: "MAXIMUM FLAMMABLE LIQUID STORAGE
25 GALLONS" REFER TO SIGNAGE DIAGRAMS ON A601
- ⑧ USE RS-2 RAINSCREEN SYSTEM ON RESTROOM ENTRY ALCOVE WALL
- ⑨ FLOOR MOP SINK PER P- DRAWINGS
- ⑩ TWO TIER LOCKERS, (6) LOCKER UNITS, (12 LOCKERS TOTAL)
- ⑪ ACCENT WALL FINISH PER ACCENT WALL FINISH DETAILS ON A203
- ⑫ ANTIMICROBIAL CUBICLE CURTAIN & OVERHEAD TRACK PROVIDED BY
OWNER, FOR REFERENCE ONLY
- ⑬ DOWNSPOUT CONNECTION TO STORM DRAIN LINE BELOW SLAB,
COORDINATE WITH CIVIL DRAWINGS
- ⑭ TRENCH DRAIN PER P-DWGS
- ⑮ FLOOR SLAB SLOPED TO DRAIN THROUGHOUT ROOM PER S DWGS.

CONSTRUCTION
DOCUMENTS

[illegible]

CLIENT: **ONONDAGA COUNTY**

DRAWING TITLE

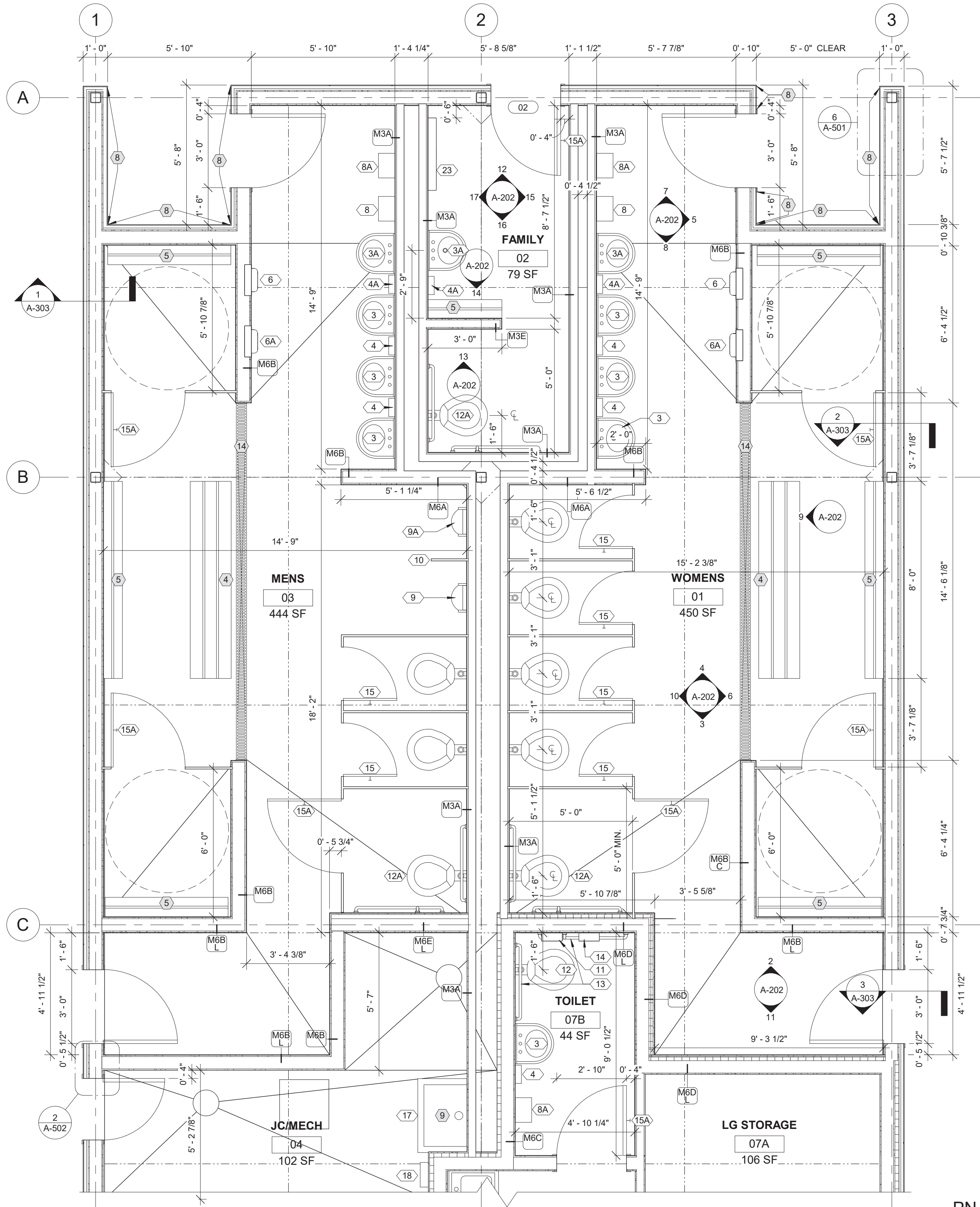
FIRST FLOOR ENLARGED
FLOOR PLANS

DRAWING NO. A-401	drawn by	KKS
	checked	MSM
	proj. mgr.	MSM
	proj. no.	AR19003.00

ISSUE DATE
12/31/2019

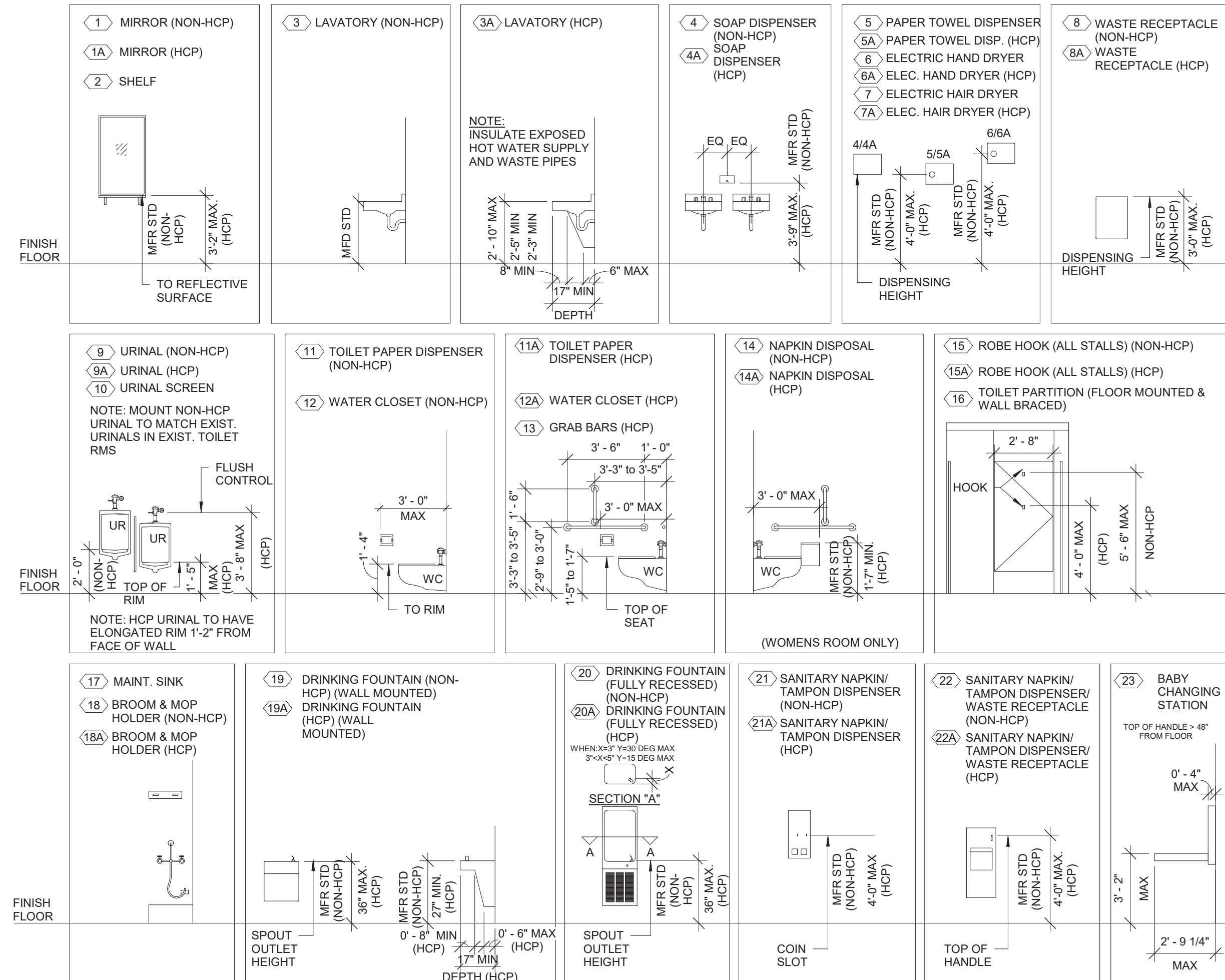
TOILET ROOM GENERAL NOTES:

1. USE MOUNTING HEIGHTS INDICATED IN TOILET FIXTURE & ACCESSORY MOUNTING STRIP UNLESS OTHERWISE INDICATED IN THE CONTRACT DOCUMENTS. ITEMS INDICATED ON THE FLOOR PLANS WITH NO DESIGNATION OR "NON-HCP" ARE TO BE MOUNTED AT STANDARD "NON-HCP" MOUNTING HEIGHTS.
2. CONFIRM ALL PLUMBING & MOUNTING HEIGHTS WITH PLUMBING DRAWINGS AND SPECIFICATIONS. IF A CONFLICT OR QUESTION ARISES BETWEEN THE ARCHITECTURAL AND PLUMBING DOCUMENTS, CONTACT THE ARCHITECT FOR CLARIFICATION.
3. HEIGHTS GIVEN FOR OPERABLE ACCESSORIES ARE TO THE UPPER MOST CONTROL ON THAT ACCESSORY, NOT TO THE BOTTOM OF THE CONTROL UNIT.
4. "MPR STD" INSTALL ACCESSORIES AT STANDARD HEIGHT AS RECOMMENDED BY ACCESSORY MANUFACTURER.
5. PROVIDE TOILET ACCESSORY IN LAYOUT ACCORDING TO TYPICAL STALL LAYOUTS AS SHOWN ON /1A01/.
 - A. OMIT NAPKIN DISPOSAL (ACCESSORY KEYNOTE 14) IN MEN'S ROOM ONLY.
 - B. STALLS WITH AN ACCESSIBLE TOILET SEAT (ACCESSORY KEYNOTE 12A) ARE ASSUMED TO BE HANDICAPPED (HCP). PROVIDE TOILET ACCESSORIES AT HCP DIMENSIONS PER TOILET ROOM FIXTURE & ACCESSORY MOUNTING LEGEND AND TYPICAL ACCESSIBLE HCP STALL ON /1A01/.
6. SLOPE ALL TILE FLOORS TO FLOOR DRAINS, MINIMUM OF 1/4" PER FOOT SLOPE.



2 ENLARGED TOILET ROOM PLANS

TOILET ROOM FIXTURE & ACCESSORY MOUNTING LEGEND

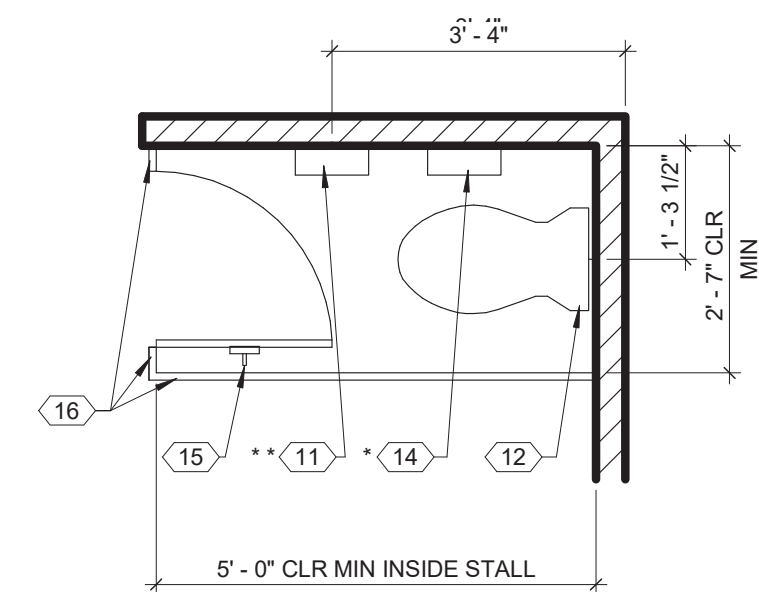


FLOOR PLAN KEYNOTES:

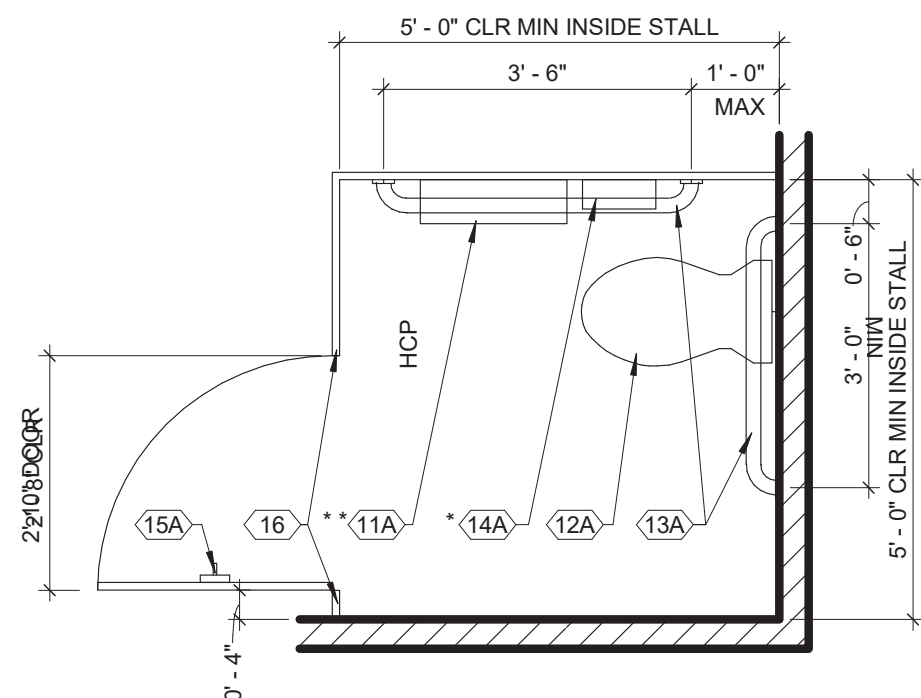
- ① SEMI-RECESSED FIRE EXTINGUISHER CABINET AND EXTINGUISHER
- ② REFRIGERATOR PROVIDED BY OWNER, FOR REFERENCE ONLY.
COORDINATE SIZE WITH OWNER
- ③ FURNITURE PROVIDED BY OWNER, FOR REFERENCE ONLY
- ④ 18" HIGH, 20" DEEP WD BENCH ON STEEL PEDESTALS
- ⑤ 18" HIGH, 9-1/2" DEEP WD BENCH ON STEEL WALL BRACKETS
- ⑥ CASEWORK, REFER TO INTERIOR ELEVATIONS AND CASEWORK DETAILS
- ⑦ POST SIGN IN STORAGE ROOM: "MAXIMUM FLAMMABLE LIQUID STORAGE
25 GALLONS" REFER TO SIGNAGE DIAGRAMS ON A601
- ⑧ USE RS-2 RAINSCREEN SYSTEM ON RESTROOM ENTRY ALCOVE WALL
- ⑨ FLOOR MOP SINK PER P.-DRAWINGS
- ⑩ TWO TIER LOCKERS, (6) LOCKER UNITS, (12 LOCKERS TOTAL)
- ⑪ ACCENT WALL FINISH PER ACCENT WALL FINISH DETAILS ON A203
- ⑫ ANTIMICROBIAL CUBICLE CURTAIN & OVERHEAD TRACK PROVIDED BY
OWNER, FOR REFERENCE ONLY
- ⑬ DOWNSPOUT CONNECTION TO STORM DRAIN LINE BELOW SLAB,
COORDINATE WITH CIVIL DRAWINGS
- ⑭ TRENCH DRAIN PER P-DWGS

TOILET ROOM MOUNTING LEGEND.

- | | | | |
|-----|----------------------------------|-----|----------------------------------------------|
| 1 | MIRROR (NON-HCP) | 12 | WATER CLOSET (NON-HCP) |
| 1A | MIRROR (HCP) | 12A | WATER CLOSET (HCP) |
| 2 | SHELF | 13 | GRAB BARS (HCP) |
| 3 | LAVATORY (NON-HCP) | 14 | NAPKIN DISPOSAL (NON-HCP) |
| 3A | LAVATORY (HCP) | 14A | NAPKIN DISPOSAL (HCP) |
| 4 | SOAP DISPENSER (NON-HCP) | 15 | ROBE HOOK (ALL STALLS) (NON-HCP) |
| 4A | SOAP DISPENSER (HCP) | 15A | ROBE HOOK (ALL STALLS) (HCP) |
| 5 | PAPER TOWEL DISPENSER | 16 | TOILET PARTITION (HUNG /WALL BRACED) |
| 5A | PAPER TOWEL DISP. (HCP) | 17 | MAINT. SINK |
| 6 | ELECTRIC HAND DRYER | 18 | BROOM & MOP HOLDER (NON-HCP) |
| 6A | ELEC. HAND DRYER (HCP) | 18A | BROOM & MOP HOLDER (HCP) |
| 7 | ELECTRIC HAIR DRYER | 19 | DRINKING FOUNTAIN (NON-HCP)(WALL MOUNTED) |
| 7A | ELEC. HAIR DRYER (HCP) | 19A | DRINKING FOUNTAIN (HCP)(WALL MOUNTED) |
| 8 | WASTE RECEPTACLE (NON-HCP) | 20 | DRINKING FOUNTAIN (NON-HCP) (FULLY RECESSED) |
| 8A | WASTE RECEPTACLE (HCP) | 20A | DRINKING FOUNTAIN (HCP) (FULLY RECESSED) |
| 9 | URINAL (NON-HCP) | 21 | SANITARY NAPKIN/TAMPON DISPENSER (NON-HCP) |
| 9A | URINAL (HCP) | 21A | SANITARY NAPKIN/TAMPON DISPENSER (HCP) |
| 10 | URINAL SCREEN | 22 | SANITARY NAPKIN/WASTE RECEPTACLE (NON-HCP) |
| 11 | TOILET PAPER DISPENSER (NON-HCP) | 22A | SANITARY NAPKIN/WASTE RECEPTACLE (HCP) |
| 11A | TOILET PAPER DISPENSER (HCP) | 23 | BABY CHANGING STATION |



TYPICAL STALL



* = WOMEN'S ROOM ONLY
** = INSTALL TOILET PAPER DISPENSER
ON STRIKE SIDE OF DOOR STALL

TYPICAL ACCESSIBLE HCP STALL

- ## 1 TYPICAL TOILET STALL LAYOUTS

IT IS A VIOLATION OF NEW YORK STATE EDUCATION LAW ARTICLE 145 SEC. 7209
FOR ANY PERSON, UNLESS ACTING UNDER THE DIRECTION OF A LICENSED
ARCHITECT, PROFESSIONAL ENGINEER, LAND SURVEYOR, TO ALTER AN
ITEM IN ANY WAY, IF AN ITEM BEARING THE SEAL OF AN ARCHITECT, ENGINEER
OR LAND SURVEYOR IS ALTERED, THE ALTERING ARCHITECT, ENGINEER OR
LAND SURVEYOR SHALL AFFIX TO THE ITEM THEIR SEAL AND NOTATION
"ALTERED BY" FOLLOWED BY THEIR SIGNATURE AND DATE OF SUCH
ALTERATIONS, AND A SPECIFIC DESCRIPTION OF SUCH ALTERATIONS.
POPLI DESIGN GROUP, ARCHITECTURE + ENGINEERING, PC
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DOCUMENT PHASE

CONSTRUCTION
DOCUMENTS

[illegible]

PROJECT:
ONONDAGA BEACH
FEASIBILITY STUDY &
DESIGN SERVICES

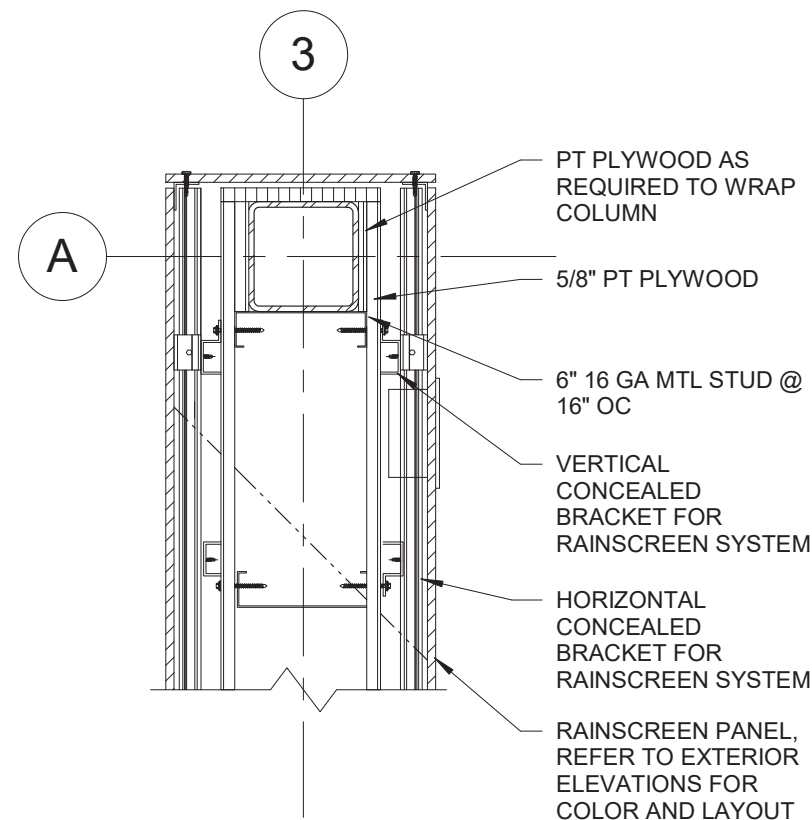
CLIENT:
ONONDAGA COUNTY

DRAWING TITLE

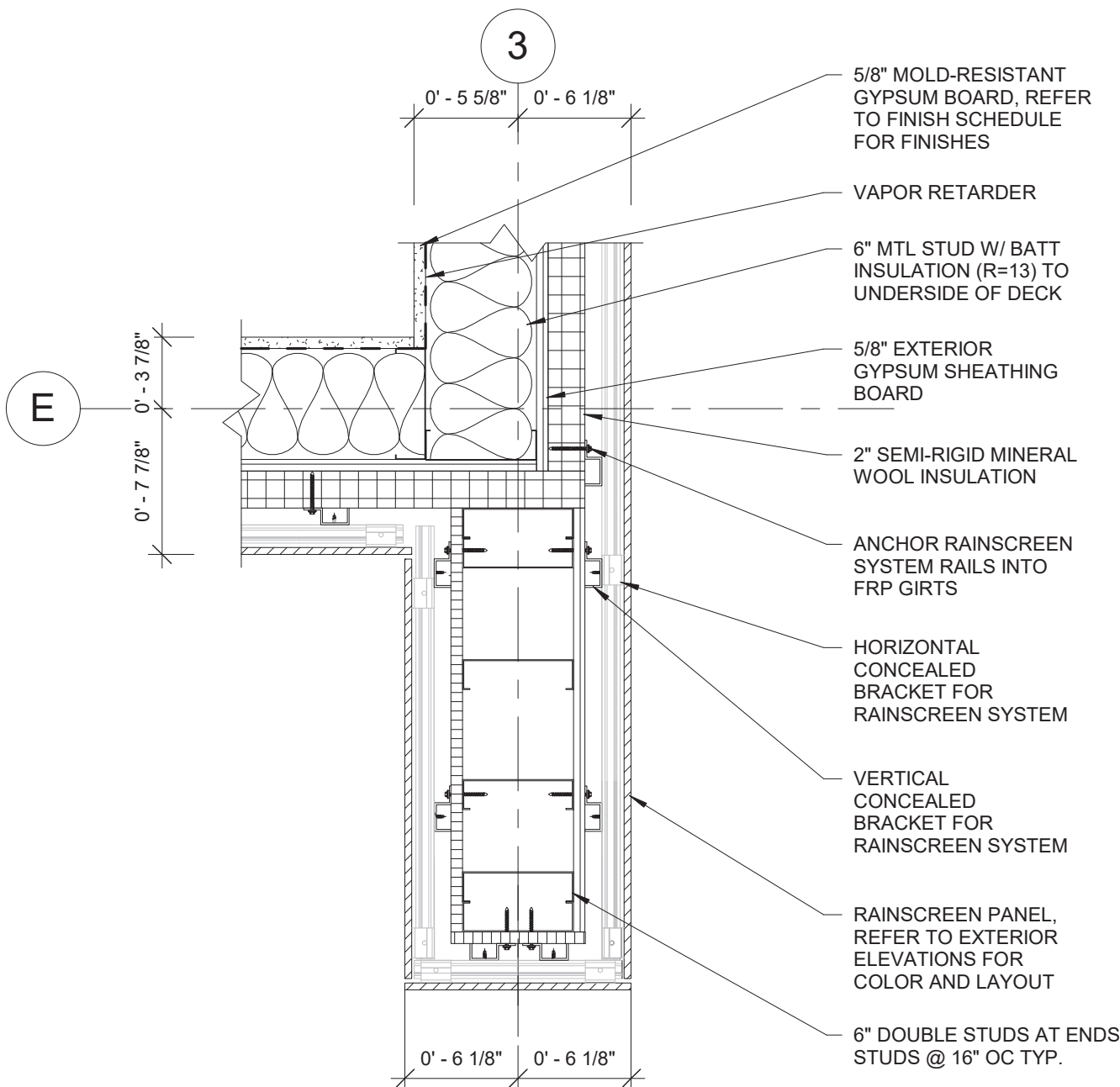
ENLARGED TOILET ROOM
PLANS AND DETAILS

DRAWING NO. A-402	drawn by	KKS
	checked	MSM
	proj. mgr.	MSM
	proj. no.	AR19003.00

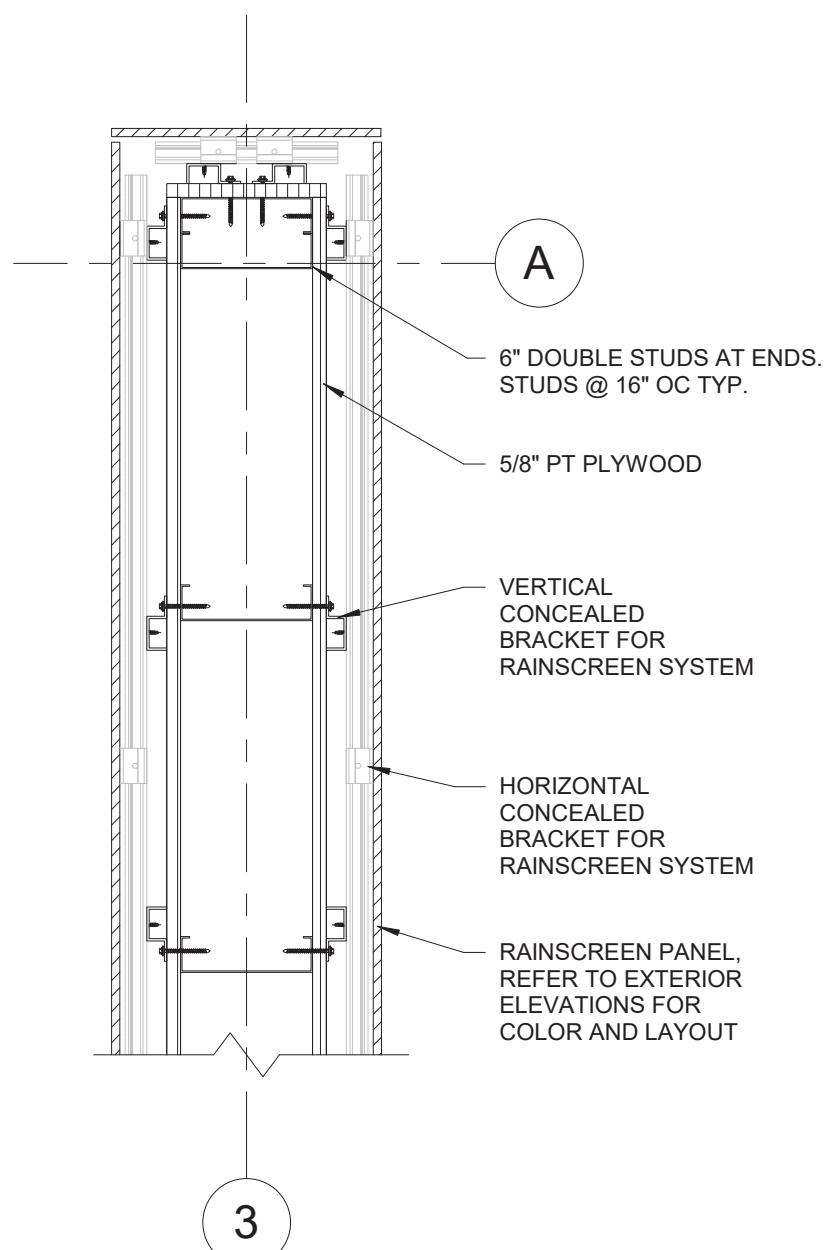
ISSUE DATE
12/31/2019



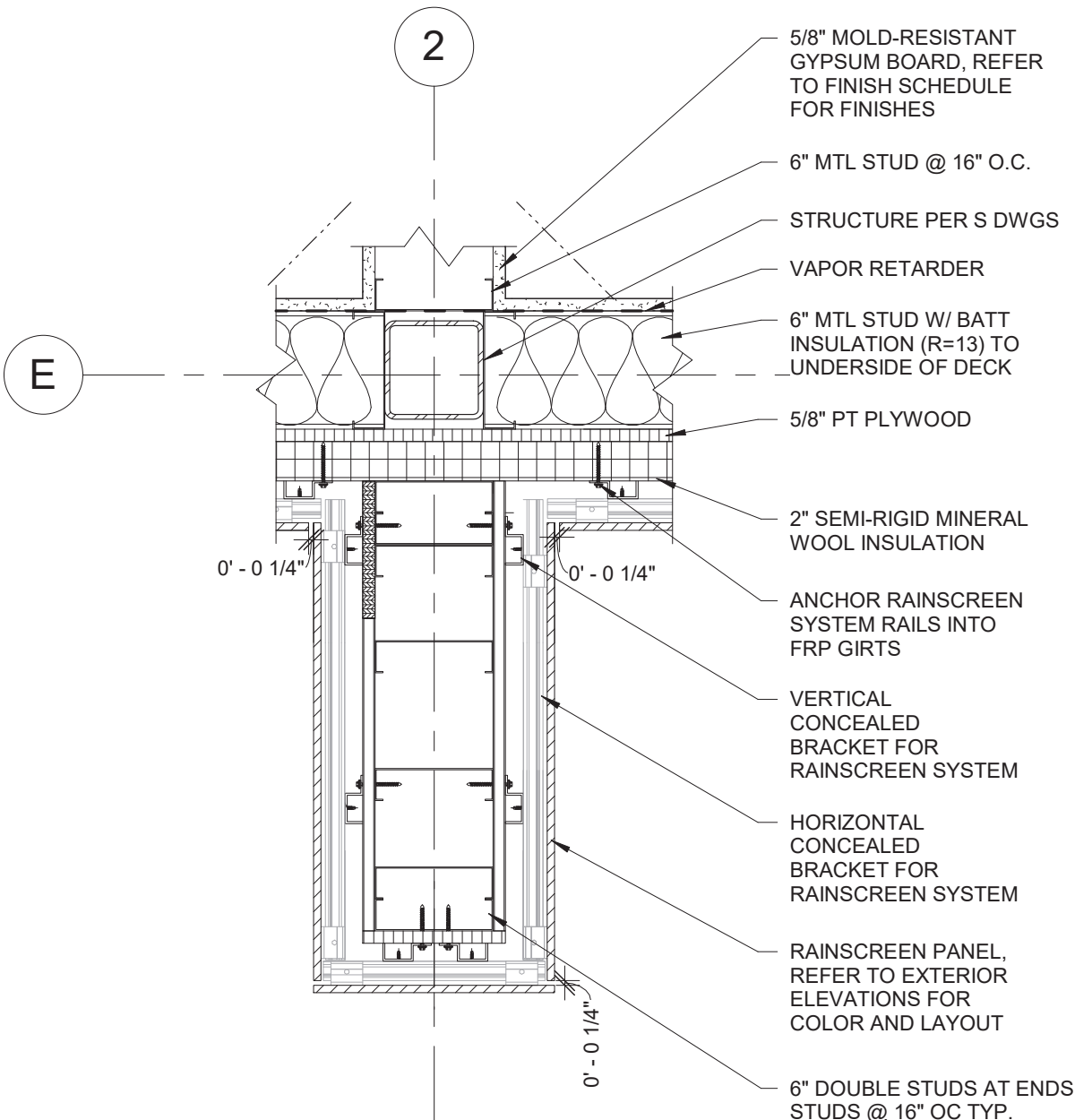
5 EXTERIOR WALL CORNER DETAIL
1 1/2" = 1'-0"



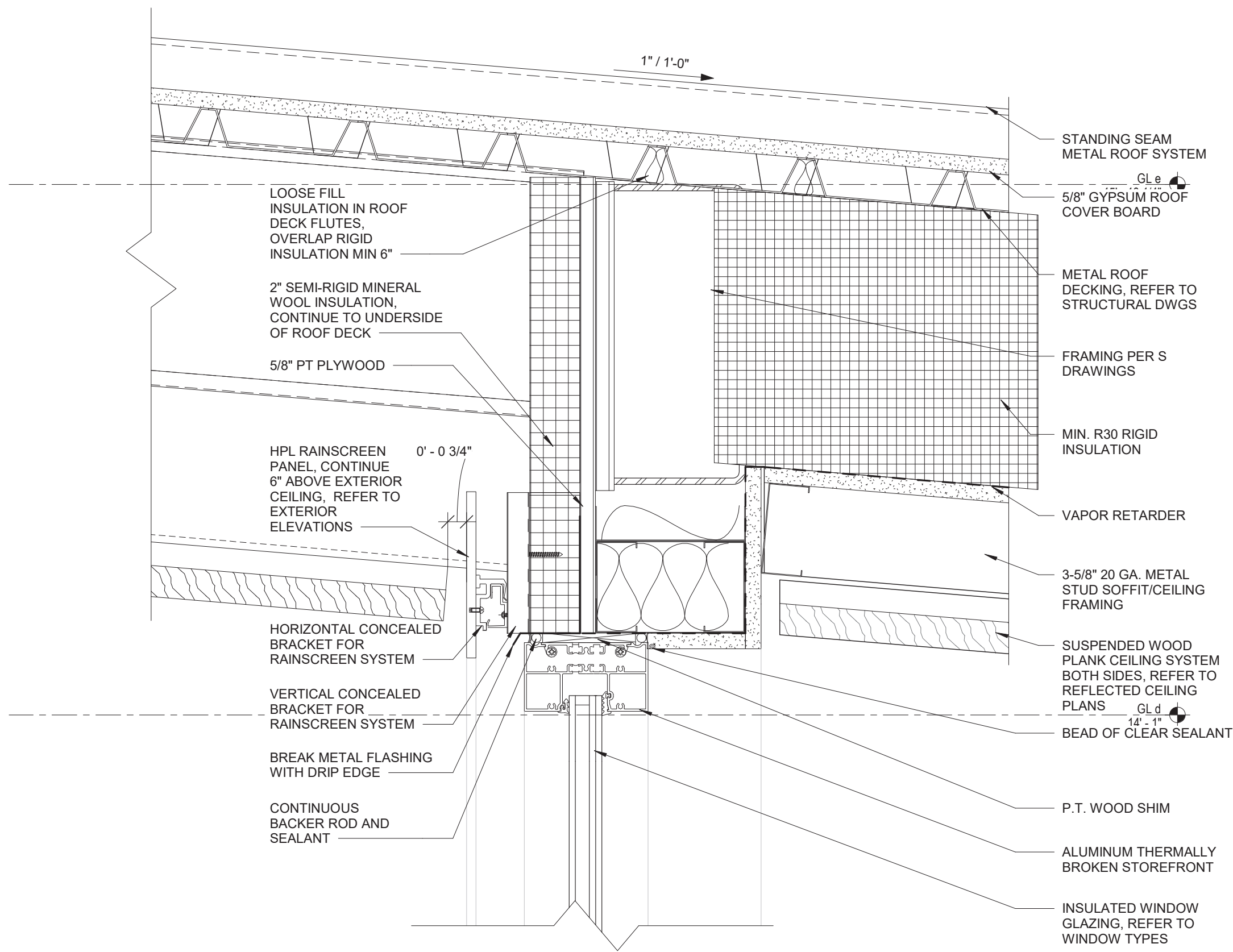
3 OFFICE BUMP OUT DETAIL
1 1/2" = 1'-0"



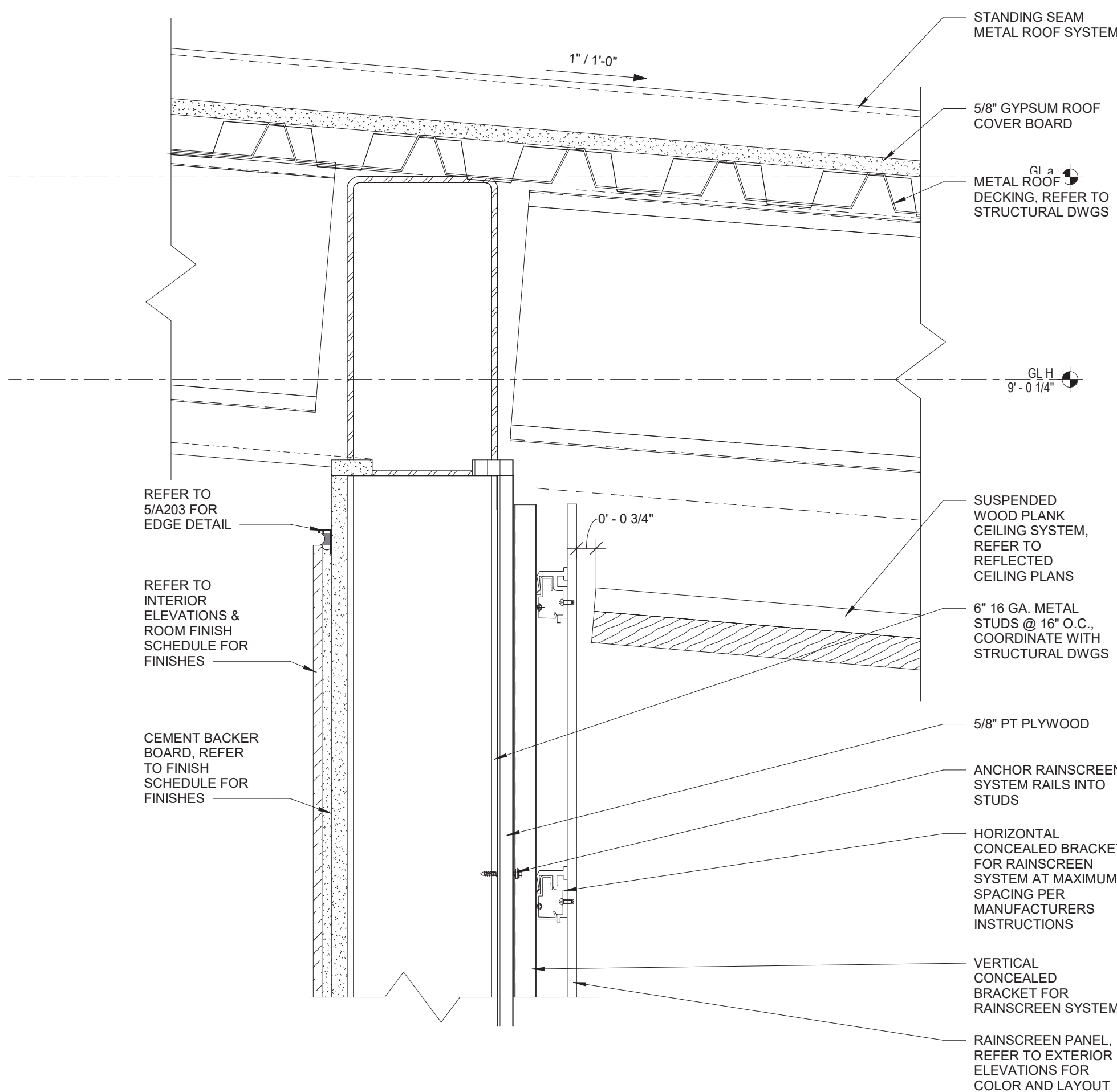
6 TOILET ROOM BUMP OUT DETAIL
1 1/2" = 1'-0"



4 MIDDLE EXTERIOR WALL BUMP OUT PLAN DETAIL
1 1/2" = 1'-0"



2 SOFFITT @ SOUTH WALL
3" = 1'-0"



1 SOFFITT @ NORTH WALL
3" = 1'-0"

DOCUMENT PHASE

CONSTRUCTION DOCUMENTS

REVISIONS

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PROJECT:
ONONDAGA BEACH
FEASIBILITY STUDY &
DESIGN SERVICES

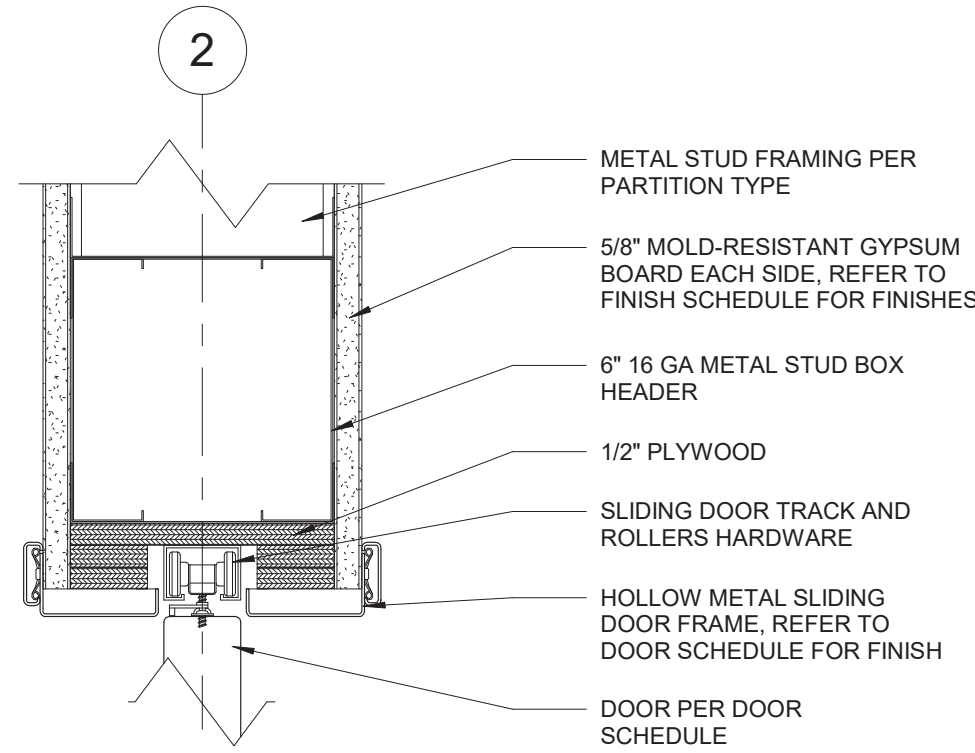
CLIENT:
ONONDAGA COUNTY

DRAWING TITLE
DETAILS

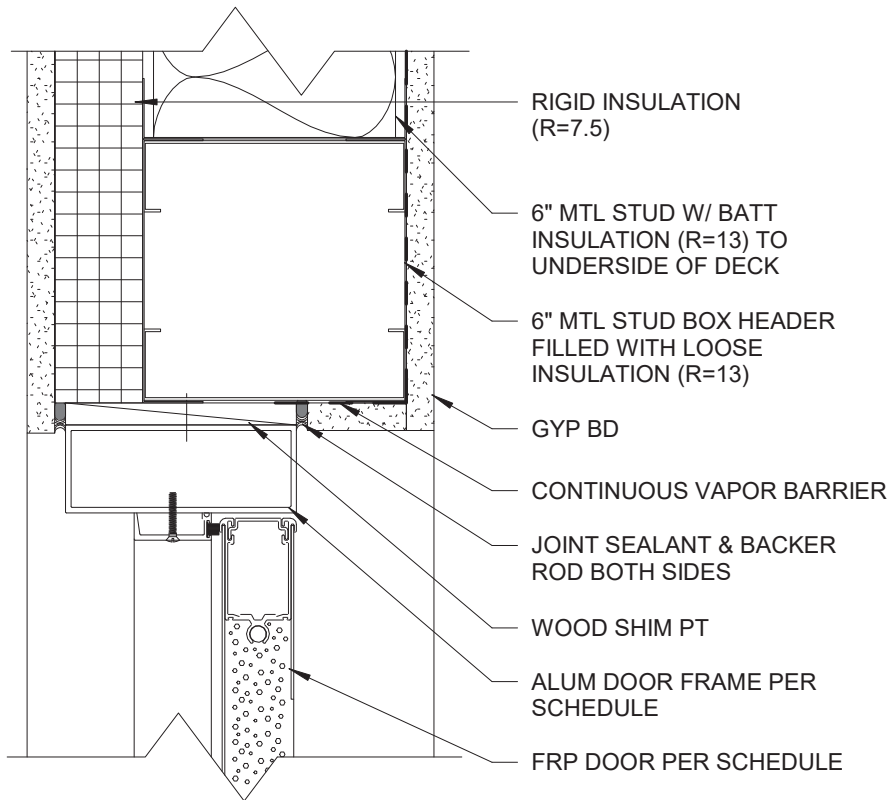
DRAWING NO.
A-501

drawn by	KKS
checked	MSM
proj. mgr.	MSM
proj. no.	AR19003.00

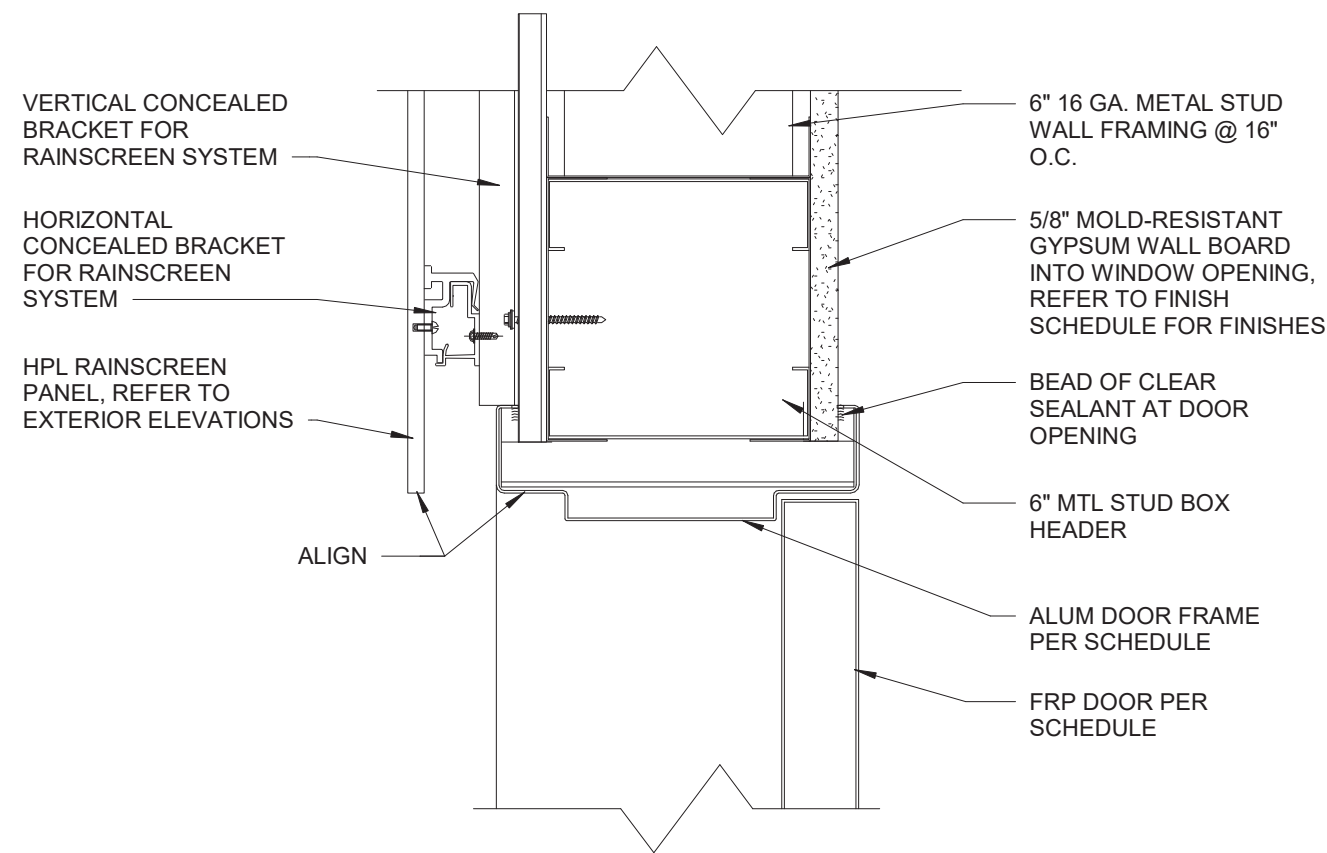
ISSUE DATE
12/31/2019



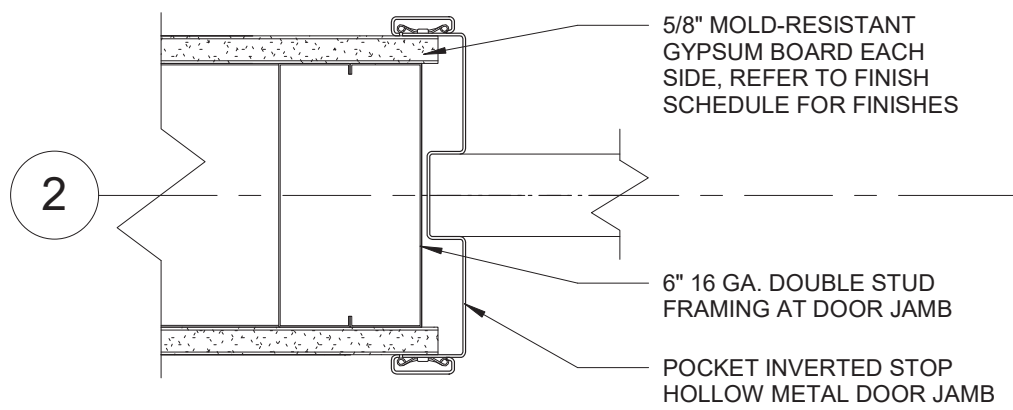
9 POCKET DOOR HEAD DETAIL
3" = 1'-0"



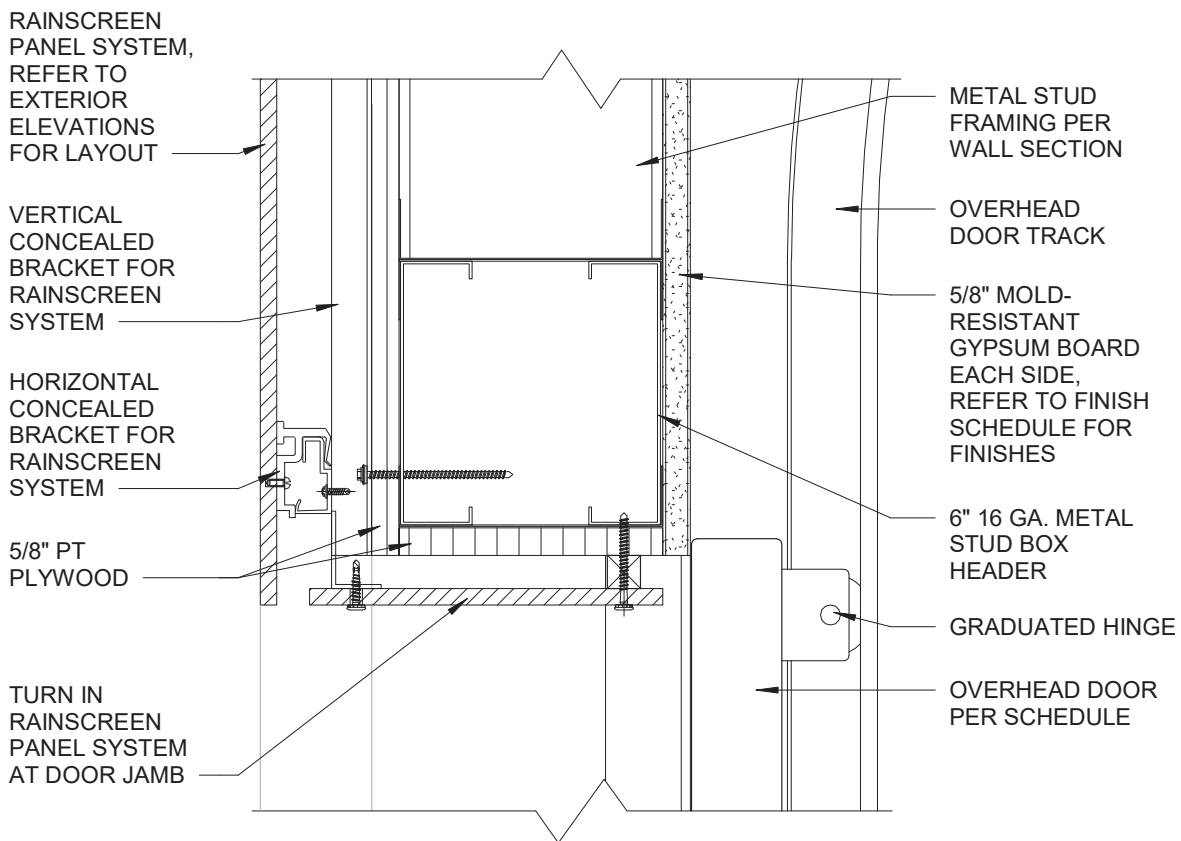
4 STORAGE ROOM DOOR HEAD
3" = 1'-0"



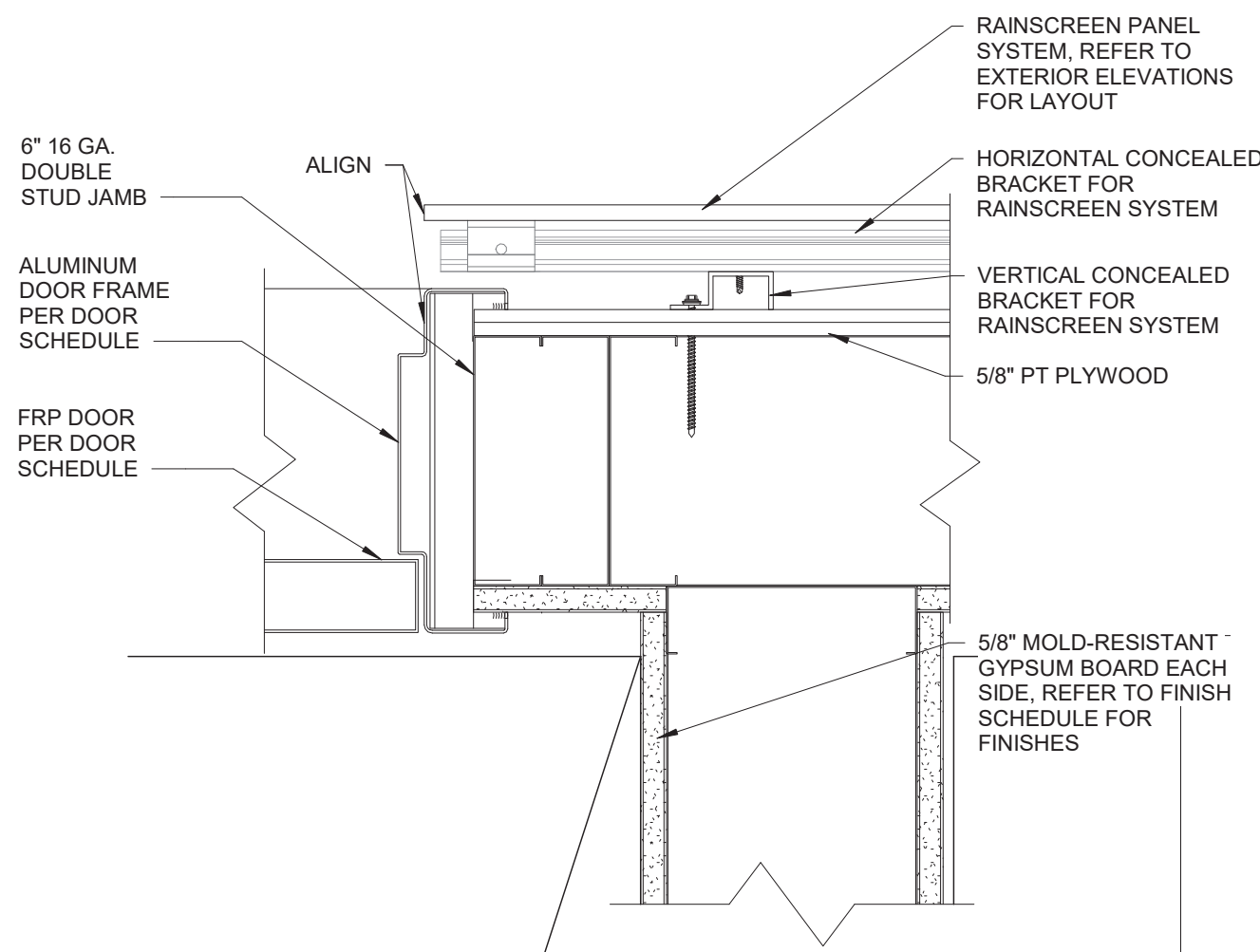
3 TYP NON-INSULATED RAINSCREEN DOOR HEAD
3" = 1'-0"



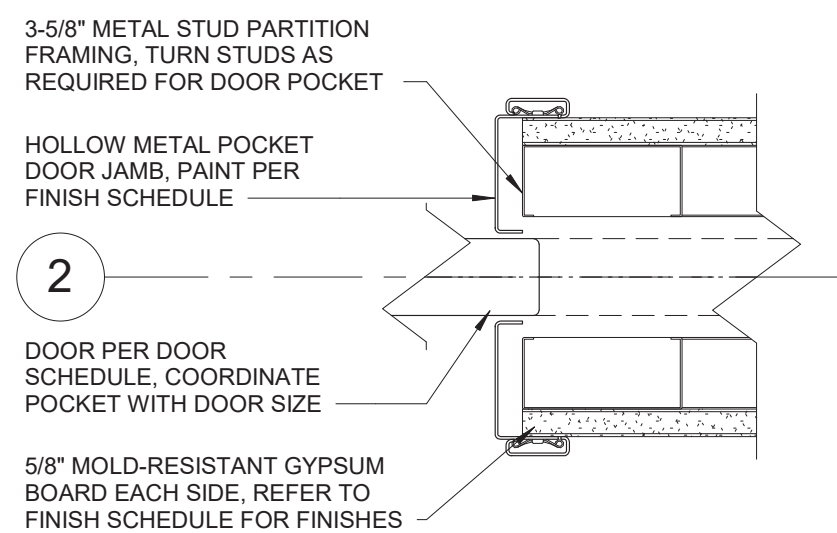
8 POCKET DOOR INVERTED STOP JAMB
3" = 1'-0"



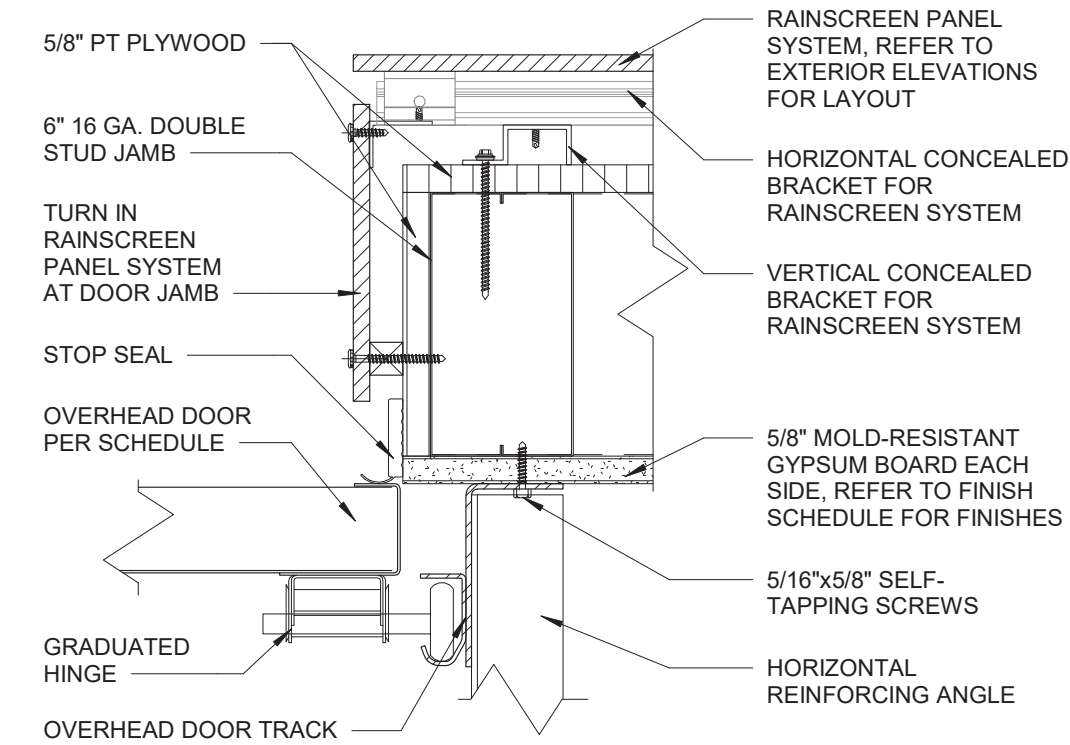
5 OVERHEAD COILING DOOR HEAD
3" = 1'-0"



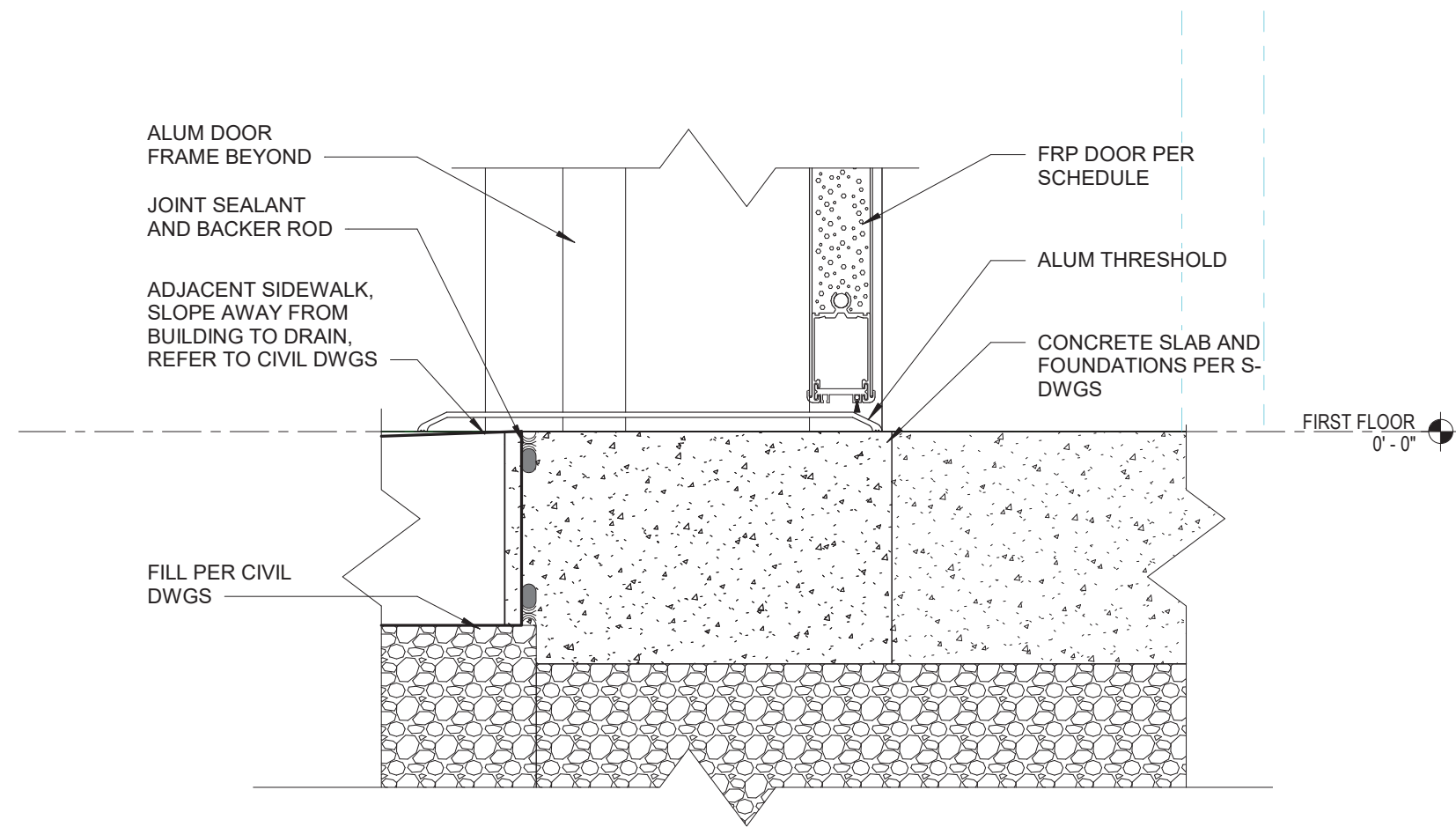
2 TYP NON-INSULATED RAINSCREEN DOOR JAMB
3" = 1'-0"



7 POCKET DOOR JAMB DETAIL
3" = 1'-0"



6 OVERHEAD COILING DOOR JAMB
3" = 1'-0"



1 TYP NON-INSULATED RAINSCREEN DOOR THRESHOLD
3" = 1'-0"

DOCUMENT PHASE

CONSTRUCTION DOCUMENTS

REVISIONS

NO.	DATE	BY	DESCRIPTION
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PROJECT:

ONONDAGA BEACH
FEASIBILITY STUDY &
DESIGN SERVICES

CLIENT:

ONONDAGA COUNTY

DRAWING TITLE

DETAILS

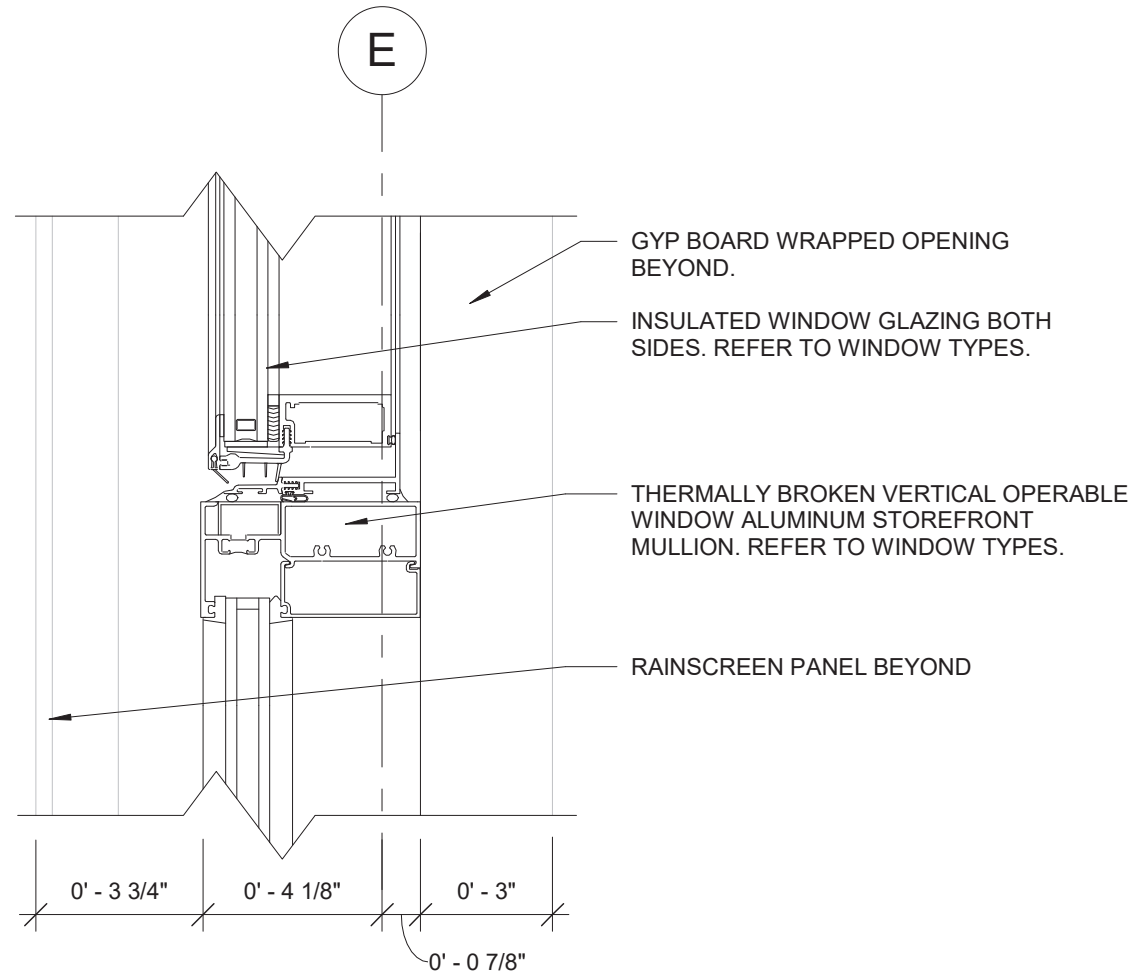
DRAWING NO.

A-502

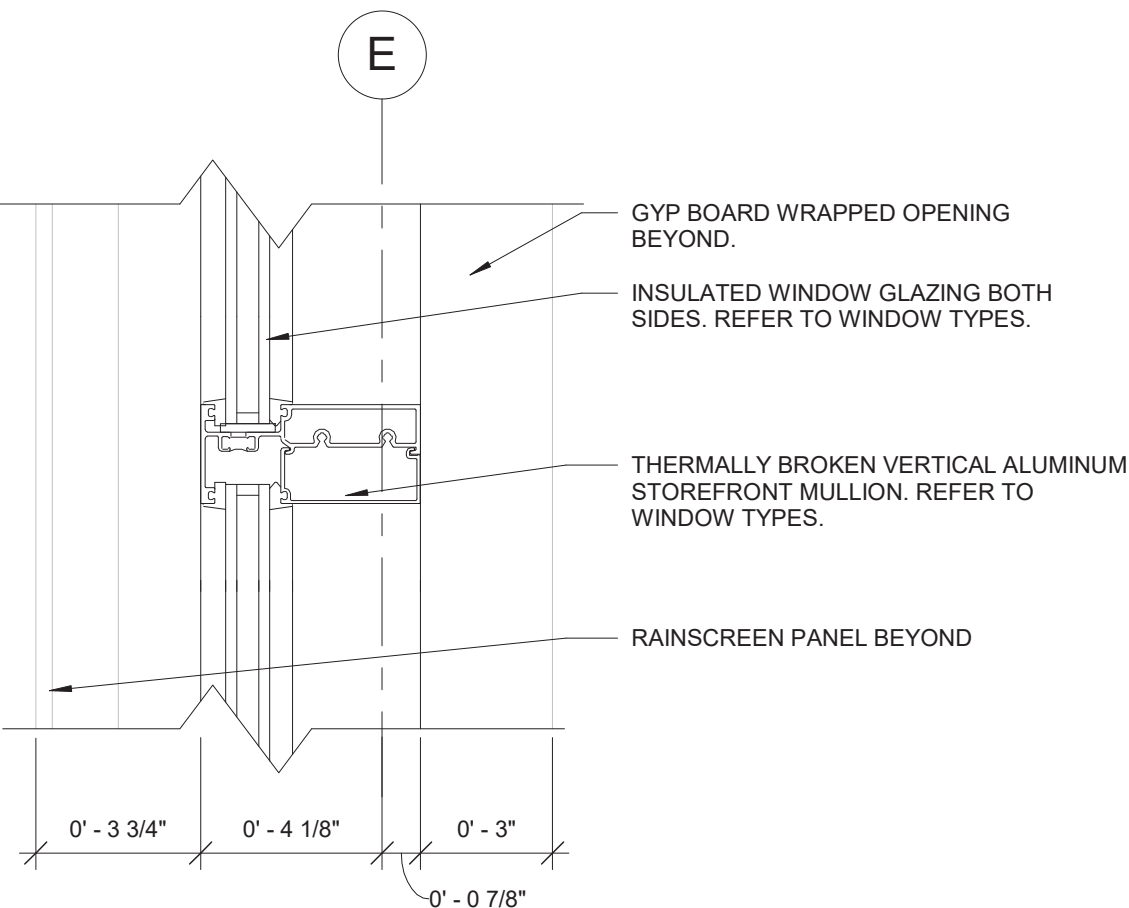
drawn by	Author
checked	Checker
proj. mgr.	MSM
proj. no.	AR19003.00

ISSUE DATE

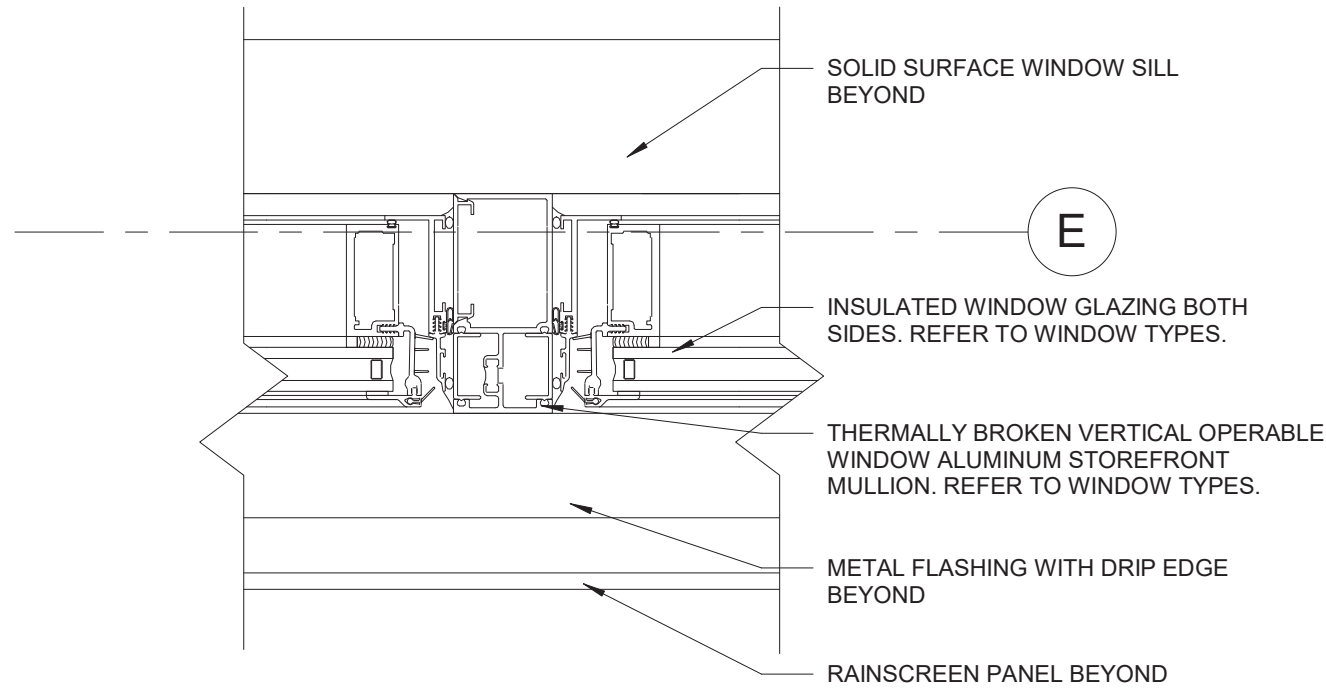
12/31/2019



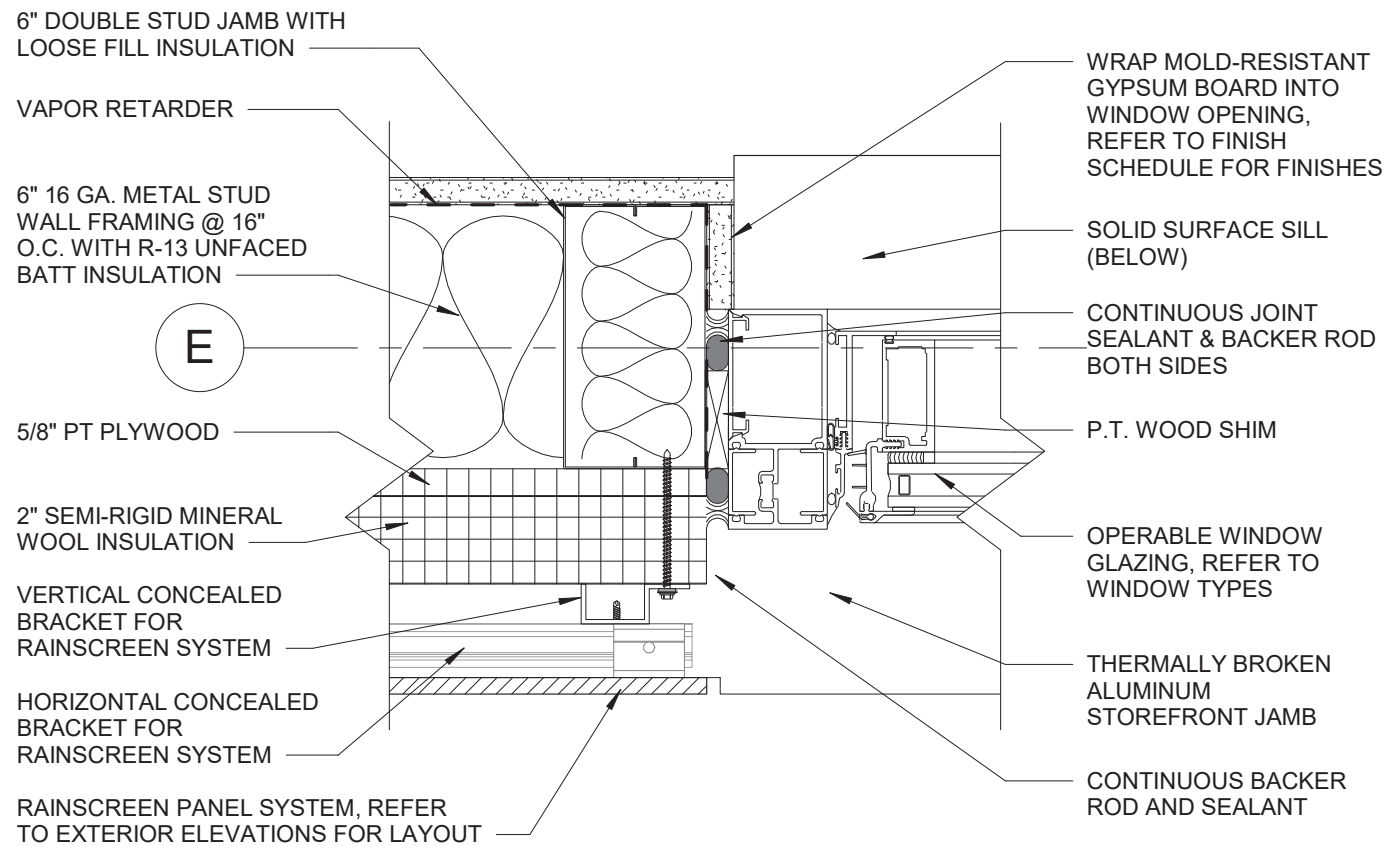
11 ALUMINUM STOREFRONT OPERABLE WINDOW VERTICAL MULLTIION
3" = 1'-0"



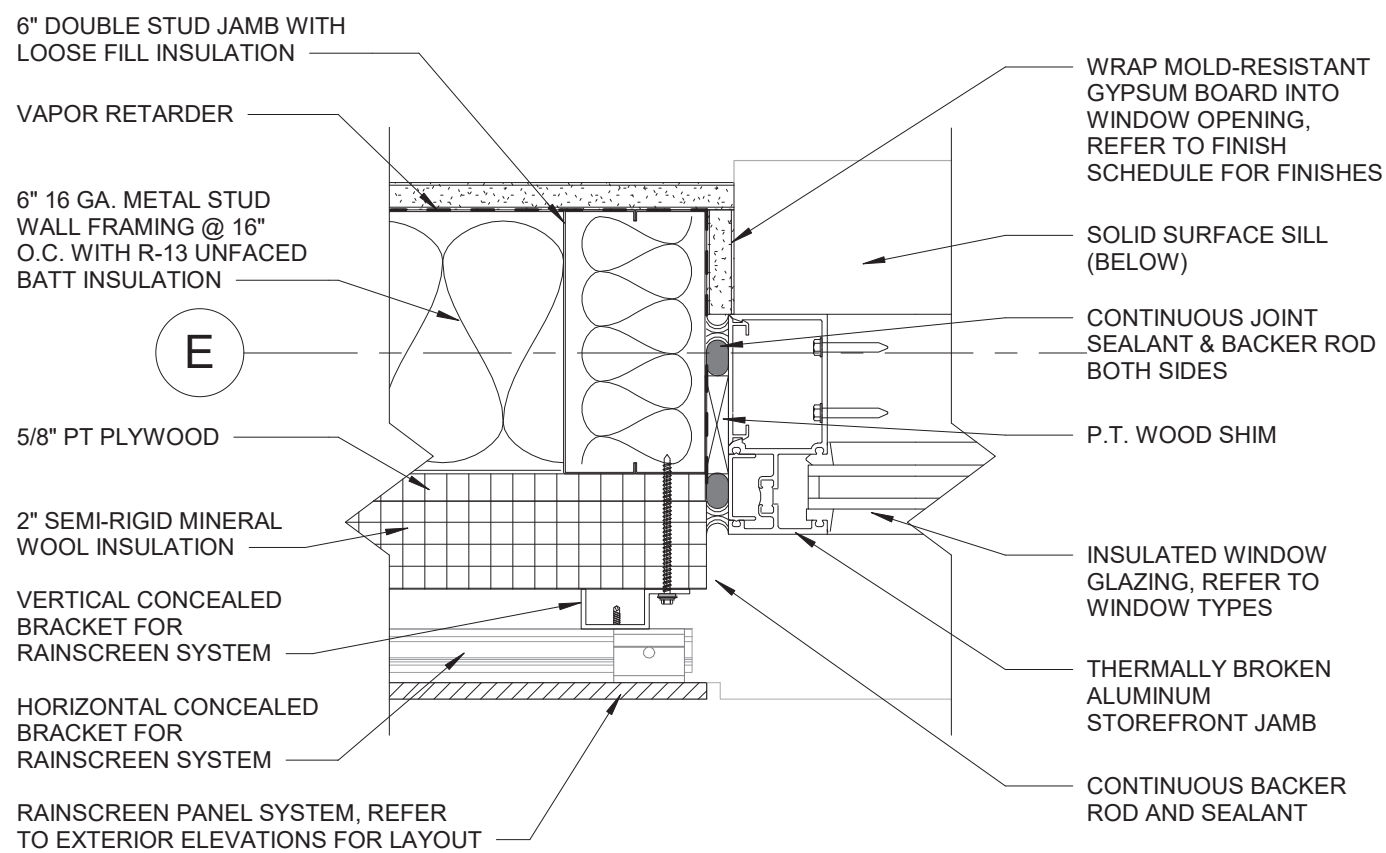
12 ALUMINUM STOREFRONT VERTICAL MULLION
3" = 1'-0"



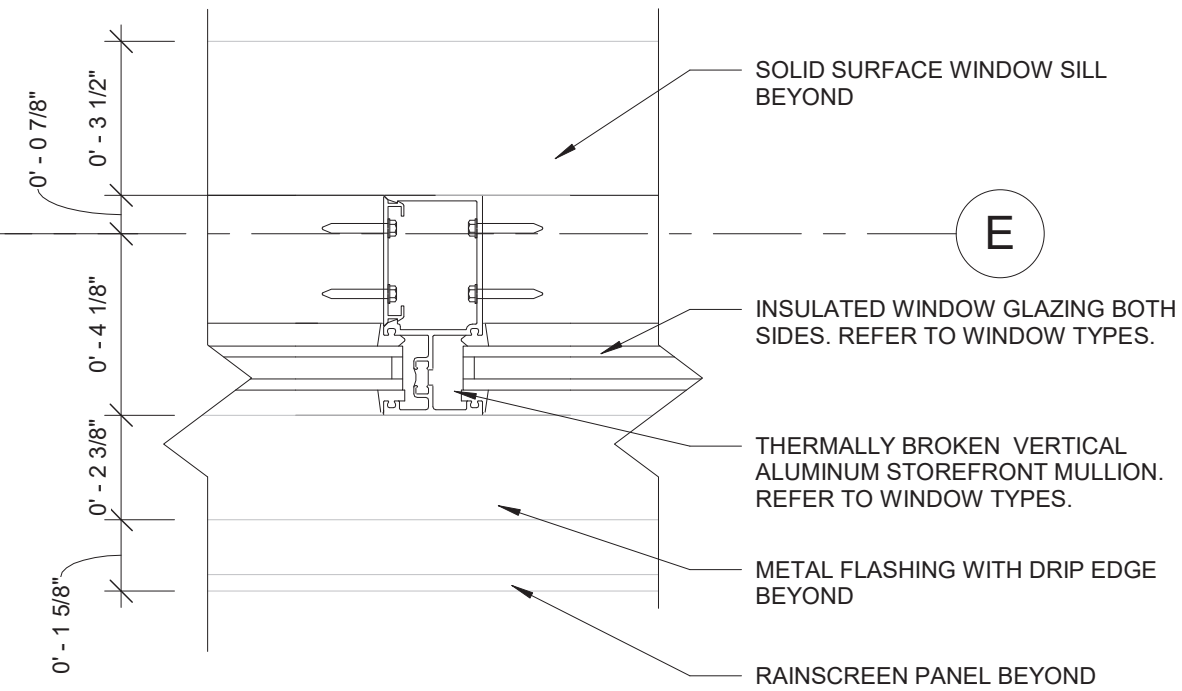
14 ALUMINUM STOREFRONT INTERIOR OPERABLE MULLION TYP
3" = 1'-0"



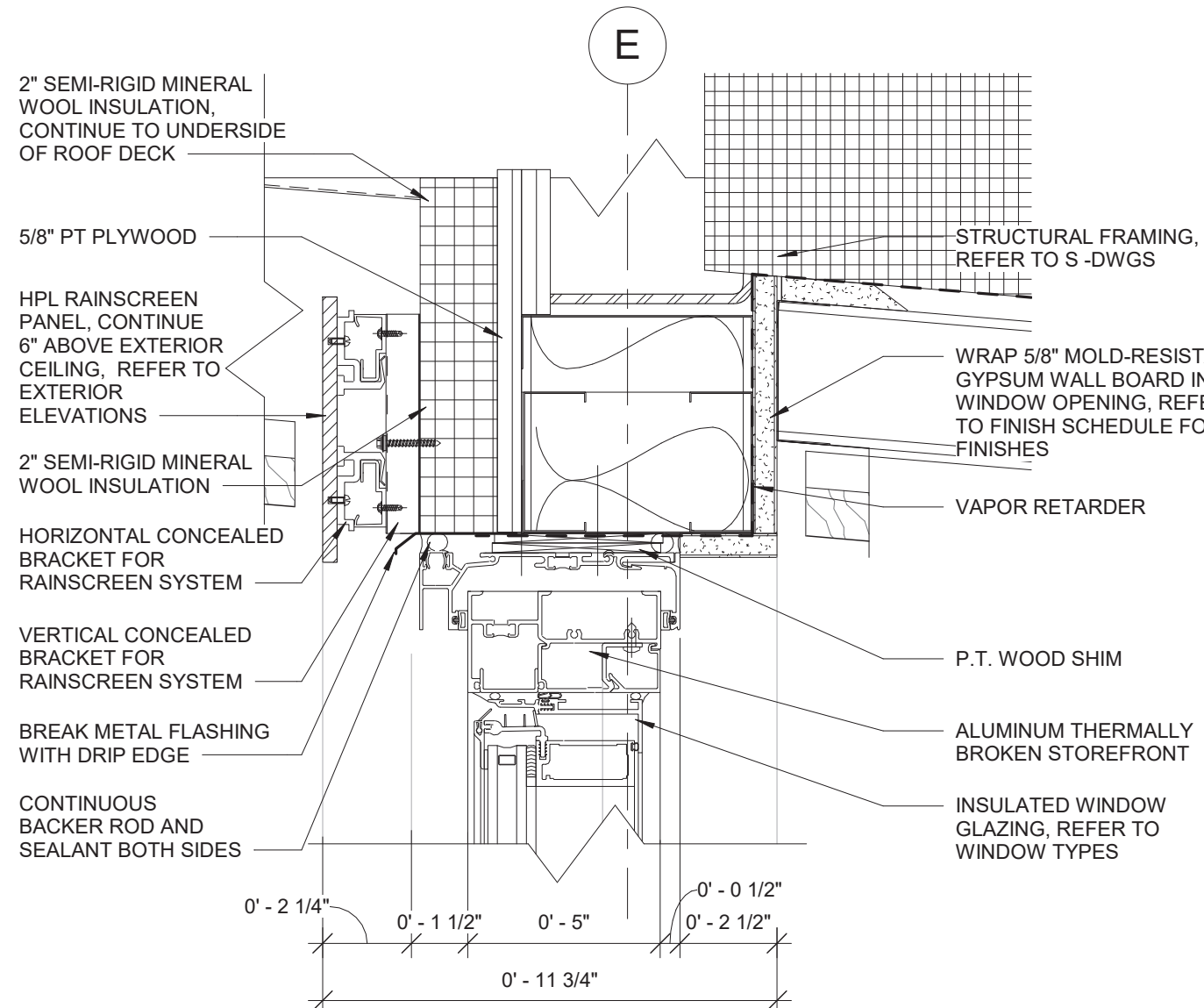
10 ALUMINUM STOREFRONT WINDOW JAMB
3" = 1'-0"



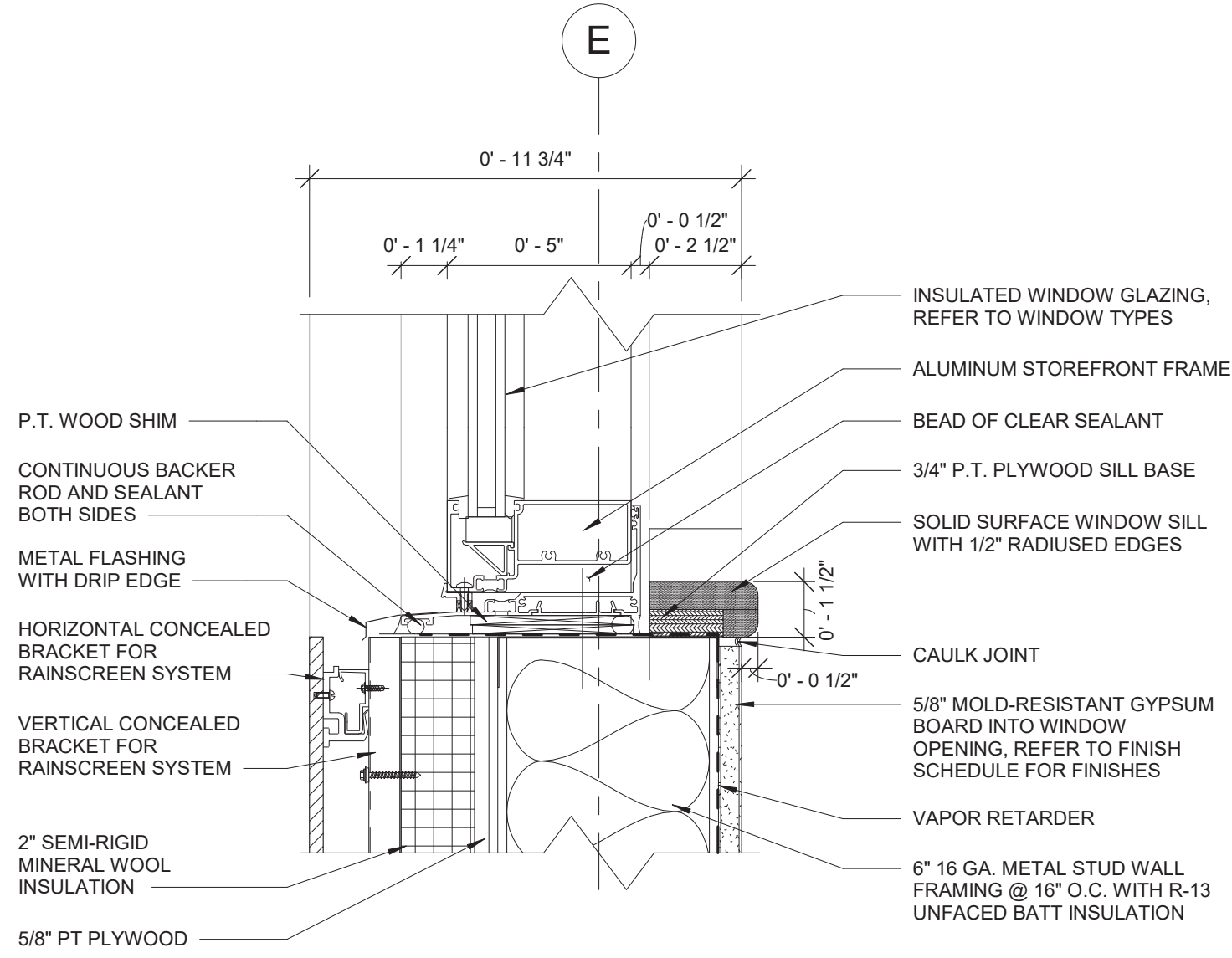
5 ALUMINUM STOREFRONT JAMB
3" = 1'-0"



13 ALUMINUM STOREFRONT INTERIOR MULLION TYP
3" = 1'-0"



4 ALUMINUM STOREFRONT HEAD
3" = 1'-0"



6 ALUMINUM STOREFRONT SILL
3" = 1'-0"

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CONSTRUCTION DOCUMENTS

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NO.	DATE	BY	DESCRIPTION

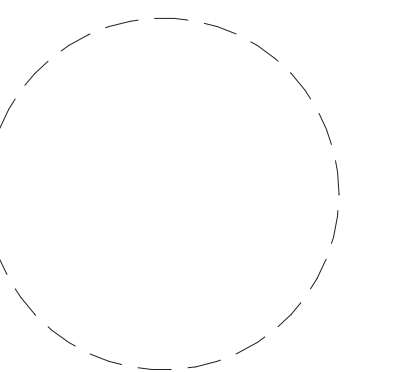
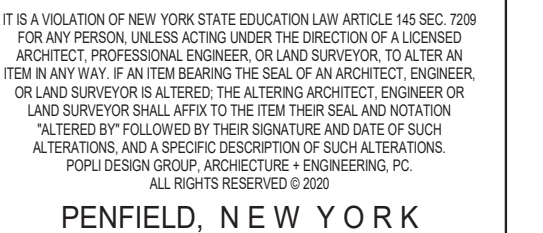
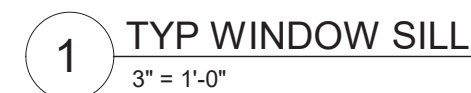
PROJECT:
ONONDAGA BEACH
FEASIBILITY STUDY &
DESIGN SERVICES

CLIENT:
ONONDAGA COUNTY

DRAWING TITLE
STOREFRONT DETAILS

DRAWING NO.	drawn by KKS
A-503	checked MSM
	proj. mgr. MSM
	proj. no. AR19003.00

ISSUE DATE
12/31/2019



CONSTRUCTION
DOCUMENTS

PROJECT:
ONONDAGA BEACH
FEASIBILITY STUDY &
DESIGN SERVICES

CLIENT:
ONONDAGA COUNTY

WINDOW AND OPENING DETAILS

ISSUE DATE
12/31/2019

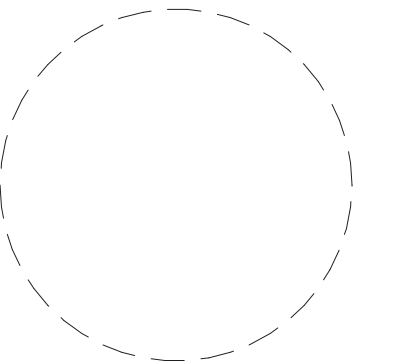


1. PROVIDE HPL PANEL (HPL-1) CASEWORK
ALL HARDWARE TO BE EITHER GALVANIZED STEEL
OR STAINLESS STEEL
3. FABRICATE AND INSTALL HPL CASEWORK PER
MANUFACTURERS INSTRUCTIONS
4. WHERE WALLS ARE TO RECEIVE PAINT, PAINT
ENTIRE WALL FROM FLOOR TO CEILING,
INCLUDING BEHIND CASEWORK, FURNITURE,
EQUIPMENT, WALL BASE, AND OTHER WALL
MOUNTED ITEMS

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main: 585.388.2060 • fax: 585.388.2070

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LAND SURVEYOR SHALL AFFIX TO THE ITEM THEIR SEAL AND NOTATION
"ALTERED BY" FOLLOWED BY THEIR SIGNATURE AND DATE OF SUCH
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PENFIELD, NEW YORK



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PROJECT:

ONONDAGA BEACH
FEASIBILITY STUDY &
DESIGN SERVICES

CLIENT:

ONONDAGA COUNTY

DRAWING TITLE

DETAILS AND CASEWORK ELEVATIONS

DRAWING NO.	
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A-505

drawn by	KKS
checked	MSM
proj. mgr.	MSM
proj. no.	AR19003.00

ISSUE DATE

12/31/2019

MECHANICAL SYMBOL LIST

	DUCT (FIRST FIGURE, SIDE SHOWN, DIMENSIONS IN INCHES)
	SINGLE LINE DUCT (FIRST FIGURE, SIDE SHOWN, DIMENSIONS IN INCHES)
	DUCT SECTION - SUPPLY
	DUCT SECTION - RETURN
	DUCT SECTION -EXHAUST
	14" ROUND DUCT
	24" x 12" FLAT OVAL DUCT
	VOLUME DAMPER - MANUAL OPERATION
	VOLUME DAMPER - MANUAL OPERATION
	TURNING VANES
	ACOUSTICAL TURNING VANES
	RISE IN DIRECTION OF ARROW
	DROP IN DIRECTION OF ARROW
	FIRE DAMPER
	ACCESS DOOR TO BE LOCATED ON MOST ACCESSIBLE SIDE OF DUCT
	SMOKE DAMPER
	ACCESS DOOR TO BE LOCATED ON MOST ACCESSIBLE SIDE OF DUCT
	COMBINATION FIRE / SMOKE DAMPER
	ACCESS DOOR TO BE LOCATED ON MOST ACCESSIBLE SIDE OF DUCT
	LINED DUCT (DIM. IS INTERNAL)
	FLEXIBLE DUCT
	FLEXIBLE CONNECTION
	THERMOSTAT
	PNEUMATIC THERMOSTAT
	SENSOR
	HUMIDISTAT
	CO ₂ SENSOR
	REGISTER OR GRILLE - TOP NUMBER REPRESENTS TAG, SEE SCHEDULE; BOTTOM NUMBER REPRESENTS CFM.
	DIFFUSER - LETTER REPRESENTS TAG, SEE SCHEDULE; NUMBER REPRESENTS CFM.
	ROOM NUMBER
	SUPPLY AIR
	RETURN OR EXHAUST AIR
	LOUVERED DOOR
	UNDERCUT DOOR
	WATER SERVICE (DOMESTIC OR COMBINED)
	WATER SERVICE (FIRE PROTECTION ONLY)
	DOMESTIC COLD WATER
	DOMESTIC HOT WATER SUPPLY
	DOMESTIC HOT WATER RECIRCULATION
	AUTOMATIC SPRINKLER
	DRY STANDPIPE
	WET STANDPIPE
	NATURAL GAS
	COMPRESSED AIR
	WASTE ANESTHETIC GAS DISPOSAL
	CONDENSATE DRAIN
	PUMPED DISCHARGE
	SANITARY DRAIN/SEWER (ABOVE GRADE)
	SANITARY DRAIN/SEWER (BELOW GRADE)
	STORM DRAIN SEWAGE (ABOVE GRADE)
	STORM DRAIN SEWAGE (BELOW GRADE)
	COMBINED STORM & SANITARY (ABOVE GRADE)
	COMBINED STORM & SANITARY (BELOW GRADE)
	SANITARY VENT
	EXISTING PIPING TO REMAIN
	EXISTING PIPING TO BE REMOVED
	HEATING WATER SUPPLY
	HEATING WATER RETURN
	LOW PRESSURE STEAM
	LOW PRESSURE CONDENSATE
	MEDIUM PRESSURE STEAM
	MEDIUM PRESSURE CONDENSATE
	CHILLED WATER SUPPLY
	CHILLED WATER RETURN
	REFRIGERANT (SUCTION AND LIQUID)
	VACUUM
	LIQUID
	COOLING TOWER SUPPLY
	COOLING TOWER RETURN
	FUEL OIL SUPPLY
	FUEL OIL RETURN
	HOT/CHILLED WATER SUPPLY
	HOT/CHILLED WATER RETURN
	HEAT PUMP LOOP SUPPLY
	HEAT PUMP LOOP RETURN

	SHUT-OFF VALVE (GATE, BALL, OR BUTTERFLY)
	GLOBE VALVE
	CHECK VALVE
	BALANCING VALVE
	ANGLE VALVE
	VALVE ON VERTICAL
	VALVE(S) IN VERTICAL PIPE
	REDUCER
	PIPE BREAK
	BALL VALVE
	BUTTERFLY VALVE
	GATE VALVE - NRS
	GATE VALVE - OS&Y
	GLOBE VALVE
	PRESSURE REDUCING VALVE
	PNEUMATIC VALVE
	PNEUMATIC CONTROL VALVE (3 WAY)
	SOLENOID OR MOTORIZED VALVE
	SOLENOID OR MOTORIZED CONTROL VALVE (3 WAY)
	TRIPLE DUTY VALVE
	RELIEF VALVE
	STRAINER
	UNION
	FLANGE
	PRESSURE GAUGE
	THERMOMETER
	WATER HAMMER ARRESTER
	P-TRAP
	PUMP (SCHEMATIC)
	IN-LINE PUMP (PLAN)
	STEAM TRAP
	BRANCH OFF BOTTOM OF PIPE
	BRANCH OFF TOP OF PIPE
	FLEX CONNECTION
	EXPANSION JOINT WITH GUIDES
	PIPE ANCHOR
	PIPE GUIDE
	FLOOR DRAIN
	FLOOR CLEAN OUT (PLAN VIEW)
	CLEAN OUT
	EXISTING EQUIPMENT TO REMAIN
	EQUIPMENT TO BE REMOVED
	NEW CONNECTION TO EXISTING
	REMOVE TO THIS POINT
	BUILDING SECTION
	DETAIL NUMBER
	PIPE CONTINUATION
	KEYNOTE
	REMOVAL KEYNOTE

HVAC ABBREVIATIONS

%	PERCENT	LG	LENGTH
AC	ALTERNATING CURRENT	LIN FT	LINEAL FOOT OR FEET
ACU(S)	AIR CONDITIONING UNIT(S)	LOC	LOCATION
ADJ	ADJACENT	LPS	LOW PRESSURE STEAM
AF	AIR FOIL	LRA	LOCKED ROTOR AMPS
AFF	ABOVE FINISHED FLOOR	LWT	LEAVING WATER TEMPERATURE
AFG	ABOVE FINISHED GRADE	MATL	MATERIAL
AHU	AIR HANDLING UNIT	MAX	MAXIMUM
ALT	ALTERNATE	MBH	BTU PER HOUR (THOUSAND)
AMB	AMBIENT	MCA	MINIMUM CIRCUIT AMPS.
AMP	AMPERE (AMP.AMPS)	MECH	MECHANICAL
ANSI	AMERICAN NATIONAL STANDARD INSTITUTE	MFG	MANUFACTURER
APD	AIR PRESSURE DROP	MIN	MINIMUM
APPROX	APPROXIMATE (LY)	MISC	MISCELLANEOUS
AVG	AVERAGE	MOCP	MAXIMUM OVERCURRENT PROTECTION
AFUE	ANNUAL FUEL UTILIZATION EFFICIENCY	MPS	MEDIUM PRESSURE STEAM
		MTG	MOUNTING
BHP	BRAKE HORSEPOWER	N/A	NOT APPLICABLE
BLDG	BUILDING	NC	NOISE CRITERIA
BO	BOTTOM OF	NC	NORMALLY CLOSED
BSMT	BASEMENT	NIC	NOT IN CONTRACT
BTU	BRITISH THERMAL UNIT	NO	NUMBER
		NO	NORMALLY OPEN
CAP	CAPICITY	NTS	NOT TO SCALE
CFM	CUBIC FEET PER MINUTE		
CLG	CEILING	OC	ON CENTER
CLR	CLEAR	OA	OUTSIDE AIR
CMPR	COMPRESSOR	OD	DIAMETER, OUTSIDE
COL	COLUMN	OPP	OPPOSITE HAND
CONN	CONNECTION	OZ	OUNCE
COMB	COMBUSTION	ODWH	ON DEMAND WATER HEATER
CONC	CONCRETE	OPG	OPENING
COND	CONDENS (ER-ING,-ATION-ATE)	OS	OPEN SITE
CONT	CONTINUOUS	OT	OFF TOP
CHWR	CHILLED WATER RETURN		
CHWS	CHILLED WATER SUPPLY	PC	PLUMBING CONTRACTOR
CU IN	CUBIC INCH	PLBG	PLUMBING
CU FT	CUBIC FEET	PH	PHASE (ELECTRICAL)
CV	VALVE FLOW COEFFICIENT	PPM	PARTS PER MILLION
		PR	PAIR
DB	DECIBEL	PRESS	PRESSURE
db	DRY BULB	PSF	POUNDS PER SQUARE FOOT
DC	DIRECT CURRENT	PSI	POUNDS PER SQUARE INCH
DEG	DEGREE	PSIG	PSI GAUGE
DEMO	DEMOLITION		
DIA	DIAMETER	R	THERMAL RESISTANCE
DWG	DRAWING	REF	REFRIGERANT
		RA	RETURN AIR
E	PREFIX FOR EXISTING	RAD	RADIATION
EAT	ENTERING AIR TEMPERATURE	RCVR	RECEIVER
EC	ELECTRICAL CONTRACTOR		
EDR	EQUIVALENT DIRECT RADIATION	RECIRC	RECIRCULATE
ELEV	ELEVATION	RH	RELATIVE HUMIDITY
ENGR	ENGINEER	REF	REFERENCE
EQ	EQUAL	RLA	RUNNING LOAD AMPS
ESP	EXTERNAL STATIC PRESSURE	RO	ROUGH OPENING
EST	ESTIMATED	ROW	RIGHT OF WAY
ETR	EXISTING TO REMAIN	RPM	REVOLUTIONS PER MINUTE
EVAP	EVAPORAT (-E,-ING,-ED,-OR)		
EWT	ENTERING WATER TEMPERATURE	SA	SUPPLY AIR
EX	EXISTING	SEER	SEASONAL ENERGY EFFICIENCY RATIO
EXIST	EXISTING	SCFM	CFM, STANDARD CONDITIONS
EXP	EXPANSION	SIM	SIMILAR
EXT	EXTERIOR		
		SP	STATIC PRESSURE
F	FAHRENHEIT	SPEC	SPECIFICATION
FA	FREE AREA	SPLY	SUPPLY
FIN	FINISHED	SQ	SQUARE
FL	FLOOR	SQ FT	SQUARE FOOT (FEET)
FLA	FULL LOAD AMPS	SQ IN	SQUARE INCH (INCHES)
FPC	FIRE PROTECTION CONTRACTOR	ST	STEEL
FPM	FEET PER MINUTE	STD	STANDARD
FPS	FEET PER SECOND	SUCT	SUCTION
FT	FOOT OR FEET		
FUT	FUTURE	T*STAT	THERMOSTAT
FV	FACE VELOCITY	TA	THROW AWAY
		TBD	TO BE DETERMINED
G	GLYCOL	TC	TEMPERATURE CONTROL CONTRACTOR
GA	GAGE OR GAUGE	TD	TEMPERATURE DIFFERENCE
GAL	GALLONS	TEMP	TEMPERATURE
GC	GENERAL CONTRACTOR	TO	TOP OF
GPM	GALLONS PER MINUTE	TSP	TOTAL STATIC PRESSURE
GPD	GALLONS PER DAY	TYP	TYPICAL
GPH	GALLONS PER HOUR		
GR	GRAINS	U	HEAT TRANSFER COEFFICIENT
		UNO	UNLESS NOTED OTHERWISE
HC	HVAC CONTRACTOR		
HD	HEAD	V	VOLT
HG	MERCURY	VAC	VACUUM
HORIZ	HORIZONTAL	VAR	VARIABLE
HP	HORSEPOWER	VAV	VARIABLE AIR VOLUME
HPS	HIGH PRESSURE STEAM	VEL	VELOCITY
HYR	HEATING WATER RETURN	VENT	VENTILATION, VENT
HYS	HEATING WATER SUPPLY	VERT	VERTICAL
HR	HOUR	VIF	VERIFY IN FIELD
HVAC	HEATING, VENTILATING AND AIR CONDITIONING	VOL	VOLUME
HZ	FREQUENCY		
		W	WATT
ID	DIAMETER, INSIDE	wb	WET BULB
IN	INCH	W/	WITH
INSUL	INSULATION	WBT	WET BULB TEMPERATURE
INT	INTERIOR	WH	WHITE
IPS	IRON PIPE SIZE	W/O	WITH OUT
		WPD	WATER PRESSURE DROP
KW	KILOWATT	WT	WEIGHT
KWH	KILOWATT HOUR	WTD	WATER TEMPERATURE DROP
LAT	LEAVING AIR TEMPERATURE		
LBS	POUNDS		
LF	LINEAR FEET		

GENERAL NOTES

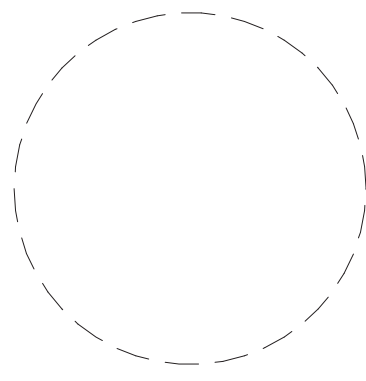
1. PROVIDE ALL WORK IN COMPLIANCE WITH ALL LOCAL, STATE AND FEDERAL CODES. OBTAIN ALL REQUIRED PERMITS.
2. COORDINATE ALL REQUIRED EXCAVATION, BACKFILL AND COMPACTION FOR ALL UNDERGROUND WORK WITH GENERAL CONTRACT.
3. FIELD VERIFY EXACT LOCATION, DEPTH, COMPOSITION AND CONDITION OF ALL PIPING, VALVES AND SYSTEMS AS REQUIRED FOR WORK OF THE CONTRACT.
4. THE PIPING INDICATED ON THESE PLANS ARE DIAGRAMATIC. ALL WORK SHALL BE COORDINATED WITH ALL OTHER TRADES PRIOR TO INSTALLATION. CONTRACTOR SHALL COORDINATE ROUTING OF ALL PIPING WITH EXISTING CONDITIONS AND SHALL PROVIDE ANY NECESSARY OFFSETS, REROUTING, TEES, ELBOWS, ETC. REQUIRED FOR A COMPLETE AND COORDINATED INSTALLATION.
5. THE CONTRACTOR SHALL OBTAIN AND PAY ALL FEES RELATED TO PERMITTING, INSPECTIONS, TAP-ON FEES, ETC.
6. CONTRACTOR SHALL COORDINATE AND PROVIDE ALL NECESSARY PIPING FITTINGS, PIPING, MISCELLANEOUS ITEMS REQUIRED FOR A COMPLETE INSTALLATION OF ALL MECHANICAL RELATED ITEMS.
7. ALL WORK SHALL BE COORDINATED WITH THE APPROVED EQUIPMENT.
8. ALL MECHANICAL & PIPING SYSTEMS SHALL BE SUPPORTED AS REQUIRED BY THE STATE AND LOCAL CODE REQUIREMENTS AND PER MANUFACTURER'S RECOMMENDATIONS.
9. ALL PIPING PENETRATIONS THROUGH WALLS OR FLOORS SHALL BE SEALED TO EQUAL THE RATING OF THE NEW, EXISTING WALL OR FLOOR.
10. THE MECHANICAL SYSTEM(S) SHALL BE TESTED AS REQUIRED BY STATE AND LOCAL CODE OR BY THE REQUIREMENTS OF THE LOCAL INSPECTOR.



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main: 585.388.2060 • fax: 585.388.2070

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FEASIBILITY STUDY &
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CLIENT:

ONONDAGA COUNTY

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HVAC LEGEND AND
SYMBOLS

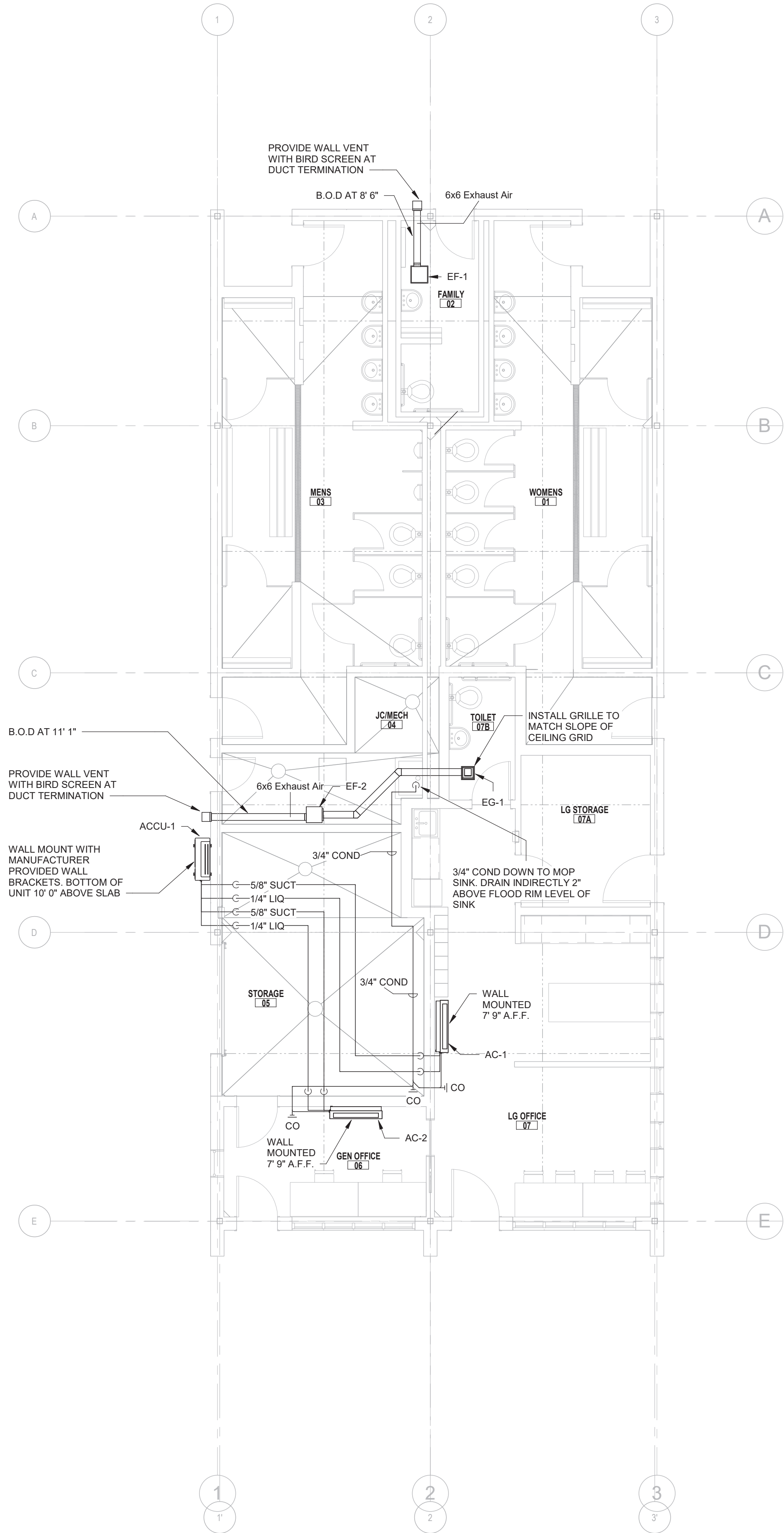
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FIRST FLOOR HVAC

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SPLIT SYSTEM COOLING (DX) SCHEDULE																					
TAG	LOCATION	REFRIGERANT	CONNECTION SIZE (INCHES)			INDOOR UNIT				OUTDOOR UNIT							COMPRESSOR			BASIS OF DESIGN MANUFACTURER	MODEL NO.
			LIQUID	GAS	COND.	NOMINAL COOLING CAPACITY (BTU/H)	CFM HIGH	CFM LOW	V/PH/Hz	MAXIMUM COOLING CAPACITY (BTU/H)	MINIMUM COOLING CAPACITY (BTU/H)	EER	V/PH/Hz	MOCp (A)	MCA (A)	HSPF	MODEL	RLA	FLA		
AC-1	LG OFFICE 07	R410A	1/4"	5/8"	3/4"	18,000	559	335	208/1/60	-	-	-	-	-	-	-	-	-	-	HITACHI	DXH18NWB21S
AC-2	GEN OFFICE 06	R410A	1/4"	5/8"	3/4"	18,000	559	335	208/1/60	-	-	-	-	-	-	-	-	-	-	HITACHI	DXH18NWB21S
ACCU-1	OUTSIDE	R410A	1/4"	3/8"	-	-	-	-	-	34,120	8,530	12.4	208/1/60	35	23	10.2				HITACHI	DHW36CMB21S

EXHAUST FAN SCHEDULE												
TAG	LOCATION	TYPE	CFM	STATIC PRESS. (IN. W.C.)	HP (WATTS)	FAN RPM	DRIVE	MAX SONES	ELECTRIC DATA V/PH/Hz	NOTES	MANUFACTURER	MODEL
EF-1	FAMILY 02	CEILING MOUNTED FAN	70	1/2"	-	838	DIRECT	2.0	115/60/1	-	GREENHECK	SP-A50-90-VG
EF-2	TOILET 07B	IN-LINE FAN	70	1/2"	-	900	DIRECT	2.1	115/60/1	-	GREENHECK	CSP-A200

REGISTER AND GRILLE SCHEDULE												
TAG	DUCT SIZE	FACE SIZE	MATL	PATTERN	DAMPER	MOUNTING	ACCESS.	FINISH	USE	REMARKS	MANUFACTURER	MODEL
EG-1	6"X6"	24"X24"	AL	PERFORATED	NONE	LAY-IN	NONE	WHITE	EXHAUST	PERFORATED RETURN DIFFUSER, ALUMINUM FACE WITH STEEL BACKPAN	TITUS	PAR-AA

DESIGN DATA FOR C-CLAMP HANGER


Nominal Pipe Size	Minimum A Dimension inches	Hanger Takeout inches	Rod Diameter inches
1/2	3 1/2	-1 1/4	3/8
3/4	3 1/2	-1 1/4	3/8
1	3 1/2	-1 1/4	3/8
1 1/4	3 3/4	-1 1/2	3/8
1 1/2	4	-1 1/2	3/8
2	4 1/4	-1 3/4	3/8
2 1/2	5	-2 1/4	3/8
3	5 1/2	-2 1/2	3/8
4	6	-3	3/8
5	6 3/4	-3 3/4	1/2
6	7 3/4	-4 1/2	1/2
8	9 1/4	-6	1/2

1 STANDARD C-CLAMP PIPE HANGER
NOT TO SCALE

2 PIPE HANGER DETAIL
NOT TO SCALE

3 TYPICAL CLEVIS HANGER DETAIL
NOT TO SCALE

4 PIPE HANGER WITH INSULATION DETAILS
NOT TO SCALE



POPLI DESIGN GROUP

555 Penbrooke Drive • Penfield, NY 14526
main: 585.388.2060 • fax: 585.388.2070

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PROJECT:

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FEASIBILITY STUDY &
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HVAC SCHEDULES AND
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PLUMBING SYMBOLS					
	LINEWEIGHT OF EXISTING PIPING TO REMAIN		CHECK VALVE		COMPRESSED AIR QUICK DISCONNECT W/ CHECK
	LINEWEIGHT OF EXISTING PIPING TO BE REMOVED		BALANCING VALVE		COMPRESSED AIR QUICK DISCONNECT W/O CHECK
	LINEWEIGHT OF PIPING TO BE PROVIDED		ANGLE VALVE		STEAM TRAP
	DOMESTIC COLD WATER SUPPLY (CWS)		PRESSURE REDUCING VALVE		PUMP (SCHEMATIC)
	DOMESTIC HOT WATER SUPPLY (HWS)		PNEUMATIC VALVE		IN-LINE PUMP (PLAN)
	DOMESTIC HOT WATER RETURN (HWR)		PNEUMATIC CONTROL VALVE (3 WAY)		FLEX CONNECTION
	SANITARY WASTE		SOLENOID OR MOTORIZED VALVE		EXPANSION JOINT WITH GUIDES
	SANITARY WASTE (UNDER SLAB)		SOLENOID OR MOTORIZED CONTROL VALVE (3 WAY)		PIPE ANCHOR
	SANITARY VENT		TRIPLE DUTY VALVE		PIPE GUIDE
	STORM DRAINAGE		RELIEF VALVE		FLOOR DRAIN OR FLOOR SINK
	STORM DRAINAGE (UNDER SLAB)		TEMPERATURE & PRESSURE RELIEF VALVE		FLOOR CLEAN OUT (PLAN VIEW)
	SECONDARY STORM DRAINAGE		HOSE BIBB OR DRAIN VALVE		CLEAN OUT
	SECONDARY STORM DRAINAGE (UNDER SLAB)		STRAINER		EQUIPMENT TO BE REMOVED
	GREASE WASTE		UNION		EXISTING EQUIPMENT TO REMAIN
	NATURAL GAS		FLANGE		PIPE CONTINUATION
	PIPE TURNED UP		PRESSURE GAUGE		NEW CONNECTION TO EXIST.
	PIPE TURNED DOWN		THERMOMETER		REMOVE TO THIS POINT
	BRANCH OFF BOTTOM OF PIPE		WATER HAMMER ARRESTER		KEYNOTE
	BRANCH OFF TOP OF PIPE		P-TRAP		REMOVAL KEYNOTE
	VALVE ON VERTICAL		BALANCE COCK		ACCESS SPACE
	REDUCER		GAS COCK		EQUIPMENT
	PIPE BREAK		VENT THRU ROOF		CLEARANCE
	BALL VALVE				
	BUTTERFLY VALVE				
	GATE VALVE - NRS				
	GATE VALVE - OS&Y				
	GLOBE VALVE				
	PLUG VALVE				
	SHUT-OFF VALVE (GATE, BALL, OR BUTTERFLY - REFER TO SPECS)				

GENERAL NOTES

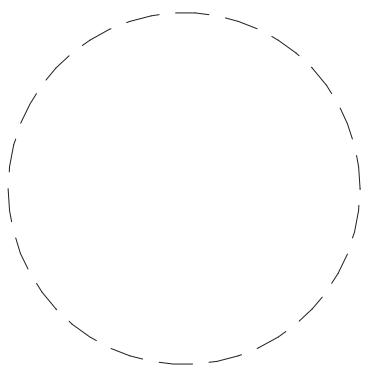
- THE ENTIRE PLUMBING SYSTEM SHALL BE IN ACCORDANCE WITH THE 2020 NEW YORK STATE BUILDING CODE AND REQUIREMENTS OF THE AUTHORITY HAVING JURISDICTION.
- PROVIDE ALL WORK IN COMPLIANCE WITH ALL LOCAL, STATE AND FEDERAL CODES. OBTAIN ALL REQUIRED PERMITS.
- COORDINATE ALL REQUIRED EXCAVATION, BACKFILL AND COMPACTION FOR ALL UNDERGROUND WORK WITH GENERAL CONTRACT.
- FIELD VERIFY EXACT LOCATION, DEPTH, COMPOSITION AND CONDITION OF ALL PIPING, VALVES AND SYSTEMS AS REQUIRED FOR WORK OF THE CONTRACT.
- PROVIDE SCHEDULE 40 GALVANIZED STEEL PIPE SLEEVES FOR ALL UNDERGROUND PIPING PASSING THROUGH OR UNDER FOOTINGS, WALLS, FOUNDATION WALLS, SLABS FLOORS AND/OR UNDERGROUND STRUCTURES. REFER TO THE PROJECT SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS.
- WHERE PIPING IS LOCATED OVER FOOTINGS AND/OR OTHER UNDERGROUND STRUCTURES, ROLL DOWN AS REQUIRED TO CONNECT TO SYSTEMS NOTED. PROVIDE ALL REQUIRED OFFSETS, FITTINGS AND CONNECTIONS.
- PITCH ALL SANITARY, WASTE, AND STORM PIPING AS FOLLOWS: PIPING 3" AND SMALLER, PITCH AT 2 PERCENT (1/4" PER FOOT) MINIMUM, PIPING 4" AND LARGER, PITCH AT 1 PERCENT (1/8" PER FOOT) MINIMUM.
- CONNECT TO SITE PIPING OUTSIDE BUILDING AS SHOWN. PROVIDE ALL REQUIRED OFFSETS, FITTINGS AND CONNECTIONS. FIELD VERIFY EXACT LOCATION, DEPTH AND COMPOSITION OF SITE SERVICES AND COORDINATE ALL WORK WITH SITE CONTRACTOR.
- PROVIDE ASSE 1072 BARRIER TYPE SEAL DEVICE ON ALL FLOOR DRAINS.
- THE PIPING INDICATED ON THESE PLANS ARE DIAGRAMATIC. ALL WORK SHALL BE COORDINATED WITH ALL OTHER TRADES PRIOR TO INSTALLATION. CONTRACTOR SHALL COORDINATE ROUTING OF ALL PIPING WITH EXISTING CONDITIONS AND SHALL PROVIDE ANY NECESSARY OFFSETS, REROUTING, TEES, ELBOWS, ETC. REQUIRED FOR A COMPLETE AND COORDINATED INSTALLATION.
- CONTRACTOR SHALL COORDINATE AND PROVIDE ALL NECESSARY PIPING & PLUMBING FITTINGS, PIPING, MISCELLANEOUS ITEMS REQUIRED FOR A COMPLETE INSTALLATION OF ALL PLUMBING RELATED ITEMS.
- ALL WORK SHALL BE COORDINATED WITH THE APPROVED EQUIPMENT.
- THE CONTRACTOR SHALL COORDINATE THE INSTALLATION OF ALL UNDER SLAB PIPING WITH EXISTING STRUCTURAL FOUNDATIONS. UNDERGROUND UTILITY LOCATIONS SHALL BE VERIFIED PRIOR TO ANY WORK BEING PERFORMED. CONTRACTOR SHALL REPAIR OR REPLACE ALL PIPING NOT IN PROPER WORKING ORDER OR DAMAGED DURING INSTALLATION OF THE NEW UNDERSLAB PIPING.
- ALL PLUMBING & PIPING SYSTEMS SHALL BE SUPPORTED AS REQUIRED BY THE STATE AND LOCAL CODE REQUIREMENTS AND PER MANUFACTURER'S RECOMMENDATIONS.
- ALL PIPING PENETRATIONS THROUGH NEW, EXISTING WALL, OR FLOOR SHALL BE SEALED TO EQUAL THE RATING OF THE NEW, EXISTING WALL OR FLOOR.
- THE PLUMBING SYSTEM SHALL BE TESTED AS REQUIRED BY STATE AND LOCAL CODE OR BY THE REQUIREMENTS OF THE LOCAL PLUMBING INSPECTOR.
- THE ENTIRE DOMESTIC WATER SYSTEM (EXISTING/NEW) SHALL BE DISINFECTED IN ACCORDANCE TO THE LOCAL CODE & HEALTH DEPARTMENT REQUIREMENTS.
- THE BACKFLOW PREVENTION DEVICE SHALL BE INSTALLED PER STATE AND LOCAL CODE & PER AUTHORITY HAVING JURISDICTION REQUIREMENTS.
- ALL VENT THRU ROOF (VTR) PENETRATIONS INDICATED ON PLANS ARE PRELIMINARY. FINAL LOCATIONS SHALL BE COORDINATED WITH ALL TRADES. ALL VTR'S SHALL BE A MINIMUM OF 25'-0" FROM ALL FRESH AIR INTAKE OPENINGS.



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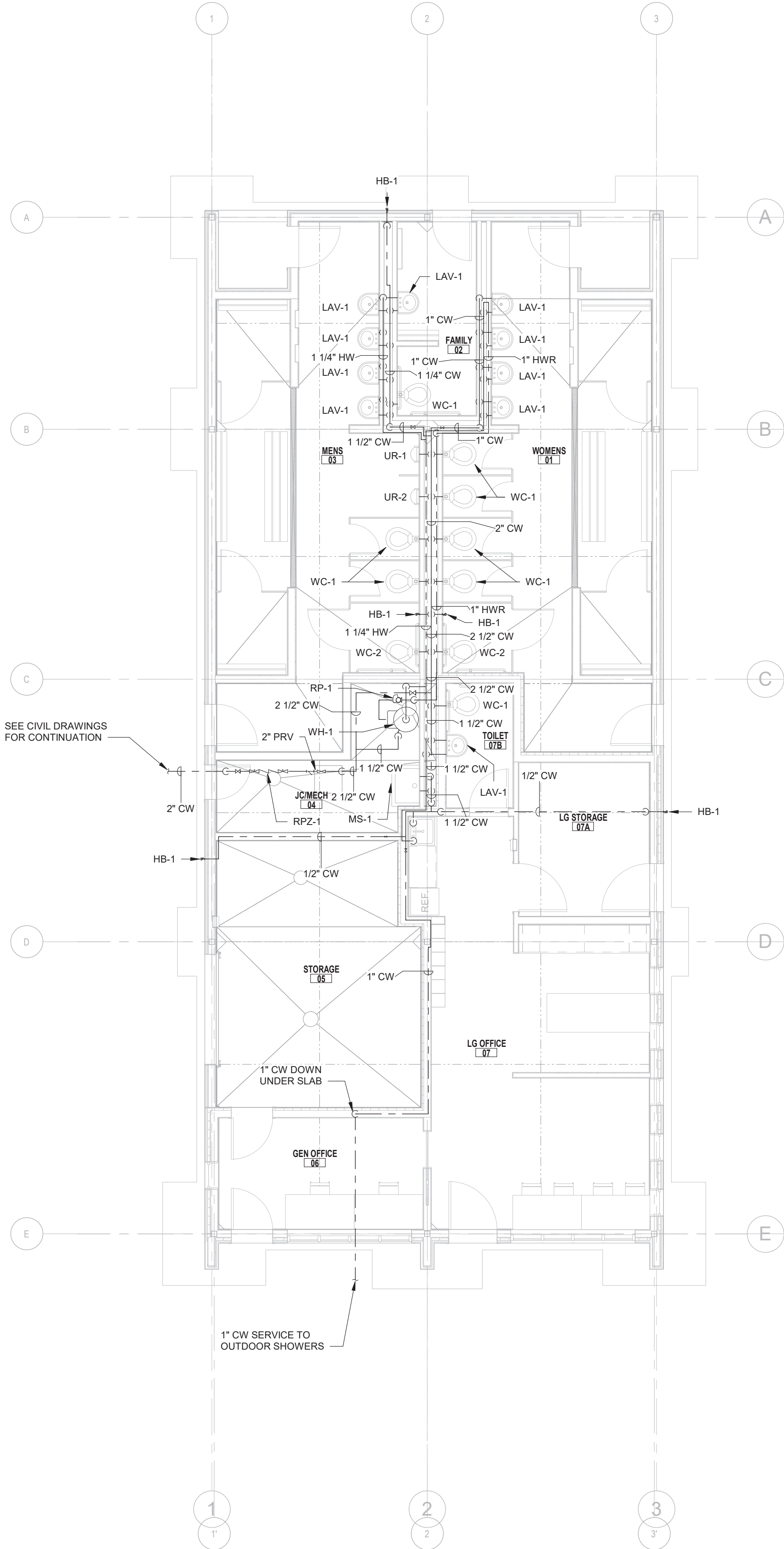
PROJECT:
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CLIENT:
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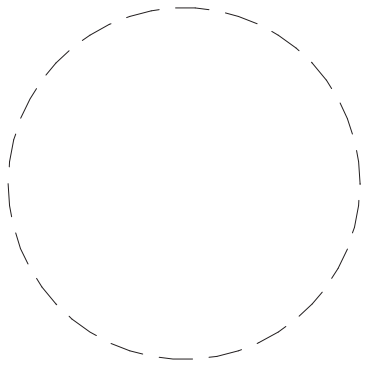
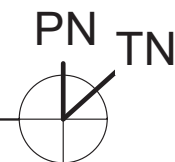
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PLUMBING LEGEND AND
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1 FIRST FLOOR PLUMBING
3/16" = 1'-0"



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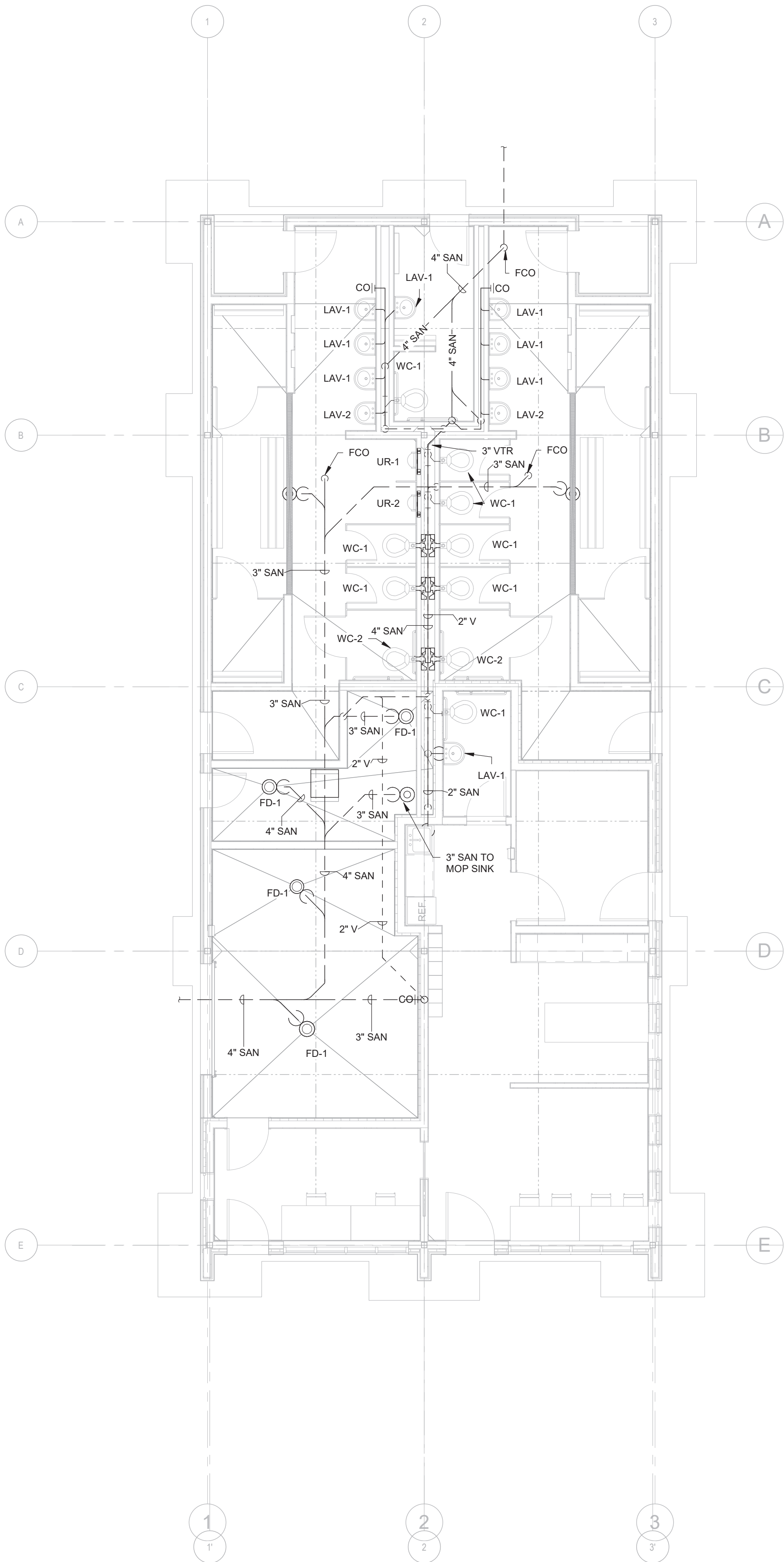
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FIRST FLOOR PLUMBING

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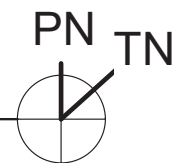
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GENERAL NOTES:

A. COORDINATE PLUMBING PENETRATIONS WITH ROOF TO CENTER BETWEEN STANDING SEAMS.

① FIRST FLOOR SANITARY AND VENT
3/16" = 1'-0"



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FIRST FLOOR
SANITARY/VENT

DRAWING NO.

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PLUMBING FIXTURE SCHEDULE										
FIXTURE	DESCRIPTION	MANUFACTURER	MODEL	CONNECTION SIZE (INCHES)						COMMENTS
				WASTE	VENT	CW	HW	TW	P-TRAP	
LAV-1	LAVATORY	KOHLER	K-1728	1-1/2"	1-1/4"	1/2"	1/2"	-	1-1/2"	
WC-1	WALL-MOUNTED WATER CLOSET	KHOLER	K-4325	4"	2"	1"	-	-	-	
WC-2	WALL-MOUNTED WATER CLOSET	KHOLER	K-4325	4"	2"	1"	-	-	-	ADA COMPLIANT
UR-1	URINAL	KHOLER	K-5016-ET	3"	2"	3/4"	-	-	-	
UR-2	URINAL	KHOLER	K-5016-ET	3"	2"	3/4"	-	-	-	ADA COMPLIANT
SH-1	OUTDOOR SHOWER	-	-	2"	1-1/2"	3/4"	3/4"	-	2"	
MS-1	MOP SINK	ACORN	-	3"	1-1/2"	3/4"	3/4"	-	3"	
S-1	KITCHEN SINK	ELKAY	CR25211	2"	1-1/2"	1/2"	1/2"	-	2"	
HB-1	HOSE BIBB	ZURN	12-195XL, Z1341-BOX	-	-	3/4"	-	-	-	
FD-1	FLOOR DRAIN	ZURN	FD-2220	3"	2"	-	-	-	3"	

NOTES: 1. REFER TO SPECIFICATIONS FOR ALL FIXTURE REQUIREMENTS.
2. PROVIDE SHUT-OFF VALVES ON ALL BRANCH PIPING TO FIXTURES AND EQUIPMENT.

DOMESTIC WATER HEATER SCHEDULE							
TAG	MANUFACTURER	MODEL	STORAGE (GALLONS)	ELECTICAL WATTAGE	ELECTRICAL (VOLTS/PH)	GPH DELIVERED @ 90 DEG F RISE	COMMENTS
WH-1	A.O. SMITH	DRE-52-9	52	9 KW	208/3	41	PROVIDE WITH DRAIN PAN AND SUPPORT BRACKETS

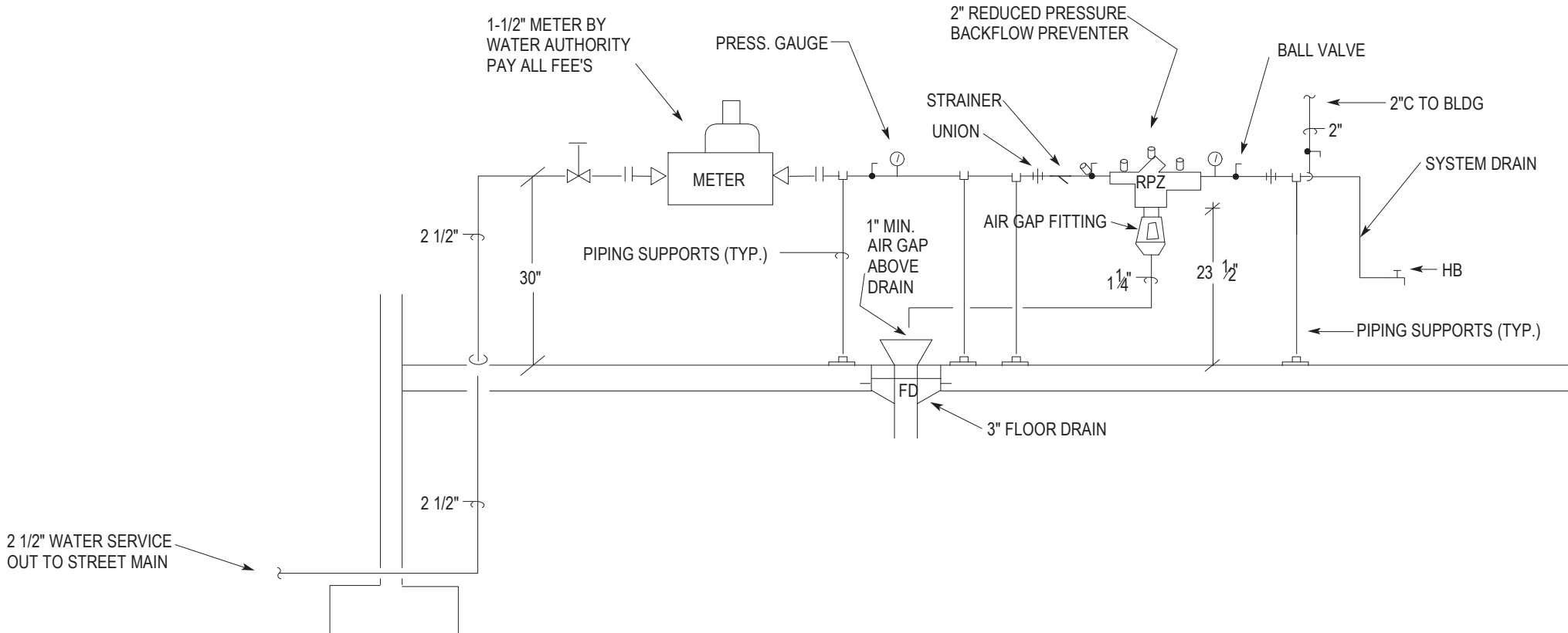
NOTES: 1. PROVIDE UNIT WITH THREE (3) 3 KW HEATING ELEMENTS.

TAG	SERVICE	LOCATION	GPM @ FT. HD.	CONN. SIZE	MOTOR			MANUFACTURER & MODEL	OPTION-ACCESSORIES
					HP	RPM	VOLT. - PH. - HZ.		
RP-1	DOMESTIC HOW WATER RECIRCULATION	JC/MECH 04	5 GPM @ 20 FT.	1"	1/12	5/8"	115-1-60	BELL & GOSSETT ECOCIRC XL 20-35	-

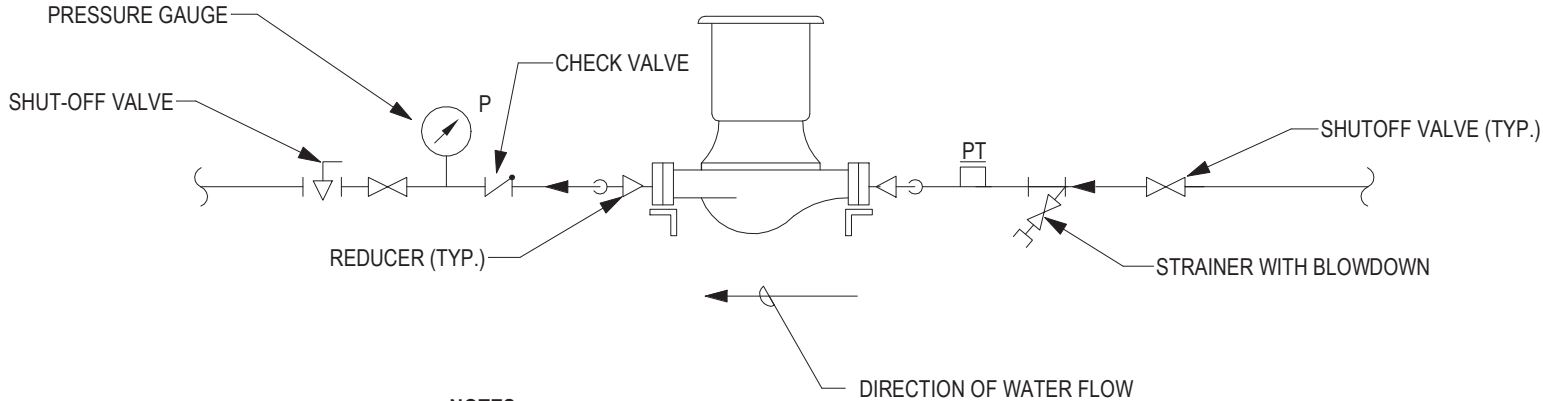
NOTES: 1. PROVIDE WITH LOCAL DISCONNECT.

MIXING VALVE SCHEDULE					
TAG	DESCRIPTION	MIN. FLOW TO ASSE 1017	EWI ("F)	LWT ("F)	MANUFACTURER/MODEL
MIX-1	LAVATORY/SINK MIXING VALVE	0.5 GPM	140	110	POWERS LFIS075

RPZ SCHEDULE								
TAG	MANUFACTURER	MODEL	QTY	LOCATION	CONNECTION SIZE (NPS)	DESIGN FLOW (GPM)	MAXIMUM PRESSURE DROP (PSI)	REQUIRED ACCESSORIES/NOTES
RPZ-1	WATTS	LF009	1	JC/MECH 04	2"	75	13	-



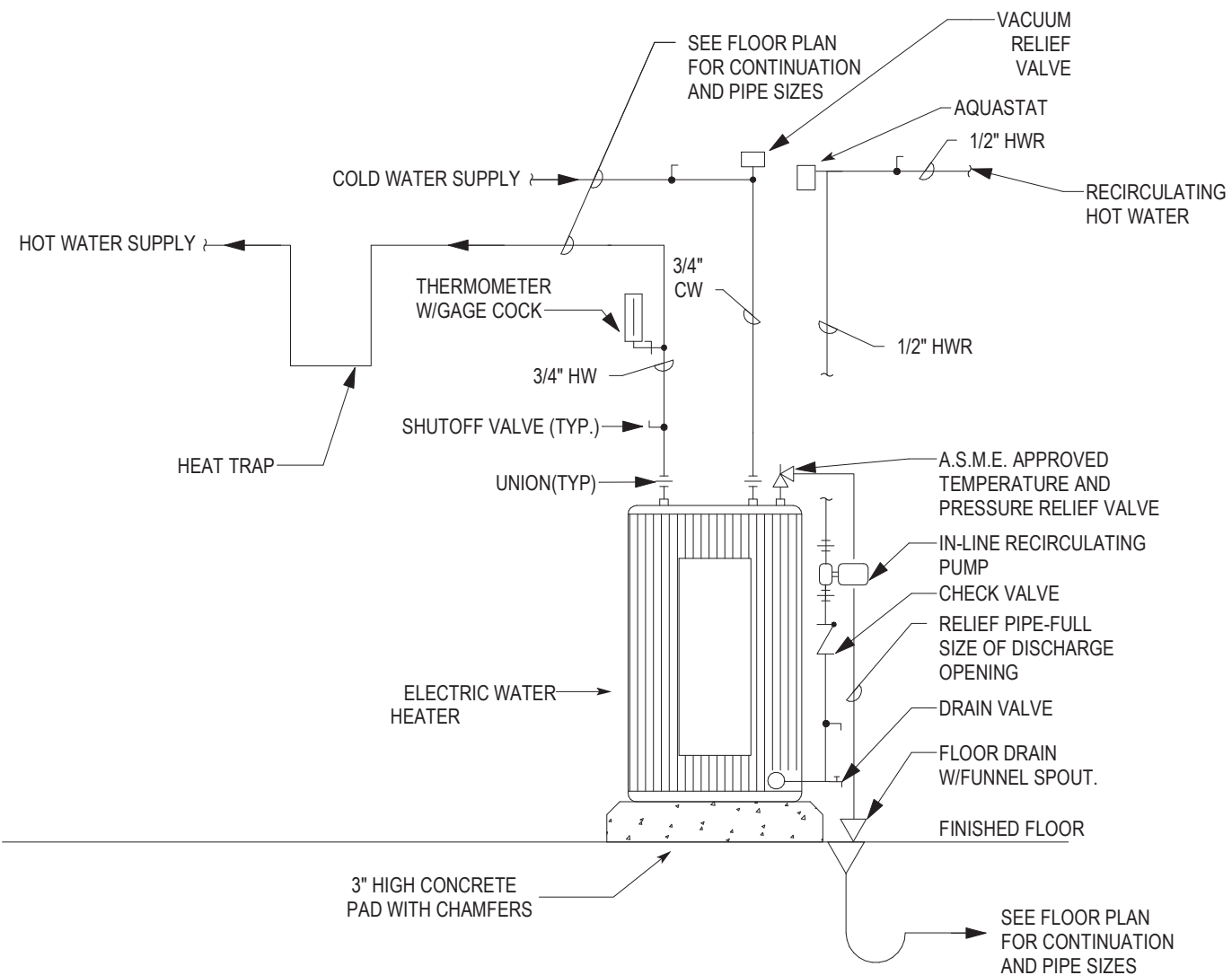
1 DOMESTIC WATER SERVICE PIPING DETAIL
NOT TO SCALE



NOTES:
1. SUPPORT PUMP FROM PIPING ONLY. DO NOT SUPPORT PUMP FROM MOTOR. PROVIDE ANGLE IRON SUPPORT FRAME. SECURE RIGIDLY SUPPORT FRAME TO FLOOR OR NEAR COLUMN.
2. PROVIDE ADEQUATE CLEARANCE FOR SERVICING OF PUMPS. PUMP SHALL BE REMOVABLE WITHOUT DISMANTLING OR REMOVING OF PIPING OR VALVES.

DESIGNER NOTE: USE FOR PARALLEL ARRANGEMENT

3 M-232123-02-1-IN-LINE WATER PUMP
NOT TO SCALE



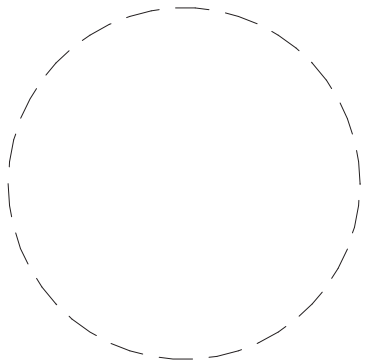
2 ELECTRIC WATER HEATER DETAIL
NOT TO SCALE

POPPI DESIGN GROUP

555 Penbrooke Drive • Penfield, NY 14526
main: 585.388.2060 • fax: 585.388.2070

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DOCUMENT PHASE

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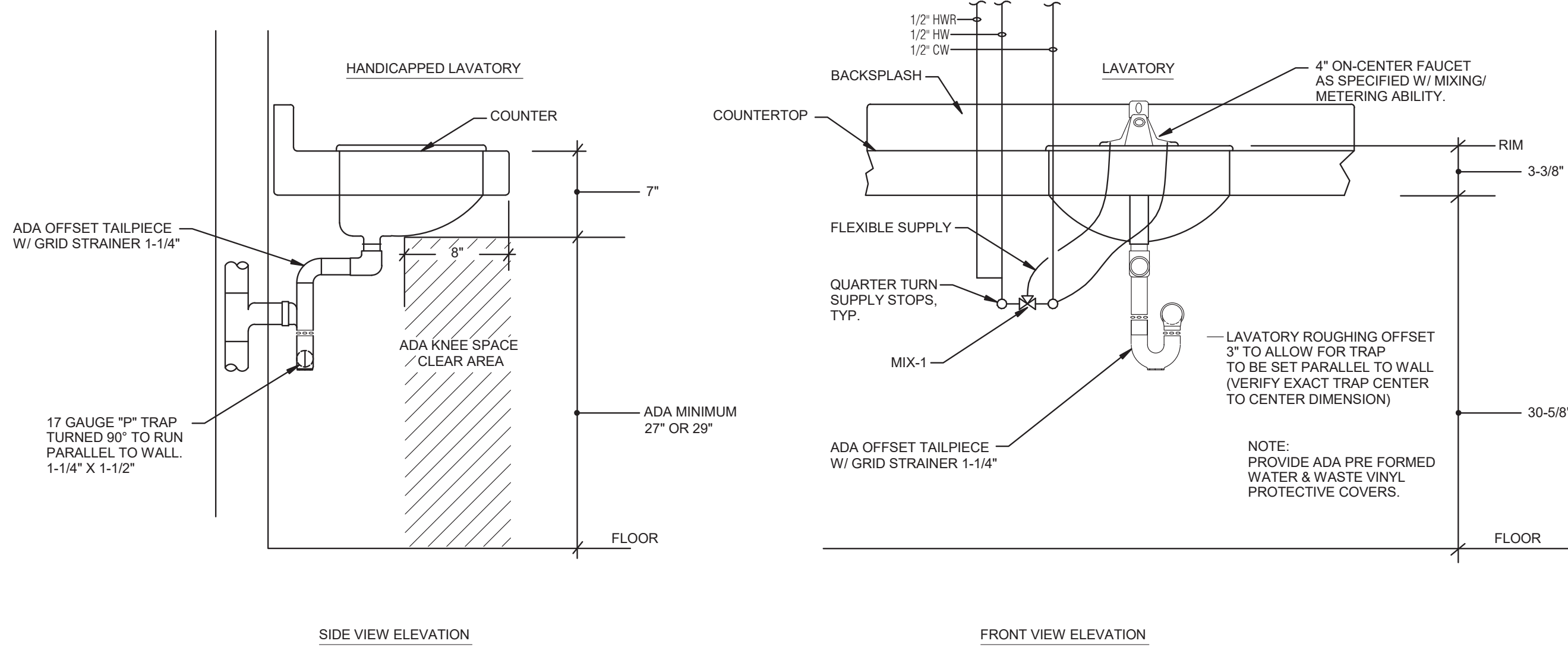
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ONONDAGA BEACH
FEASIBILITY STUDY &
DESIGN SERVICES

CLIENT:
ONONDAGA COUNTY

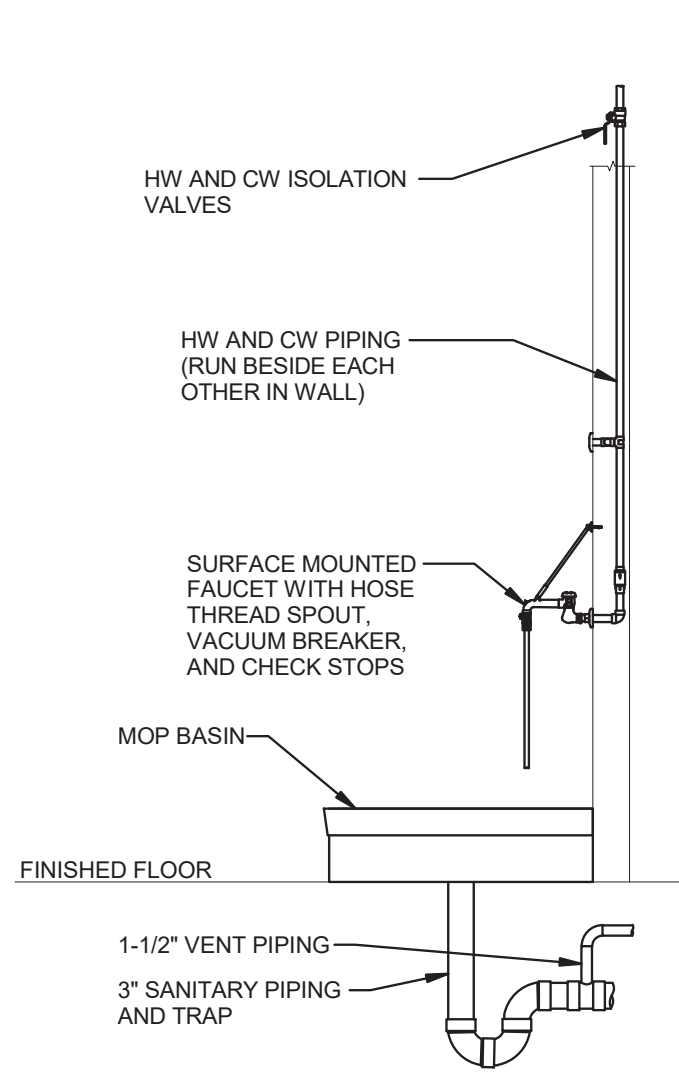
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AND DETAILS

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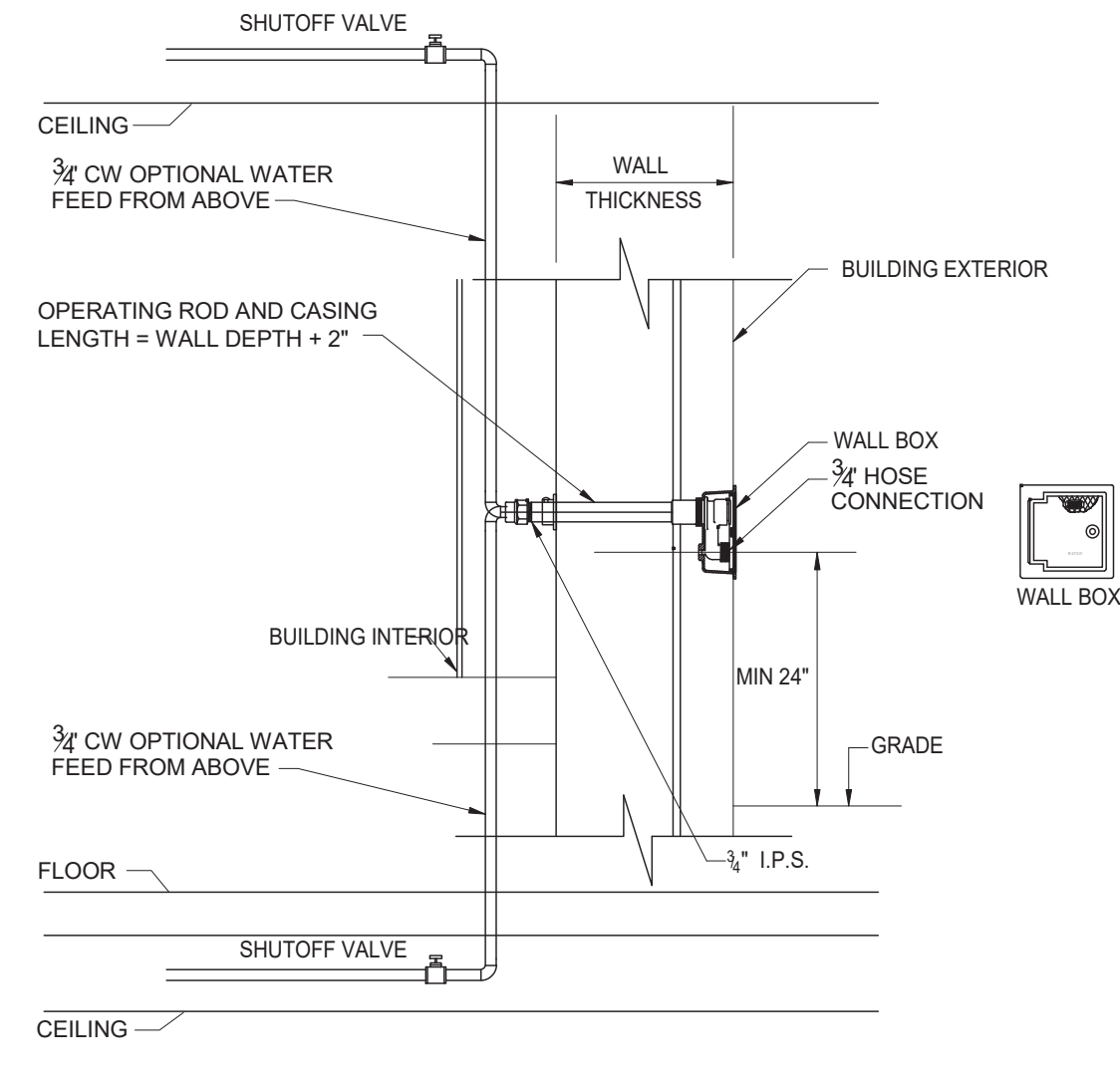
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12/06/19



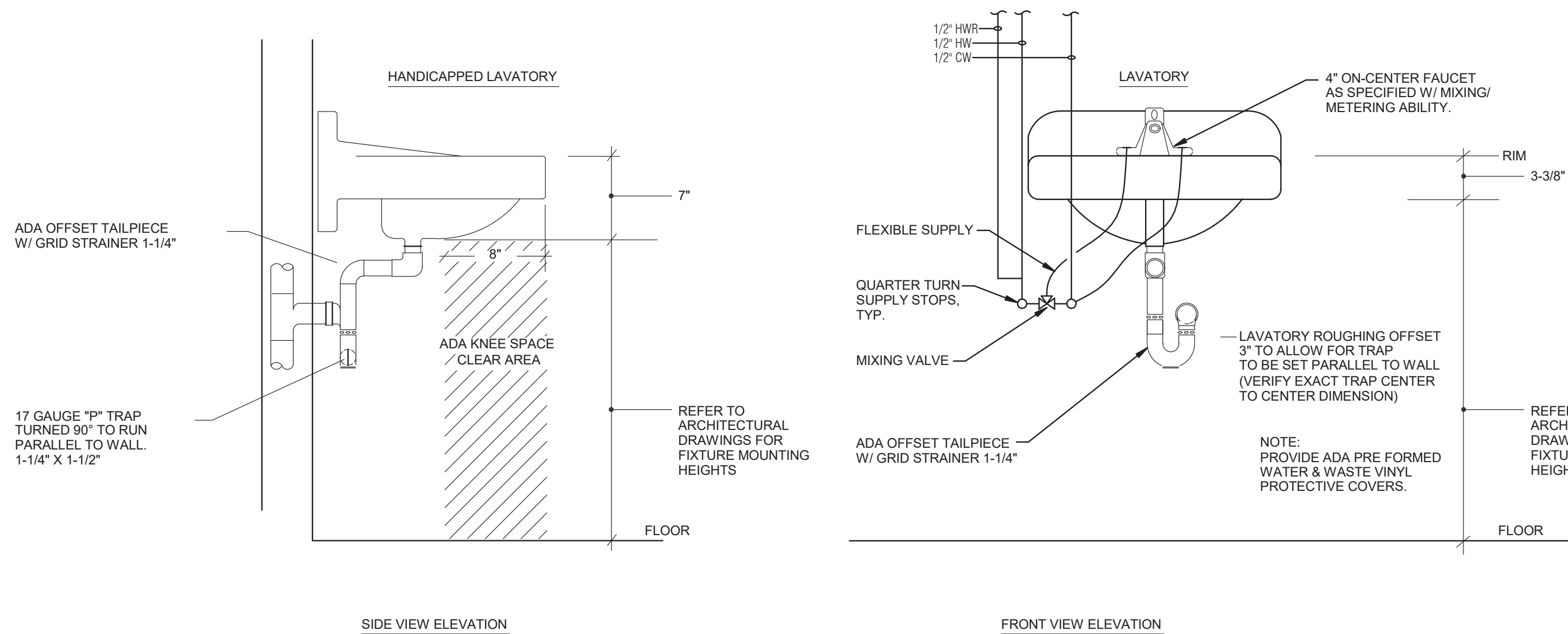
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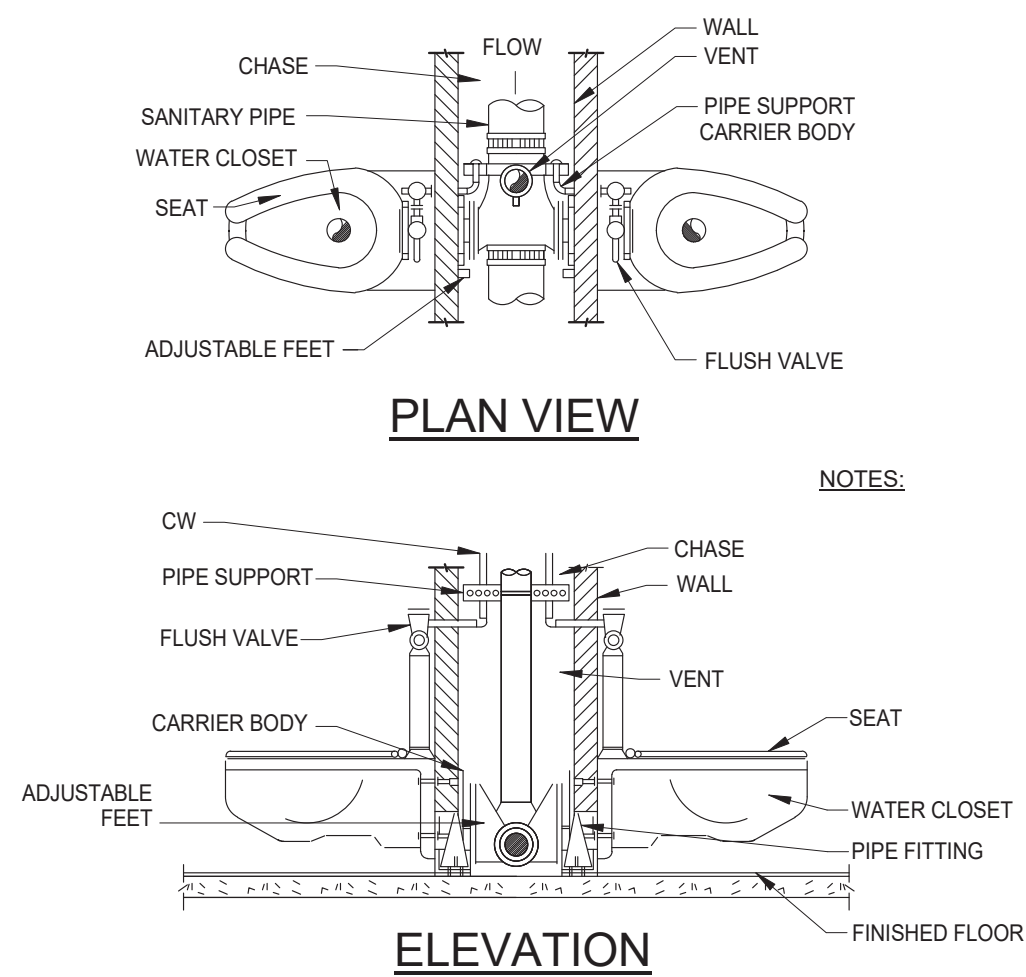
⑤ MOP RECEPTOR DETAIL
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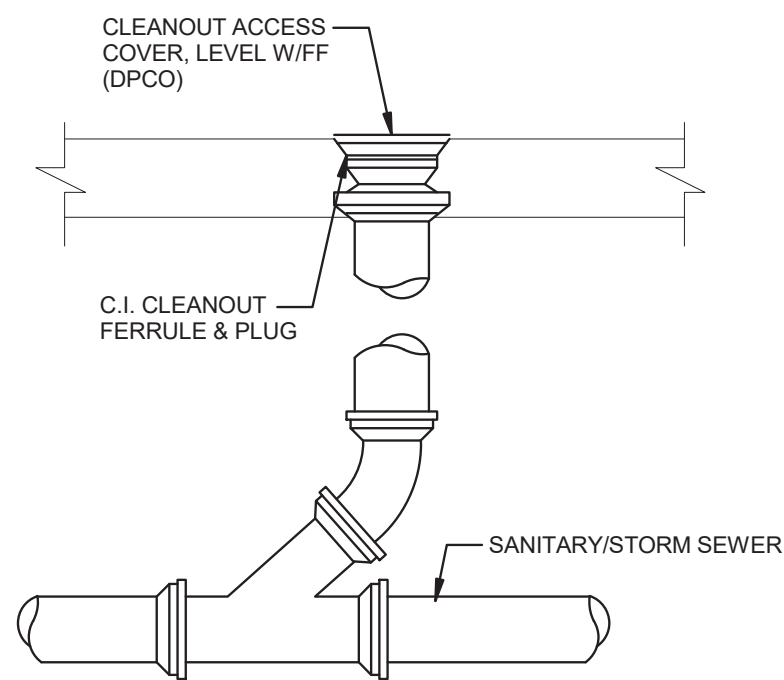
⑥ EXTERIOR WALL HYDRANT DETAIL
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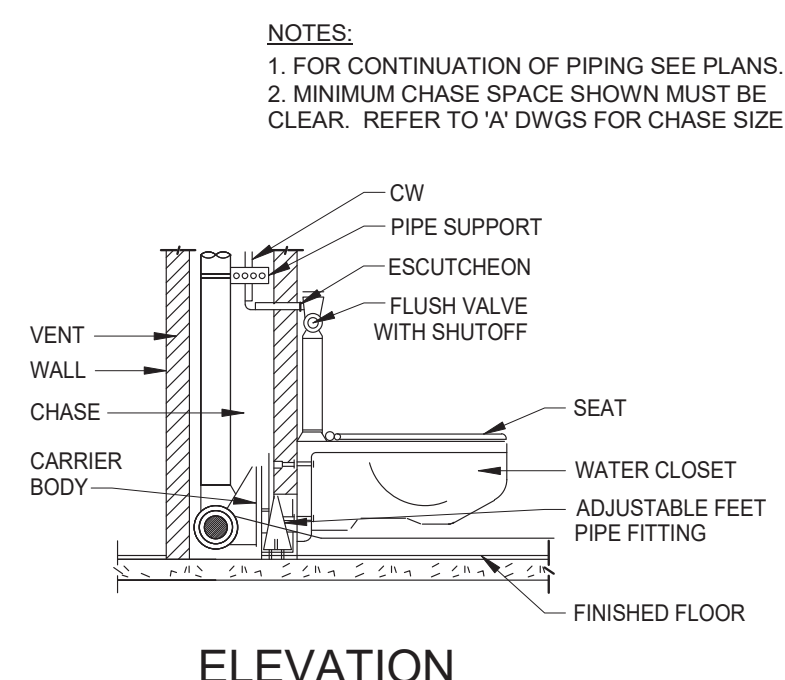
⑦ WALL MOUNT LAVATORY ROUGHING DETAIL
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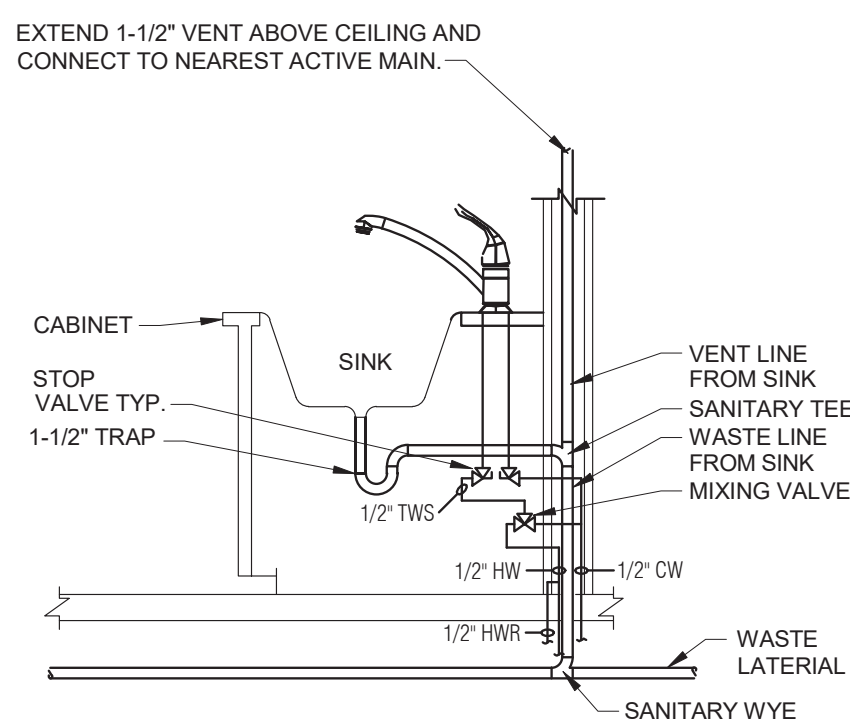
⑧ BACK-TO-BACK WALL HUNG WATER CLOSET DETAIL
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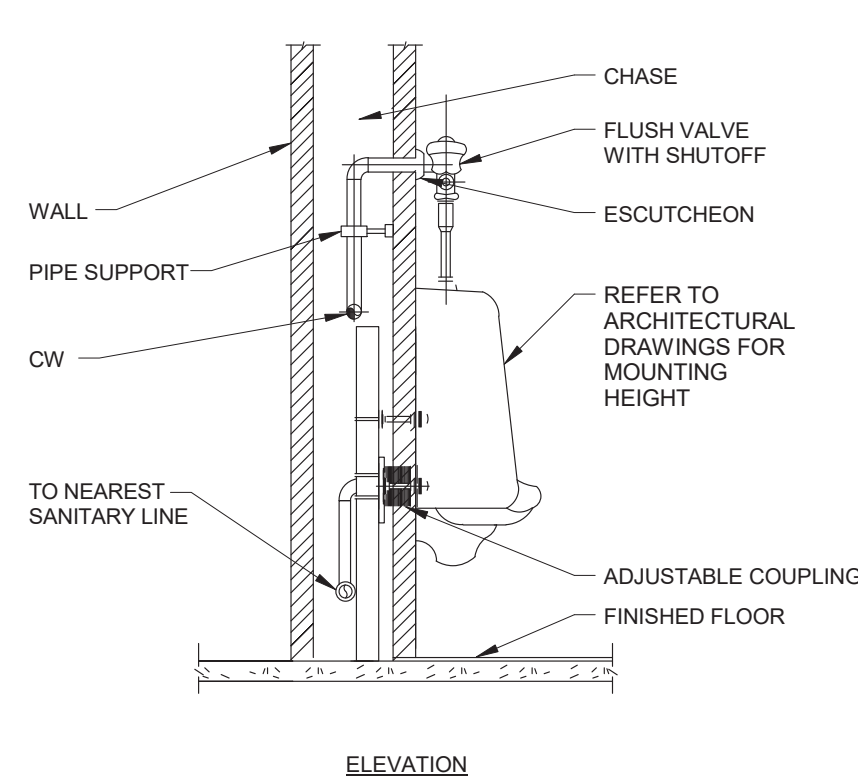
⑨ FLOOR CLEANOUT DETAIL
NOT TO SCALE



⑩ SINGLE WALL HUNG WATER CLOSET DETAIL
NOT TO SCALE



⑪ COUNTERTOP SINK DETAIL
NOT TO SCALE



⑫ WALL HUNG URINAL DETAIL
NOT TO SCALE

PDG
POPLI DESIGN GROUP

555 Penbrooke Drive • Penfield, NY 14526
main: 585.388.2060 • fax: 585.388.2070

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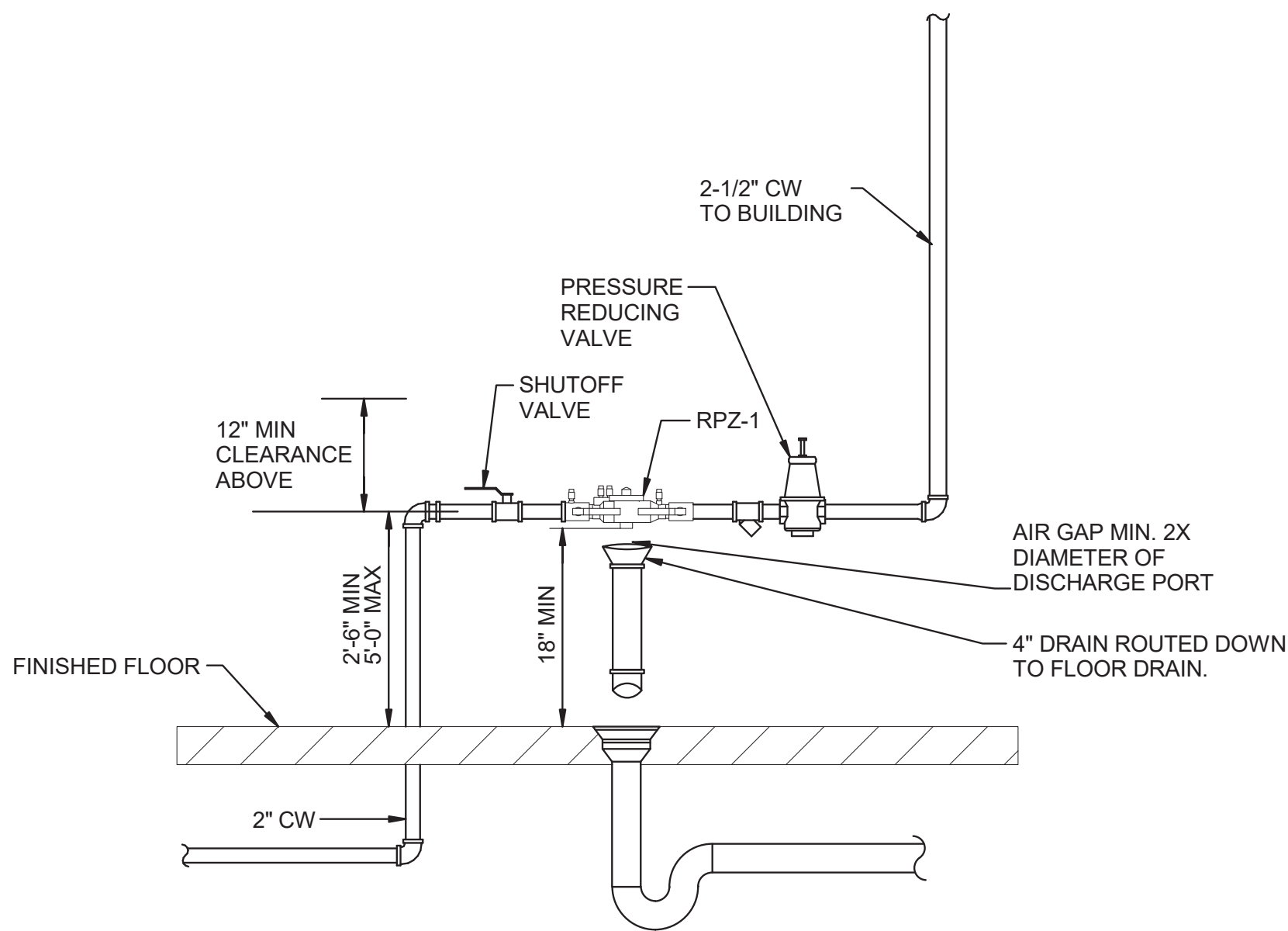
PROJECT:
**ONONDAGA BEACH
FEASIBILITY STUDY &
DESIGN SERVICES**

CLIENT:
ONONDAGA COUNTY

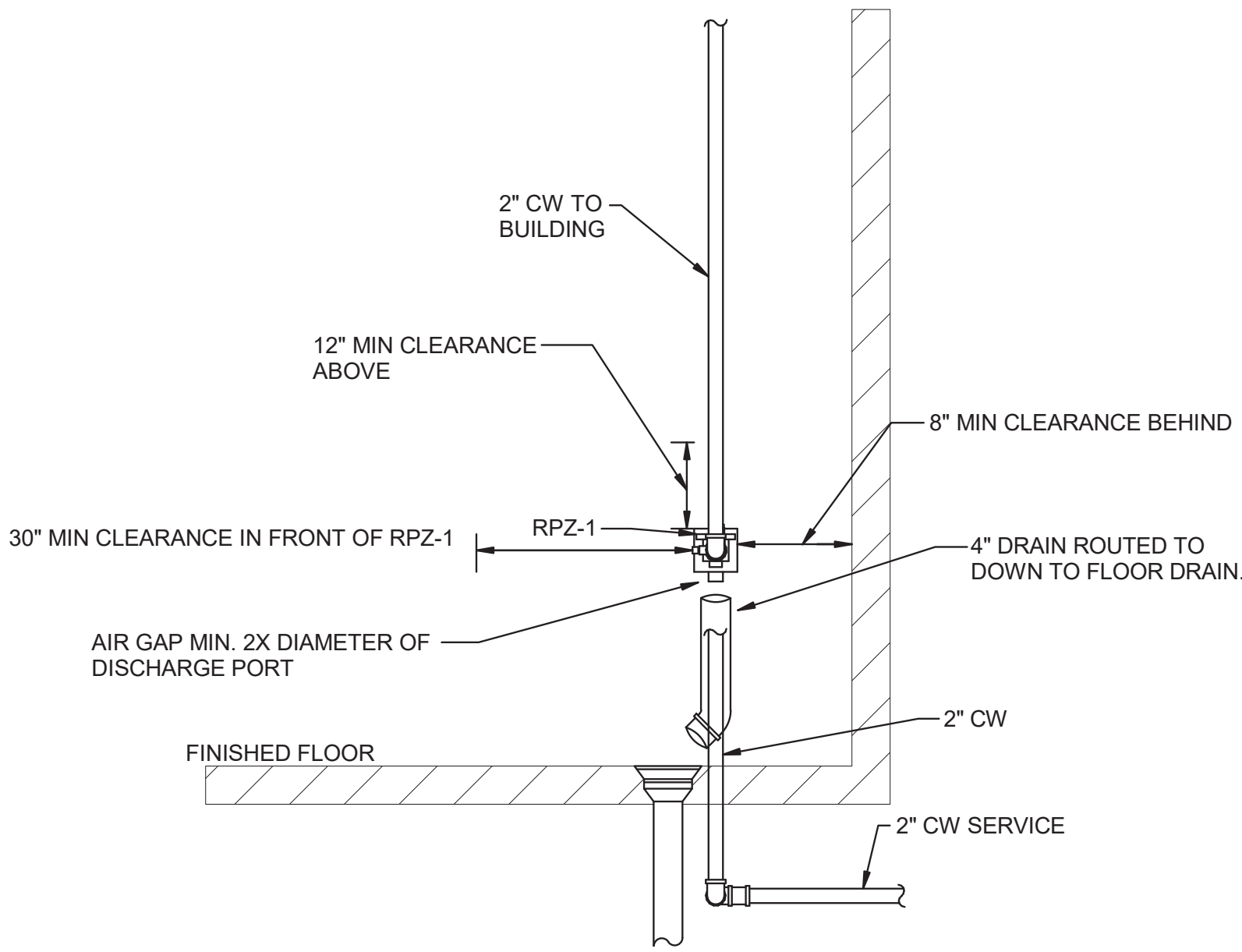
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**PLUMBING SCHEDULES
AND DETAILS**

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P-201	checked MMR
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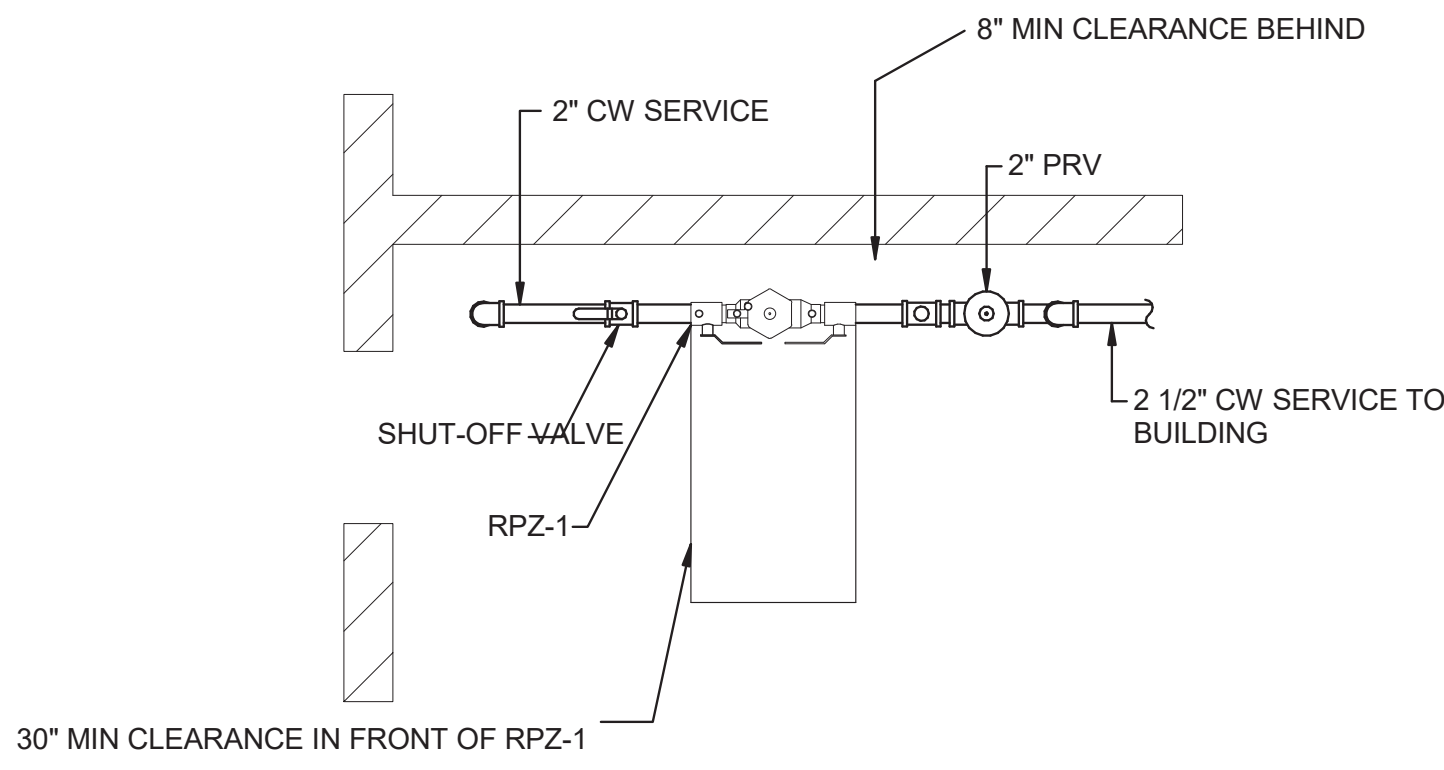
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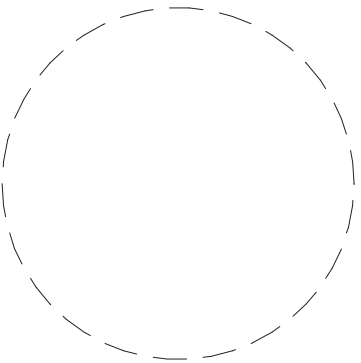
13 RPZ SECTION VIEW DETAIL
NOT TO SCALE



14 RPZ SECTION VIEW DETAIL
NOT TO SCALE



15 RPZ PLAN VIEW DETAIL
NOT TO SCALE



DOCUMENT PHASE

FOR REVIEW

REVISIONS

no.	date	by	description
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PROJECT:

ONONDAGA BEACH
FEASIBILITY STUDY &
DESIGN SERVICES

CLIENT:

ONONDAGA COUNTY

DRAWING TITLE

BACKFLOW PREVENTER
DETAILS AND SECTIONS

DRAWING NO.

P-202

drawn by

checked

proj. mgr.

proj. no.

Author

Checker

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




ISSUE DATE

12/06/19

GENERAL NOTES

1. THE CONTRACTOR IS RESPONSIBLE TO PERFORM ALL WORK AS REQUIRED BY CODES, REGULATIONS AND LAWS OF THE LOCAL STATE AND FEDERAL GOVERNMENTS AND OTHER AUTHORITIES AND AGENCIES WITH LAWFUL JURISDICTION. ALL MATERIAL AND EQUIPMENT SHALL BE LISTED AS APPROPRIATE FOR THE APPLICATION.
2. THE CONTRACT SPECIFICATIONS FOR THIS PROJECT ARE AN INTEGRAL PART OF THE CONTRACT DOCUMENTS AND SHALL BE CONSIDERED PART OF AND COMPLEMENTARY TO THE INFORMATION IN THE CONTRACT DRAWINGS.
3. ALL REFERENCES TO THE ELECTRICAL CONTRACTOR REFERS TO THE CONTRACTOR OR CONTRACTORS RESPONSIBLE FOR ANY AND ALL WORK SHOWN ON THESE CONTRACT DOCUMENTS.
4. ELECTRICAL CONTRACTOR SHALL FIELD VERIFY ALL EXISTING CONDITIONS AND DIMENSIONS PRIOR TO COMMENCEMENT OF ANY WORK OR SHOP FABRICATION. REQUIRED CHANGES TO THE WORK AS SHOWN ON CONTRACT DOCUMENTS SHALL BE APPROVED BY THE ENGINEER, OTHER TRADES, AND OWNER, IN WRITING, PRIOR TO ANY CONSTRUCTION.
5. COORDINATE THE WORK OF THIS CONTRACT WITH THE WORK OF ALL OTHER CONTRACTS IN THE AFFECTED AND/OR ADJACENT AREA. COORDINATE SHUTDOWN OF EXISTING SYSTEMS WITH OWNER AND OTHER TRADES. THE CONTRACTOR IS RESPONSIBLE FOR DISABLING EXISTING SYSTEMS AS REQUIRED, AND IS RESPONSIBLE FOR PERFORMING ALL WORK AS REQUIRED BY CODES REGULATIONS AND LAWS OF THE LOCAL STATE AND FEDERAL GOVERNMENTS AND OTHER AUTHORITIES AND AGENCIES WITH LAWFUL JURISDICTION. ALL MATERIAL AND EQUIPMENT SHALL BE LISTED AS APPROPRIATE FOR THE APPLICATION.
6. PROVIDE GROUNDING & BONDING IN ACCORDANCE WITH THE NATIONAL ELECTRICAL CODE AND THE CONTRACT DOCUMENTS. CONDUCTORS SHALL BE COPPER UNLESS INDICATED. OTHERWISE, ALL FEEDERS, BRANCH CIRCUITS, AND OTHER WIRING SYSTEMS SHALL HAVE A SEPARATE DEDICATED INSULATED GROUND WIRE. ELECTRICALLY CONDUCTIVE MATERIALS ASSOCIATED WITH THE PROJECT SHALL BE CONNECTED TOGETHER IN A MANNER THAT CREATES A PERMANENT, LOW IMPEDANCE PATH FOR GROUND FAULT CURRENT. ALL BRANCH CIRCUITS REQUIRING A NEUTRAL SHALL HAVE SEPARATE DEDICATED FULL SIZE NEUTRAL CONDUCTORS OR AS INDICATED OTHERWISE.
7. THE CONTRACT DOCUMENTS ARE SCHEMATIC IN NATURE AND REPRESENT A COMPLETED PROJECT. MINOR MODIFICATIONS OF WORK SHALL BE PROVIDED BY THE CONTRACTOR TO COMPLY WITH PROJECT REQUIREMENTS AND TO INSTALL A WORKING SYSTEM. LOCATIONS OF DEVICES AND EQUIPMENT SHOW A GENERAL ARRANGEMENT AND/OR INTENDED FUNCTION. ALL COMPONENTS TO BE INSTALLED ARE NOT SHOWN ON ALL DRAWINGS OR DETAILS, BUT SHALL BE INCLUDED AS IF SHOWN ON ALL. EXACT LOCATIONS OF CERTAIN EQUIPMENT THAT REQUIRE ELECTRICAL CONNECTIONS MAY BE SHOWN ON THE DRAWINGS SHOWING THAT EQUIPMENT. IT IS THE CONTRACTORS RESPONSIBILITY TO VERIFY THE EXACT LOCATION FOR THAT EQUIPMENT.
8. BEFORE INSTALLATION OF WORK, THE CONTRACTOR SHALL CHECK FOR ALL REQUIRED CLEARANCES, INCLUDING DOOR SWINGS, TO AVOID INTERFERENCE WITH OTHER TRADES. THE CONTRACTOR IS RESPONSIBLE FOR OBTAINING AND COORDINATING WITH ALL CONTRACT DOCUMENTS, SHOP DRAWINGS, CONTRACTOR SUBMITTALS AND EQUIPMENT CONTRACT DOCUMENTS.
9. PROVIDE ELECTRICAL CONNECTION FOR EVERY FIXTURE, ITEM OR ANY EQUIPMENT REQUIRING ANY ELECTRICAL CONNECTION WHICH IS SHOWN ON ANY CONTRACT DRAWING OR NOTED IN ANY TECHNICAL SPECIFICATION.
10. INSTALL ALL EQUIPMENT IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS AND CONDITIONS FOR WARRANTY AND GUARANTEE. PROVIDE ALL ACCESSORIES REQUIRED FOR A COMPLETE AND SATISFACTORY INSTALLATION READY FOR CONTINUOUS USE.
11. EXISTING CIRCUITS, AND DEVICES, WHICH ARE PRESENT OR PASS THROUGH AFFECTED AREAS, SHALL BE MAINTAINED OPERATIONAL, AS REQUIRED, AND AS DIRECTED BY THE ENGINEER. THE CONTRACTOR SHALL BE RESPONSIBLE FOR LOCATING AND AVOIDING, IF POSSIBLE, THESE CIRCUITS AND DEVICES. IF DISTURBED, UNLESS OTHERWISE APPROVED BY THE ENGINEER, SHALL BE REPAIRED, OR REPLACED, AND MADE OPERATIONAL AS SOON AS POSSIBLE AND AT THE CONTRACTORS EXPENSE. ALL INTERRUPTIONS TO LIFE SAFETY SYSTEMS INCLUDING ALARM SYSTEMS SHALL BE KEPT TO A MINIMUM AND SHALL BE RESTORED AS SOON AS POSSIBLE.
12. THE CONTRACTOR IS RESPONSIBLE FOR ANY EQUIPMENT OR WORK THAT MAY BE REQUIRED TO BE TEMPORARILY DISCONNECTED, REMOVED AND/OR RELOCATED AS PART OF THE CONTRACTORS WORK OR THE WORK OF OTHER TRADES. THE EQUIPMENT SHALL BE PROTECTED FROM DAMAGE. THE CONTRACTOR IS RESPONSIBLE TO RECONNECT AND MAKE ELECTRICALLY OPERATIONAL ALL EQUIPMENT THAT IS DISCONNECTED AND/OR RELOCATED AS PART OF THE WORK.
13. THE CONTRACTOR SHALL MAINTAIN RECORD DRAWINGS ON SITE SHOWING CHANGES MADE DUE TO FIELD CONDITIONS OR ENGINEER APPROVED CHANGES. THE RECORD SET MUST BE COMPLETE AND CURRENT AND AVAILABLE FOR INSPECTION WHEN REQUISITIONS FOR PAYMENT ARE SUBMITTED. ELECTRONIC VERSIONS, AS APPROVED BY THE ENGINEER, ARE ACCEPTABLE.
14. ALL EQUIPMENT SHALL BE INSTALLED IN A NEAT AND WORKMANLIKE MANNER, RECTILINEAR TO BUILDING STRUCTURE. ALL WIRING SHALL BE RUN CONCEALED OR IN RACEWAY UNLESS SPECIFIED OTHERWISE.
15. ALL RACEWAYS THROUGH BUILDING EXPANSION JOINTS SHALL BE EQUIPPED WITH EXPANSION FITTINGS. CUT AND PATCH BUILDING STRUCTURE AS REQUIRED. PROVIDE UL LISTED FIRE STOP METHODS FOR PENETRATIONS OF FIRE-RATED BUILDING COMPONENTS OR BARRIERS PER CONTRACT SPECIFICATIONS. WATERPROOF ALL EXTERIOR OUTDOOR PENETRATIONS. THIS WORK SHALL BE SUBJECT TO INSPECTION AND APPROVAL.
16. ALL CUTTING AND PATCHING OF BUILDING COMPONENTS REQUIRED TO ACCOMMODATE THE WORK OF THIS CONTRACT SHALL BE THE RESPONSIBILITY OF THE ELECTRICAL CONTRACTOR. ALL PATCHING SHALL MATCH THE EXISTING COMPONENTS AND FINISHES. CUTTING AND PATCHING WORK SHALL BE PERFORMED BY PERSONNEL TRAINED AND REGULARLY EMPLOYED FOR SUCH SERVICES. COORDINATE ALL WORK ON EXISTING BUILDING COMPONENTS WITH GENERAL AND/OR ABATEMENT CONTRACTOR.
17. ELECTRICAL CONTRACTOR SHALL PROVIDE NECESSARY SUPPORT FRAMING, STIFFENERS, BRACING, AND HANGERS TO ENSURE A COMPLETE AND DURABLE SYSTEM. SUPPORTS MAY VARY FROM THOSE SHOWN IN DETAILS AND AS REQUIRED FOR EQUIPMENT TO BE FURNISHED OR FOR EXISTING FIELD CONDITIONS. DEVIATIONS FROM THE CONTRACT DOCUMENTS MUST BE APPROVED BY THE ENGINEER.
18. ALL LOW VOLTAGE POWER CIRCUITS ARE TO BE FED WITH #12 CONDUCTORS AND A #12 GROUND MINIMUM, AND ALL CIRCUITS GREATER THAN 20 AMPS AND LESS THAN OR EQUAL TO 30 AMPS ARE TO BE FED WITH #10 CONDUCTORS AND A #10 GROUND, UNLESS STATED OTHERWISE.
19. ALL WORK THAT IS THE RESPONSIBILITY OF THE PLUMBING CONTRACTOR IS DENOTED WITH THE ABBREVIATION PC. SIMILARLY, ALL WORK THAT IS THE RESPONSIBILITY OF THE MECHANICAL CONTRACTOR IS DENOTED BY MC.
20. NOT ALL SYMBOLS AND NOT ALL NOTES ARE USED ON THESE CONTRACT DRAWINGS.















LIGHTING EQUIPMENT SYMBOLS

\$#	LIGHT SWITCH # = 3 IS 3-WAY, 4 IS 4-WAY		CEILING MOUNTING LIGH FXTURE, TYPE AS INDICATED.
\$x	LIGHT SWITCH X : D = DIMMER M = MOMENTARY OS = OCCUPANCY SENSOR K = KEY OPERATED T = TIMER P = SWITCH WITH PILOT LIGHT WP=WEATHER PROOF		WALL MOUNTED EMERGENCY LIGHT.
	CEILING MOUNTED OCCUPANCY SENSOR. DUAL TECHNOLOGY UNLESS NOTED OTHERWISE		EXIT LIGHT INDICATES FACE
	PHOTOCELL DAYLIGHT SENSOR		
























GENERAL ABBREVIATIONS

A AMPERES
AC ABOVE COUNTER
ADA AMERICANS WITH DISABILITIES ACT
AFF ABOVE FINISH FLOOR
AFG ABOVE FINISH GRADE
AHJ AUTHORITY HAVING JURISDICTION
AHU AIR HANDLING UNIT
AL ALUMINUM
ANSI AMERICAN NATIONAL STANDARDS INSTITUTE
ARCH ARCHITECT
ATS AUTOMATIC TRANSFER SWITCH
ATC AUTOMATIC TEMPERATURE CONTROL
AWG AMERICAN WIRE GAUGE
BFG BELOW FINISH GRADE
BLDG BUILDING
C CONDUIT
CAT CATALOG
CB CIRCUIT BREAKER
CKT CIRCUIT
CL CENTERLINE
COL COLUMN
CPT CONTROL POWER TRANSFORMER
CU COPPER
DWG DRAWING
EC ELECTRICAL CONTRACTOR
EF EXHAUST FAN
EM EMERGENCY
EMT ELECTRICAL METALLIC TUBING
ENG ENGINEER
ERGB ELECTRICAL ROOM GROUND BAR
ETR EXISTING TO REMAIN
EVC ELECTRIC WATER COOLER
F FUSE
FA FIRE ALARM
FLA FULL LOAD AMPERES
FMC FLEXIBLE METAL CONDUIT
FT FEET
GC GENERAL CONTRACTOR
GF GROUND FAULT
GFCI GROUND-FAULT CIRCUIT INTERRUPTER
GFI GROUND-FAULT INTERRUPTER
GND,G GROUND OR GROUNDING
HOA HAND, OFF, AUTOMATIC SWITCH
IEEE INSTITUTE OF ELECTRICAL AND ELECTRONIC ENGINEERS
IMC INTERMEDIATE METAL CONDUIT
INT INTERLOCK
KCMIL THOUSAND CIRCULAR MILS
KVA KILOVOLT AMPERES
KW KILOWATTS
LFG LIGHTING
LFMC FLEXIBLE METAL CONDUIT
MC MECHANICAL CONTRACTOR
MCB MAIN CIRCUIT BREAKER
MCC MOTOR CONTROL CENTER
MCP MOTOR CIRCUIT PROTECTOR
MISC MISCELLANEOUS
MLO MAIN LUGS ONLY
NC NORMALLY CLOSED
NEC NATIONAL ELECTRIC CODE
NEMA NATIONAL ELECTRICAL MANUFACTURERS ASSOCIATION
NF NON FUSED
NFPA NATIONAL FIRE PROTECTION ASSOCIATION
NMC NON METALLIC CONDUIT
NO NORMALLY OPEN OR NUMBER
NTS NOT TO SCALE
P POLE
PB PUSHBUTTON
PL PLUMBING CONTRACTOR
PNL PANEL
PVC POLYVINYL CHLORIDE
PWR POWER
QTY QUANTITY
RMC RIGID METAL CONDUIT
RMS ROOT MEAN SQUARED
RNM RIGID NON-METALLIC CONDUIT
RTU ROOF TOP UNIT
SP SPARE
SS SAFETY SWITCH
ST SHUNT TRIP
SW SWITCH
SYM SYMMETRICAL
TYP TYPICAL
UG UNDERGROUND OR UNDERGRADE
UL UNDERWRITERS LABORATORIES
UON, UNO UNLESS OTHERWISE NOTED
V VOLT
VAC VOLT ALTERNATING CURRENT
VDC VOLT DIRECT CURRENT
VT VOLTAGE TRANSFORMER
W WIRE
WG WIRE GUARD
WH WATER HEATER
WP WEATHER PROOF WHILE IN USE
XFMR TRANSFORMER
XP EXPLOSION PROOF
Δ DELTA
WYE
(E) EXISTING ITEM - SHOWN FOR REFERENCE ONLY





















SPECIAL SYSTEMS SYMBOLS

	CEILING MOUNTED SPEAKER, X = TYPE
	WALL MOUNTED SPEAKER, Y = NUMBER OF FACES VISIBLE
	CEILING MOUNTED CLOCK, X = NUMBER OF FACES VISIBLE
	WALL MOUNTED CLOCK, X = NUMBER OF FACES VISIBLE
	MAIN DATA FRAME
	INTERMEDIATE DATA FRAME
	WIRELESS ACCESS POINT
	ELECTRICAL TIME CLOCK
	PA CONSOLE
	SPECIAL SYSTEMS RECEPTACLE X : T = TELEPHONE DUPLEX D = DATA, NUMBER INDICATES NUMBER OF DATA JACKS I = INTERCOM N = NURSE CALL C = CAMERA DUPLEX R = RADIO DUPLEX TV = TELEVISION OUTLET = SPECIAL - SEE KEYNOTE
	SPECIAL SYSTEMS RECEPTACLE FLUSH WITH FLOOR
	CABLE TELEVISION LINE
	CLOSED CIRCUIT TELEVISION LINE
	FIBER OPTIC LINE











































PLAN VIEW WIRING DEVICE SYMBOLS

	DUPLEX RECEPTACLE X: D=DEDICATED G=GROUND FAULT INTERRUPTING TYPE AC=INSTALLED ABOVE COUNTER BACKSPLASH BC=INSTALLED BELOW COUNTER WP=WEATHER PROOF WHILE IN USE COVER H=HOSPITAL GRADE T=TAMPER RESISTANT TVSS=TVSS RECEPTACLE U=RECEPTACLE WITH USB CHARGE CONNECTORS SS=SURGE SUPPRESSION NUMBER INDICATES CIRCUIT NUMBER
	QUAD RECEPTACLE
	SIMPLEX RECEPTACLE
	DUPLEX RECEPTACLE - 1/2 CONTROLLED BY WALL SWITCH
	SPECIAL OUTLET (WITH CHARACTERISTICS AS NOTED ON PLANS)
	DUPLEX RECEPTACLE - FLUSH WITH FLOOR
	DUPLEX RECEPTACLE - FLUSH WITH CEILING
	JUNCTION BOX
	JUNCTION BOX FLUSH WITH FLOOR
	TRANSFORMER
	ELECTRICAL PANELBOARD (SEE PANELBOARD SCHEDULE)
	NONFUSED DISCONNECT SWITCH
	FUSED DISCONNECT SWITCH
	COMBINATION STARTER WITH OVERCURRENT DISCONNECT SWITCH
	MOTOR CONTROLLER
	ENCLOSED CIRCUIT BREAKER
	VARIABLE SPEED DRIVE
	COMBINATION VARIABLE SPEED DRIVE (AS SCHEDULED)
	MOTOR EQUIPMENT CONNECTION
	CIRCUIT HOMER, SOURCE, PANEL, AND CIRCUIT NUMBER AS INDICATED. MINIMUM 2#12, 1# 12G, 3/ 4"C UNLESS OTHER WISE INDICATED.
	HAND DRYER
	CEILING MOUNTED CORD REEL
	RACEWAY X: R1 = SINGLE CHANNEL R2 = DOUBLE CHANNEL R3 = THREE CHANNEL









SINGLE LINE WIRING DIAGRAM SYMBOLS

	DISCONNECT xxAF=AMPERE FRAME RATING, xP=POLES
	FUSE xxA=AMPERE RATING, xxAT=AMPERE TRIP RATING, xP=POLES, CL=CURRENT LIMITING
	GROUND
	CIRCUIT BREAKER xxA= AMPERE, xP= POLES,ST=SHUNT TRIP, CL=CURRENT LIMITING
	POWER TRANSFORMER, DRAWOUT TYPE, xxA = AMPERES, xP = POLES
	POTENTIAL TRANSFORMER
	CURRENT TRANSFORMER, RATIO AS NOTED (IE. 5:1 INDICATES 5 PRIMARY TURNS TO 1 SECONDARY TURN)
	POWER TRANSFORMER xx=KVA 480-208/120V = 480 PRIMARY, 208/120 SECONDARY
	AUTOMATIC TRANSFER SWITCH
	4#12-1#12G, 1/2"C (INDICATES 3 PHASE CONDUCTORS & NEUTRAL PLUS 1 GROUND INSTALLED IN A 1/2" CONDUIT)
	MOTOR CONNECTION - REFER TO MOTOR AND EQUIPEMENT SCHEDULE
	ELECTRICAL DELTA CONNECTION
	ELECTRICAL WYE CONNECTION
	SPLIT PHASE-THREE PHASE CONNECTION
	ELECTRICAL METER M: WHM = WATT HOUR METER V= VOLT METER A= CURRENT METER
	ELECTRICAL POWER GENERATOR
	PULL BOX
	UTILITY POLE - INDICATE POLE #, UTILITY NAME, UTILITY PROVIDED
	TRANSIENT VOLTAGE SURGE SUPPRESSOR
	VARIABLE SPEED DRIVE





FIRE ALARM SYSTEM SYMBOLS

	FIRE ALARM CONTROL UNIT
	DIGITAL ALARM RADIO TRANSMITTER
	DIGITAL ALARM COMMUNICATOR TRANSMITTER
	FIRE ALARM TRANSPONDER
	FIRE ALARM TERMINAL CABINET
	FIRE ALARM BATTERY CABINET
	FIRE ALARM POWER SUPPLY
	FIRE ALARM ANNUNCIATOR PANEL
	AREA OF REFUGE CONTROL UNIT
	MANUAL PULL STATION
	HEAT DETECTOR - 135DEG. FIXED WITH RATE OF RISE
	SMOKE DETECTOR
	DUCT MOUNTED SMOKE DETECTOR
	COMBINATION HEAT / SMOKE DETECTOR
	BEAM TYPE SMOKE DETECTOR, TRANSMITTER
	BEAM TYPE SMOKE DETECTOR, RECEIVER OR REFLECTOR
NOTE: ALL STROBE UNITS TO BE INDIVIDUALLY VARIABLE CANDELA AND ALL HORN AND SPEAKER TO BE INDIVIDUALLY VARIABLE VOLUME.	
	COMBINATION HORN/STROBE - WALL MOUNTED
	COMBINATION HORN/STROBE - CEILING MOUNTED
	STROBE ONLY - WALL MOUNTED
	STROBE ONLY - CEILING MOUNTED
	COMBINATION SPEAKER/STROBE - WALL MOUNTED
	COMBINATION SPEAKER/STROBE - CEILING MOUNTED
	CO HORN/STROBE - WALL MOUNTED
	CO HORN/STROBE - CEILING MOUNTED
	CO STROBE - WALL MOUNTED
	CO STROBE - CEILING MOUNTED
	COMBINATION CO SPEAKER/STROBE - WALL MOUNTED
	COMBINATION CO SPEAKER/STROBE - CEILING MOUNTED
	CARBON MONOXIDE (CO) DETECTOR
	COMBUSTIBLE GAS DETECTOR
	SPEAKER ONLY - WALL MOUNTED
	SPEAKER ONLY - CEILING MOUNTED
	WALL MOUNTED MAGNETIC DOOR HOLDER
	FLOOR MOUNTED MAGNETIC DOOR HOLDER
	FIRE ALARM CIRCUIT
	ADDRESSABLE INTERFACE MODULE
	FIRE/SMOKE DAMPER - FURNISHED & INSTALLED BY MC AND WIRED BY EC
NOTE: THE FOLLOWING ITEMS ARE PART OF THE FIRE PROTECTION SPRINKLER SYSTEM, FURNISHED AND INSTALLED BY P.C. AND WIRED BY E.C.	
	SUPERVISORY SWITCH, VALVE TAMPER
	WATER FLOW INDICATOR SWITCH
	FIRE ALARM CHECK VALVE PRESSURE SWITCH
	ELECTRICALLY OPERATED ALARM BELL
	FIRE PUMP

ACCESS CONTROL AND ALARM SYMBOLS

	CARD READER (MOUNT 42" ABOVE FLOOR/GRADE)
	REQUEST TO EXIT (MOUNT ABOVE DOOR)
	DOOR OPEN INDICATOR (MOUNT AT TOP OF DOOR)
	MOTION SENSOR
	KEYPAD (MOUNT 42" ABOVE FLOOR/GRADE)
	DOOR LATCH (MOUNT IN DOOR JAMB AT HANDLE LEVEL)
	CEILING MOUNTED MOTION SENSOR
	EXTERNAL COMMUNICATION SPEAKER STATION (MOUNT 42" ABOVE GRADE)

GENERAL ANNOTATION SYMBOLS

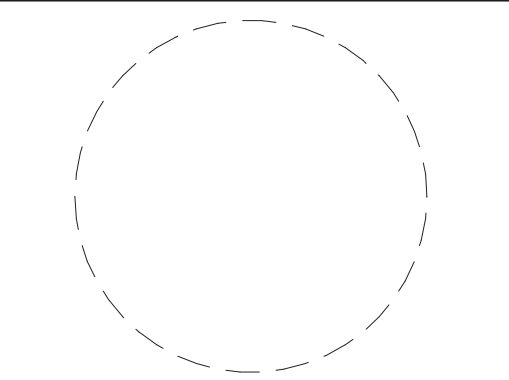
	EQUIPMENT TO BE REMOVED
	EXISTING EQUIPMENT TO REMAIN
	KEYNOTE
	REMOVAL KEYNOTE



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ONONDAGA COUNTY

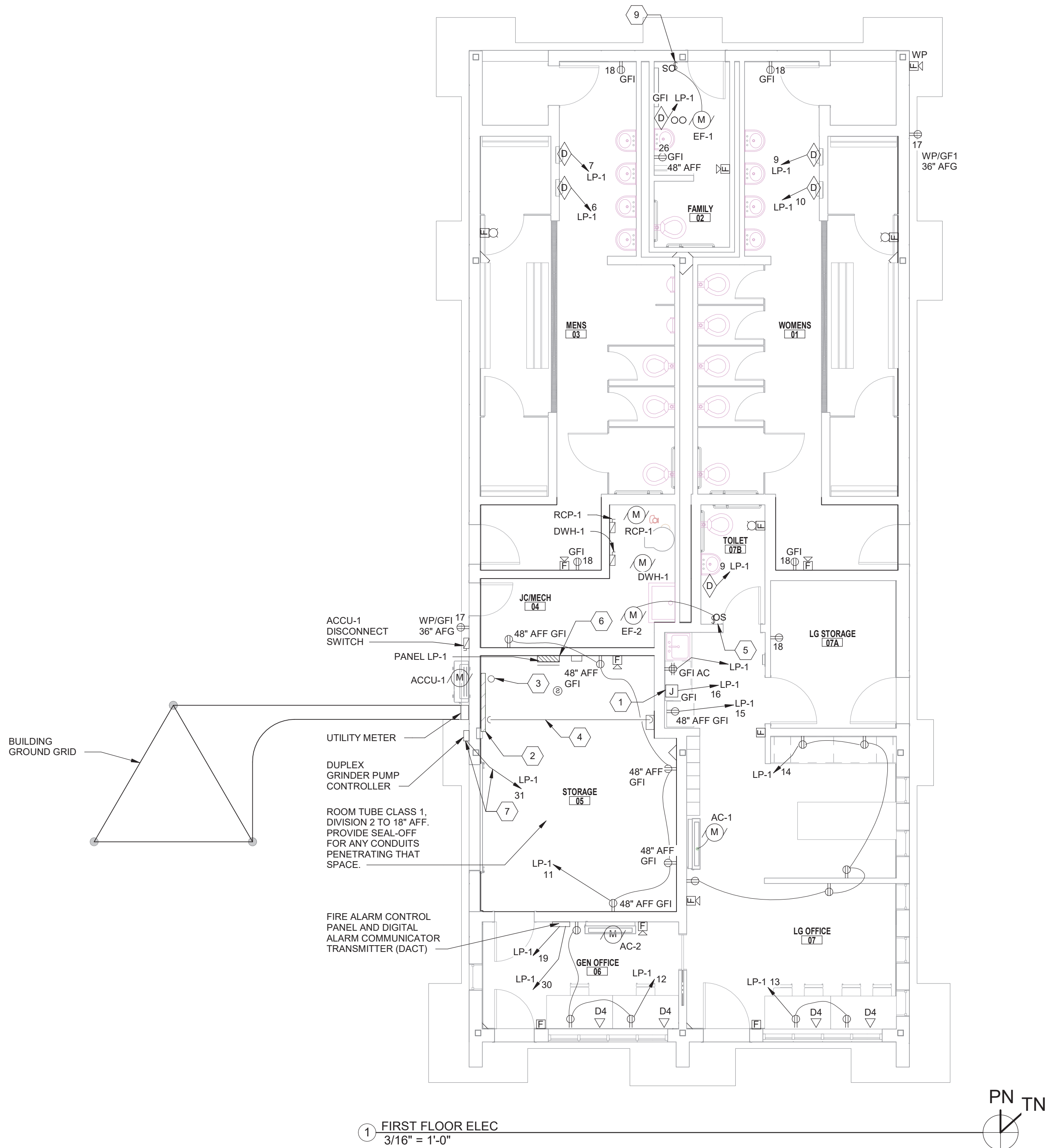
DRAWING TITLE

LEGEND, NOTES &
SYMBOLS

DRAWING NO.	drawn by checked proj. mgr. proj. no.	USM JD MSM AR 190003
E-001		

ISSUE DATE

12/06/19



GENERAL NOTES:

- A. FROM EACH DATA OUTLET ROUTE 1" CONDUIT WITH DATA WIRING TO OWNER FURNISHED RACK.

KEY NOTES:

1. POWER CONNECTION TO OWNER FURNISHED DATA RACK.
2. PROVIDE PLYWOOD RACK BOARD FOR TELECOMMUNICATIONS STUB UP INTO BUILDING.
3. 4" TELECOMMUNICATIONS STUB-UP INTO BUILDING. COORDINATE WITH SITE DESIGNS. STUB CONDUIT OUT 10'-0" BEYOND CONCRETE SIDE WALK.
4. PROVIDE 3" ERGS CONDUIT FROM TELECOMMUNICATIONS BACK BOARD TO 12" X 8" NEMA 1 BOX WITH HINGED CORVER. PROVIDE 3" CONDUIT INTO BACK OF OWNER FURNISHED DATA RACK FOR TELECOMMUNICATIONS TRUNK LINE.
5. PROVIDE TWO POLE DUAL TECHNOLOGY OCCUPANCY SENSOR. ONE POLE TO CONTROL LIGHTING, ONE POLE TO CONTROL ROOM EXHAUST FAN.
6. PROVIDE 1" CONDUIT WITH PULLROPE STUBBED OUT OF WEST SIDE OF CONCRETE SIDE WALK 10'-0". FOR DUPLEX GRINDER PUMP. COORDINATE WITH SITE CONTRACTOR.
7. PROVIDE 2#10, 1#10G, 3/4" C FOR DUPLEX GRINDER PUMP CONTROL PANEL CIRCUIT. FROM CONTROL PANEL, STUB 1-1/4" CONDUIT OUT 10'-0" BEYOND CONCRETE SIDEWALK. COORDINATE WITH SITE CONTRACTOR.

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DRAWING TITLE

POWER AND SPECIAL
SYSTEMS PLAN

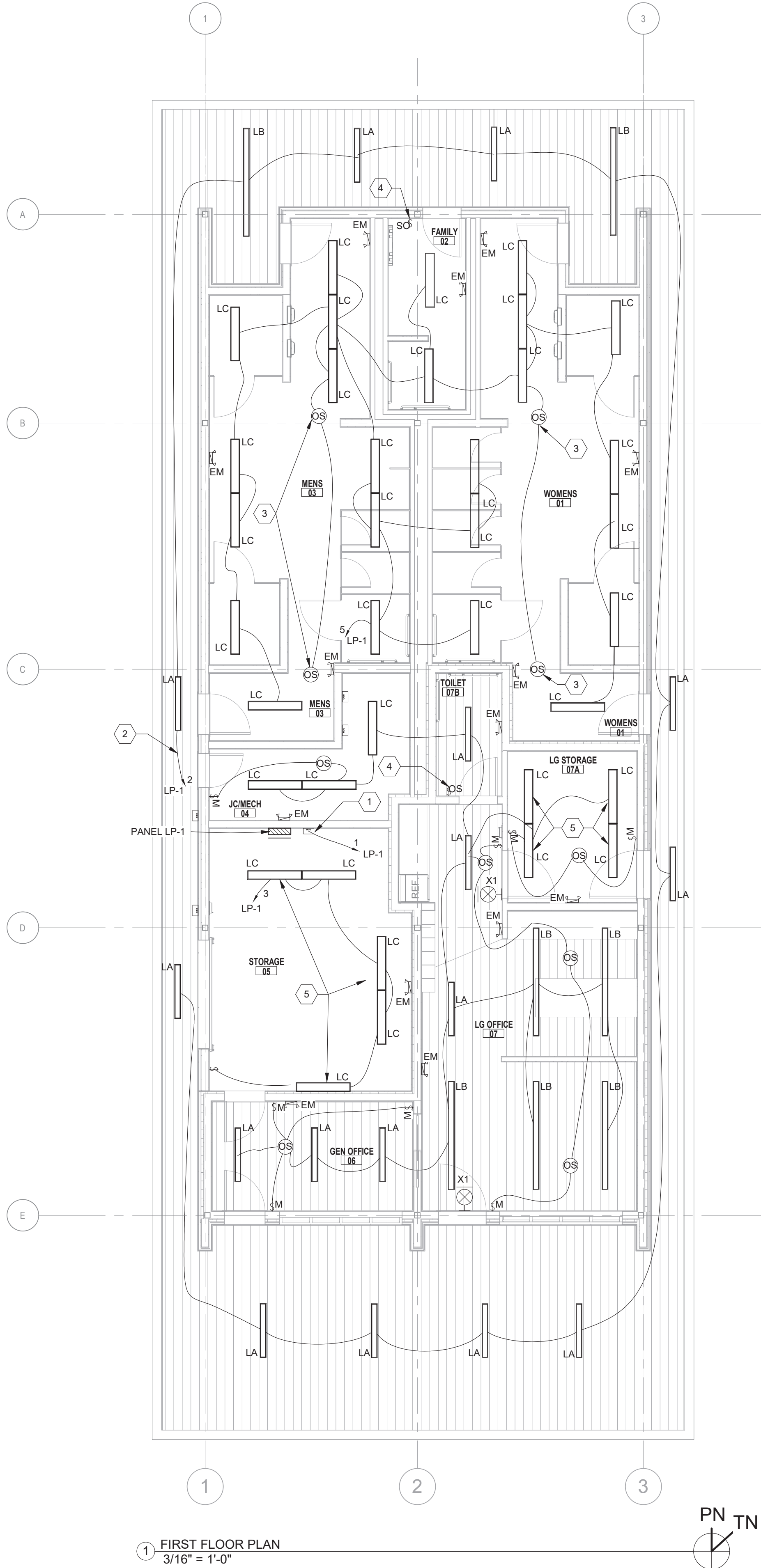
DRAWING NO.

E-100

drawn by USM
checked JD
proj. mgr. MSM
proj. no. AR 190003

ISSUE DATE

12/06/19



KEY NOTES: (#)

1. PROVIDE TIME SWITCH FOR CONTROL OF EXTERIOR LIGHTING. DIGITAL, 365/7DAY TIME SWITCH, WITH ASTRONOMIC CONTROL. PROVIDE TORK MODEL DWZ100B, OR EQUAL. COORDINATE TIMER SCHEDULE WITH OWNER.
2. CIRCUIT VIA EXTERIOR LIGHTING TIME SWITCH FOR CONTROL OF LIGHTING.
3. OCCUPANCY SENSOR WITH AUTOMATIC ON, AUTOMATIC OFF FUNCTIONALITY.
4. PROVIDE TWO POLE DUAL TECHNOLOGY OCCUPANCY SENSOR. ONE POLE TO CONTROL LIGHTING, ONE POLE TO CONTROL ROOM EXHAUST FAN. SENSOR SET FOR AUTAMTIC ON, AUTOMATIC OFF FUNCTIONALITY.
5. MOUNT EIGHT FIXTURES 10'-0" AFF TO BOTTOM FIXTURE.

GENERAL NOTES:

- A. CIRCUIT EMERGENCY LIGHTING WITH ROOM LIGHTING CIRCUIT, AHEAD OF SWITCH CONTROL.
- B. PENDANT MOUNT TYPE LC FIXTURES 9'-0" AFF TO BOTTOM OF FIXTURE, UNLESS OTHER WISED NOTED.
- C. CIRCUIT EXIT LIGHTS TOGETHER USING 2# 12, 1# 12G, 3/4" C, TO A 20A-1P CIRCUIT BREAKER IN PANEL LP-1.

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LIGHTING PLAN

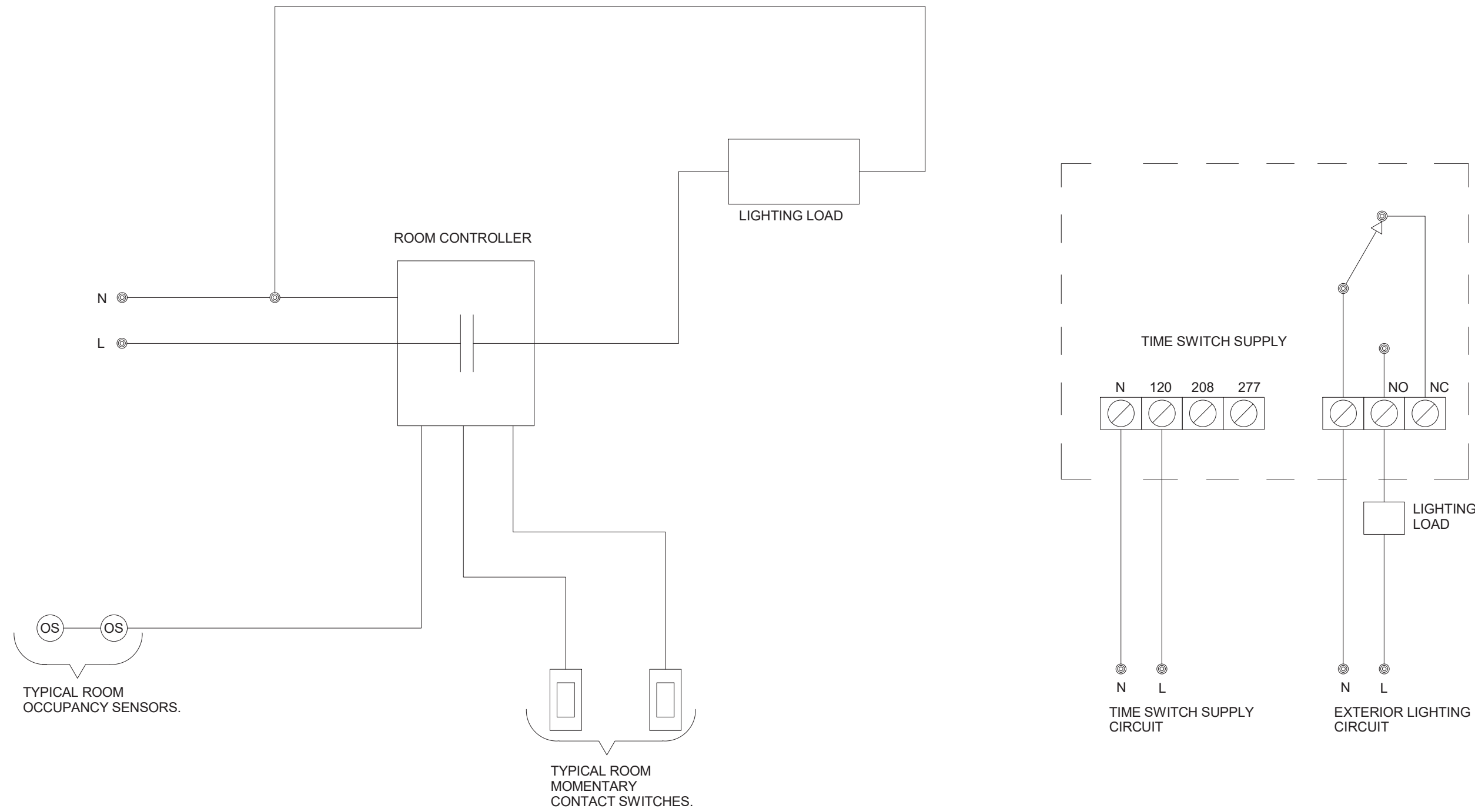
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E-101

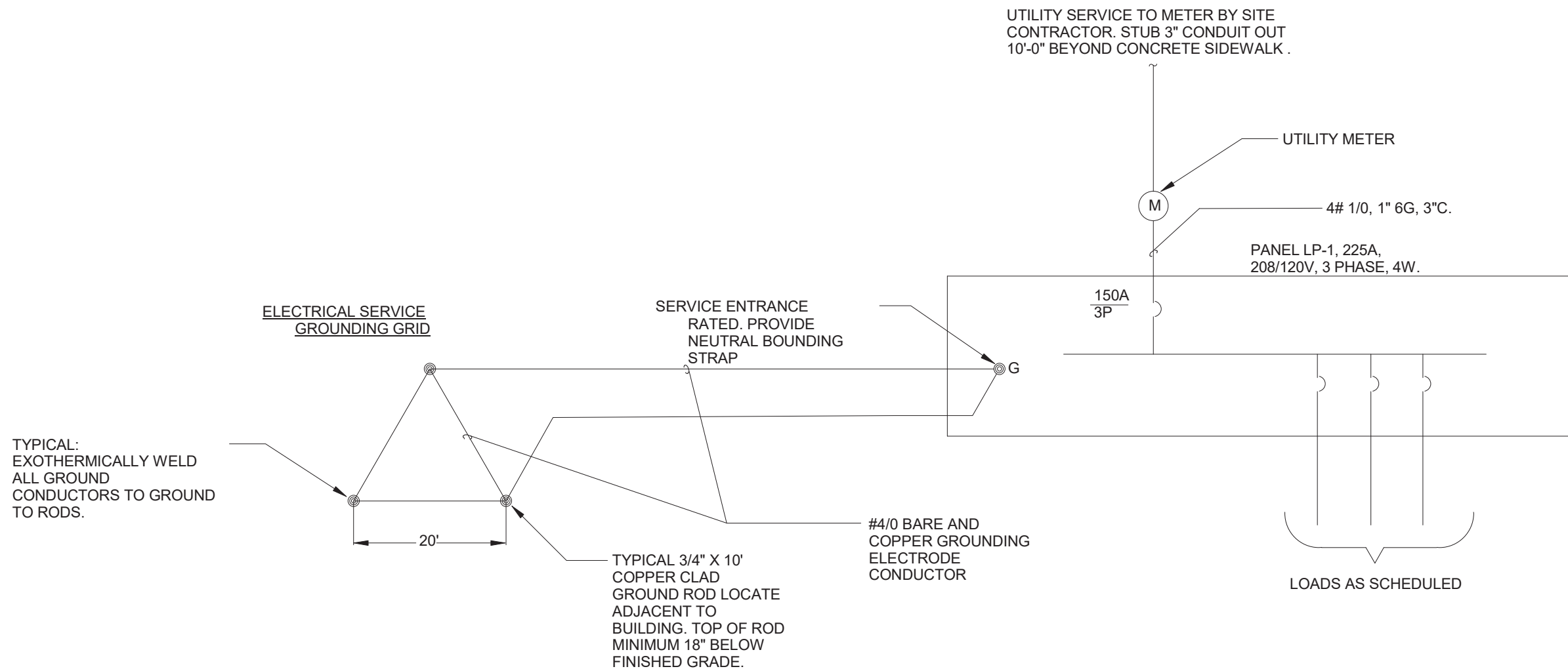
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proj. no. AR 190003

ISSUE DATE

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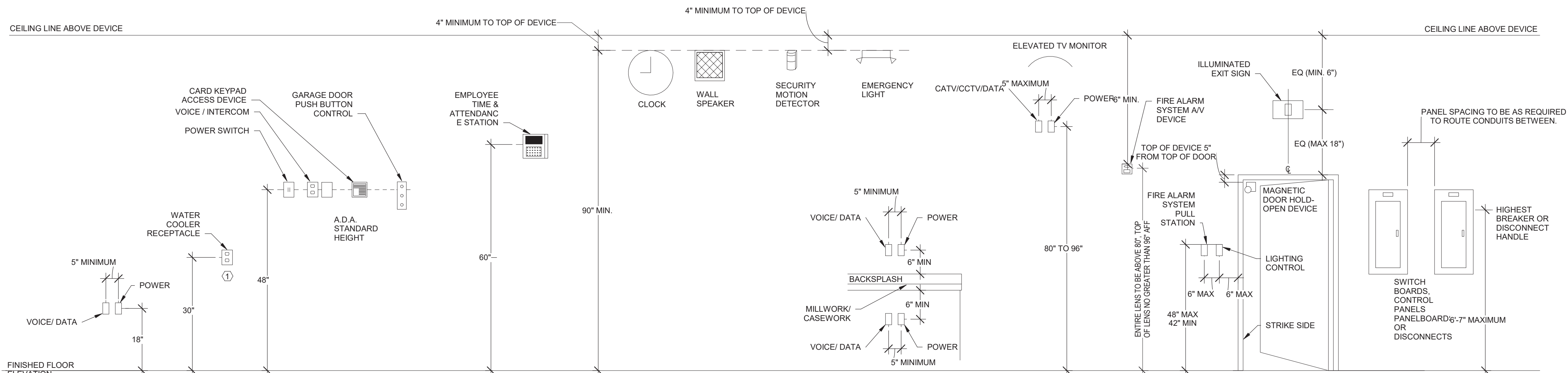


2 CEILING MOUNTED OCCUPANCY SENSOR CONTROL DETAIL
NOT TO SCALE



3 EXTERIOR TIME SWITCH WIRING DIAGRAM
NOT TO SCALE

4 POWER RISER DIAGRAM
NOT TO SCALE



1 MOUNTING HEIGHT DETAIL
1" = 1'-0"

KEYNOTES:
1. COORDINATE WITH OTHER TRADES.

DETAIL NOTES:
1. CONTRACTOR TO VERIFY WITH ARCHITECTS AND OWNER ALL FINAL MOUNTING HEIGHTS FOR DEVICES AND EQUIPMENT.

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DETAILS

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E-200	checked	JD
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12/06/19

LIGHTING FIXTURE SCHEDULE									
TYPE	DESCRIPTION	MOUNTING	DELIVER LUMENS	INPUT WATTAGE	COLOR TEMPERATURE	CRI	VOLTAGE	BASS OF DESIGN	NOTES
LA	LOW-PE OF ILE LINEAR PLANK LED LIGHT FIXTURE, AS FURNISHED WITH CEILING SYSTEM. NOMINAL 1184MM LONG.	RECESSED	2280	18	3000K	>80	120	BACKLIGHT SRL OR XAL, TO BE COMPATIBLE WITH THE SPECIFIED CEILING SYSTEM.	1
LB	LOW-PROFILE LINEAR PLANK LED LIGHT FIXTURE, AS FURNISHED WITH CEILING SYSTEM. NOMINAL 2384MM LONG.	RECESSED	4560	36	3000K	>80	120	BACKLIGHT SRL OR XAL, TO BE COMPATIBLE WITH THE SPECIFIED CEILING SYSTEM.	1
LC	NOMINAL 4' LONG LED VAPOR TIGHT, VANDAL RESISTANT. FIBERGLASS HOUSING WITH FROSTED POLYCARBONATE LENS. PROVIDE CUSTOM PENDANTS TO MOUNT FIXTURES AT 10'-0" AFF.	PENDANT AT 10'-0" AFF	6325	49	4000K	>80	UNIV	LITHONIA VAP-6000 LM-FST-MD-MVOLT-G210-40K-800CRI-STSL	
EM	EMERGENCY BATTERY UNIT. DUAL HEAD COMPACT WHITE THERMOPLASTIC HOUSING. TWO HIGH PERFORMANCE 5.3 WATT HEADS. LITHIUM IRON PHOSPHATE BATTERY WITH SELF DIAGNOSTICS. PROVIDE WITH VANDAL SHIELD	SURFACE	1100	10.6	5000K	NA	UNIV	LITHONIA QUANTUM SERIES ELM6L-LTP-SDRT-HO-WPVS	2
xi	EXIT SIGN DIE-CAST ALUMINUM HOUSING BLACK FINISH WITH BRUSHED ALUMINUM FACE. SELF-TEST/SELF-DIAGNOSTICS.	SURFACE	N/A	1	N/A	N/A	UNIV	LITHONIA SIGNSTURE SERIES LE-P-X-ELN-SD	

NOTES:

1. INSTALL FIXTURE FURNISHED AS PART OF THE CEILING SYSTEM. COORDINATE WITH ARCHITECT.
2. CIRCUIT EMERGENCY BATTERY UNIT WITH ASSOCIATED ROOM LIGHTING CIRCUIT, AHEAD OF ANY SWITCH CONTROL.

MOTOR AND EQUIPMENT SCHEDULE															
UNIT			LOAD				SERVICE				CONTROLLER/DDISCONNECTING MEANS				
ITEM	DESCRIPTION	LOCATION	HP	KW	VOLTS	PHASE	CIRCUIT BREAKER	POWER SOURCE	CIRCUIT FROM POWER SOURCE TO CONTROLLER	CIRCUIT CONTROLLER TO MOTOR	CONTROLLER PROVIDED BY ELEC. DIVISION	CONTROLLER FURNISHED BY MEC. DIVISION AND INSTALLED BY ELEC. DIVISION	CONTROLLER LOCATION	DISCONNECT BY ELEC. DIVISION(LOCATION)	NOTES
EF-1	EXHAUST FAN	RM 02	-	0.04	115	1	15A-1P	LP-1	2#12, 1#12G, 3/4"C	2#12, 1#12G, 3/4"C	OS	-	RM 02	-	1
EF-2	EXHAUST FAN	RM 04	-	0.04	115	1	15A-1P	LP-1	2#12, 1#12G, 3/4"C	2#12, 1#12G, 3/4"C	OS	-	RM 07B	-	1
ACCU-1	OUTDOOR CONDENSING UNIT	SITE	-	4.7	208	1	35A-2P	LP-1	2#10, 1#10G, 3/4"C	2#10, 1#10G, 3/4"C	-	PCU	AU	FSS(AU)	
AC-1	DUCTLESS HEAT PUMP	RM 07	-	-	208	1	-	LP-1	-	2#12, 1#12G, 3/4"C	-	-	-	-	2
AC-2	DUCTLESS HEAT PUMP	RM 06	-	-	208	1	-	LP-1	-	2#12, 1#12G, 3/4"C	-	-	-	-	2
DWH-1	DOMESTIC WATER HEATER	RM 04	-	9	208	3	40A-3P	LP-1	3#8, 1#10G, 3/4"C	3#8, 1#10G, 3/4"C	-	PCU	AU	SS(RM 04)	
RP-1	RECIRC PUMP	RM 04	1/12	-	120	1	15A-1P	LP-1	2#12, 1#12G, 3/4"C	2#12, 1#12G, 3/4"C	-	PCU	AU	SS(RM 04)	

ABBREVIATIONS:

AU- AT UNIT
COIMB- COMBINATION MAGNETIC STARTER
MMS- MANUAL MOTOR STARTED
TMS- TWO SPEED MANUAL MOTOR STARTER
PCU - PACKAGED CONTROL UNIT
VFD - VARIABLE FREQUENCY DRIVE
SS - NON FUSED SAFETY SWITCH
FSS - FUSED SAFETY SWITCH
IDS - INTEGRAL DISCONNECT SWITCH
X - INDICATES REQUIRED ITEM
OS- OCCUPANCY SENSOR

NOTES:

1. PROVIDE TWO POLE DUAL TECHNOLOGY OCCUPANCY SENSOR ONE POLE TO CONTROL ROOM LIGHTING, ONE POLE TO CONTROL EXHAUST FAN.
2. POWER CONNECTION IS AT ACCU-1 WIRE COMPLETE FROM ACCU-1 TO EACH HEAT PUMP. CIRCUITING AS SCHEDULED.

PANELBOARD SCHEDULE													
LP-1	VOLTS: 208Y/120 PHASE: 3 WIRE: 4		MAINS RATING: 225A MCB: 150A-3P MLO:		A.I.C RATING : 22,000A BKR/R SPACE: MTG./NEMA#: SURF/NEMA 1			LOCATION: ROOM 05 SOURCE: UTILITY FEEDER: SERVICE ENTRANCE RATED. PROVIDE NEUTRAL BONDING STRAP.					
	#	LOAD	BREAKER		CONNECTED LOAD (KW)			BREAKER		LOAD		#	
		TYPE	DESCRIPTION	AMP	POLE	PH. A	PH. B	PH. C	POLE	AMP	DESCRIPTION	TYPE	
1	LTG	TIME SWITCH	20	1	0.05	.25			1	20	EXTERIOR LIGHTING	LTG	2
3	LTG	LIGHTING - BATHROOMS	20	1					1	20	LIGHTING - OFFICE/STORAGE	LTG	4
5	OT	HAND DRYER	20	1				1.3 1.3	1	20	HAND DRYER	OT	6
7	OT	HAND DRYER	20	1	1.3	1.3			1	20	HAND DRYER	OT	8
9	OT	HAND DRYER	20	1			1.3 1.3		1	20	HAND DRYER	OT	10
11	PWR	RECEPTACLES	20	1				0.72 0.54	1	20	RECEPTACLES	PWR	12
13	C	RECEPTACLES	20	1	0.5	0.9			1	20	RECEPTACLES	PWR	14
15	K	REFRIG RECEPTACLE	20	1			0.8 1		1	20	DATA RACK	C	16
17	PWR	EXTERIOR RECEPTACLES	20	1				0.36 0.72	1	20	RECEPTACLES	PWR	18
19	C	FIRE ALARM CONTROL PNL	20	1	1	2.35			2	35	ACCU-1/AC-1/AC-2	HVAC	20
21	HVAC	EF-1	15	1			0.04 2.35		-	-	-	HVAC	22
23	HVAC	EF-2	15	1				0.04 0.3	1	15	RP-1	HVAC	24
25	EH	DWH-1	40	3	3	0.18			1	20	RECEPTACLES	PWR	2 6
27	EH	-	-	-			3 0.2		1	20	EXIT LIGHT	LTG	28
29	EH	-	-	-				3 0.5	1	20	DACT	C	30
31	OT	DUPLEX GRINDER PUMP	30	2	1.83				1	20	SPARE		32
33	OT	-	-	-			1.83		1	20	SPARE		34
35		SPACE							1	20	SPARE		36
37		SPACE							1	20	SPARE		38
39		SPACE									SPACE		40
41		SPACE									SPACE		42
TOTAL CONNECTED LOAD PER PHASE:					12.66	14.22	8.28	NOTE:					
TOTAL CONNECTED KW:					35.16								

POPPLI DESIGN GROUP

555 Penbrooke Drive • Penfield, NY 14526

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CLIENT:

ONONDAGA COUNTY

DRAWING TITLE

SCHEDULES

DRAWING NO.

E-201

drawn by
checked
proj. mgr.
proj. no.

USM
JD
MSM
AR 190003

ISSUE DATE

12/06/19

ITEM 203.25010039 PLAY SAND

DESCRIPTION:

The work shall include furnishing and installing sand for recreational areas, as shown in the contract documents or as directed by the Engineer.

MATERIALS:

The following sections of the standard specifications shall apply:

Fine Aggregate 703-01

with the following modifications:

MATERIAL REQUIREMENTS. The material shall meet the following gradation criteria:

<u>Passing Sieve (Dry Analysis)</u>	<u>Percent by Weight</u>
No. 16	95-100%
No. 30	85-100%
No. 50	65-85%
No. 100	10-30%
No. 200	0-10%

Source Limitations: Sand shall be obtained from one source to provide materials of consistent quality and physical properties.

Laboratory Testing: The Contractor shall, furnish a certified report by a nationally-recognized entity which provides soils laboratory services (e.g.: a state university agricultural extension lab or “Certified Professional Soil Scientist” issued by the Soil Science Society of America or equivalent certification). The certified test report shall show, at a minimum gradation per above sieve sizes.

The Contractor shall bear responsibility for all costs associated with laboratory testing.

No material shall be delivered to the site unless positive test results have been obtained, furnished and approved. Any material delivered to the site prior to approval or otherwise not meeting these specifications will be rejected and shall be removed from the site.

CONSTRUCTION DETAILS:

Environmental Limitations: Do not install play sand during rainy conditions.

Site Examination: Verify that subgrade is dry and in suitable condition to support sand and imposed loads.

ITEM 203.25010039 PLAY SAND

Proof-roll sub base using heavy, pneumatic-tired rollers to locate areas that are unstable or that require further compaction.

Compact base course at optimum moisture content to required grades, lines, cross section, and thickness to not less than 98% of maximum dry unit weight according to ASTM D1557.

Proceed with installation only after unsatisfactory conditions have been corrected.

Surface Preparation: Immediately before placing play sand, remove loose and deleterious materials from substrate surfaces. Ensure that prepared subgrade is ready to receive sand.

Sweep loose granular particles from surface of unbound-aggregate base course. Do not dislodge or disturb aggregate embedded in compacted surface of base course.

Sand Placement: Upon thorough moisture penetration, sand material shall be placed in twelve inch (12") maximum loose lifts and compacted to 95% maximum density per ASTM D1557 by compaction equipment such as; double drum roller (2-4 ton) or single drum roller (1000lbs.) vibratory plate tamp over prepared sub-grade.

Repairs and Protection: Remove and replace sand areas that are defective or do not meet the requirements of this section.

METHOD OF MEASUREMENT:

The work will be measured as the number of cubic yards of play sand, measured in place, satisfactorily furnished and installed.

BASIS OF PAYMENT:

The unit price bid for each cubic yard of play sand shall include the cost of all labor, material, equipment and incidental expenses necessary to satisfactorily complete work.

ITEM 304.01940004 - TRAILWAY TOP COURSE, STONE DUST

DESCRIPTION

The work shall consist of furnishing, placing and compacting crushed limestone in conformity with the lines, grades, thicknesses and typical sections shown on the Plans, or as determined by field conditions and ordered by the Engineer.

MATERIALS

Test and Control Methods. The Department will perform materials tests and quality control methods pertaining to the work of this section in conformance with the procedures contained in the appropriate Departmental publications which are current on the date of advertisement for bids. These publications are available upon request to the NYSDOT, Geotechnical Engineering Bureau.

Material Requirements. Material shall consist of crushed limestone. All materials furnished shall be well graded and free from unsuitable materials. All processing shall be completed at the source.

A. Gradation

<u>Sieve Size Designation</u>	<u>Percent Passing by Weight</u>
¼ inch	100
#10	55-75
#40	20-40
#200	7-15

B. Soundness. Material will be accepted on the basis of a Magnesium Sulfate Soundness Loss after 4 cycles of 20 percent or less.

C. Plasticity Index. The Plasticity Index of the material passing the #40 mesh sieve shall not exceed 5.0.

D. Stockpiling. All material shall be stockpiled and sampled in accordance with the appropriate NYSDOT publication in effect on the date of the advertisement for bids. These publications are available upon request to the NYSDOT, Geotechnical Engineering Bureau.

CONSTRUCTION DETAILS

The crushed limestone course shall be placed to grade with a paver. The Engineer may waive this requirement, in writing, for locations where it is deemed not practical. In these situations, trucks shall be carefully unloaded on the grade at locations which minimize the distance the material must be moved. Uncontrolled spreading from piles dumped on grade will not be permitted.

Material shall be compacted in accordance with the requirements of *Compaction* of Section 203 Excavation and Embankment. A minimum of 95% of Standard Proctor Maximum Density will be required.

ITEM 304.01940004 - TRAILWAY TOP COURSE, STONE DUST

Compaction of this course shall not lag spreading operations by more than 500 feet.

Should the subbase become mixed with the crushed limestone course or any other material, the Contractor shall, at his expense, remove such mixture and replace it with approved materials.

The Contractor shall assume full responsibility for any contamination and degradation of any part of this course during construction and shall, at no cost to the State, remove any and all portions of this course which does not conform to the requirements of this specification and replace these portions with approved material.

After completion, the final surface of the course shall not extend more than 0.25 inch above nor more than 0.25 inch below true grade for the course at any location.

METHOD OF MEASUREMENT

The quantity to be paid for under this item will be the number of cubic yards of material, computed from payment lines shown on the Plans, or as ordered by the Engineer.

BASIS OF PAYMENT

The unit price bid for this work shall include the cost of furnishing all labor, material and equipment necessary to complete the work. The cost of adding water shall be included in the price bid unless the item for applying water is included in the Contract. No direct payment will be made for losses of material resulting from erosion or any other cause. The cost of such losses shall be included in the price bid for this item. No deductions shall be made for the volumes occupied by manholes, catch basins and other such objects.

Progress payments will be made after the crushed limestone course has been properly placed and compacted. Payment will be made at the unit price bid for seventy-five (75%) of the quantity. The balance will be paid for after the final surface is accepted.

ITEM 555.97010016 - CONCRETE FOR STRUCTURES, CLASS HP (REINFORCEMENT INCLUDED AND NO BAR LIST IN PLANS)

ITEM 555.97020016 - FOOTING CONCRETE, CLASS HP (REINFORCEMENT INCLUDED AND NO BAR LIST IN PLANS)

DESCRIPTION:

This work shall consist of furnishing and placing Class HP concrete for structures, including steel reinforcement as indicated in the contract documents or as directed by the Engineer.

MATERIALS:

All the material requirements of §555-2 and §556-2 shall apply.

CONSTRUCTION DETAILS:

If placement details and bar lists are not included in the contract plans, then the following provisions apply:

1. The Contractor shall submit a minimum of two copies of the bar lists and placement drawings showing the bar locations to the Engineer. The details of the bar list drawing and placement shall meet the requirements of the current edition of the Concrete Reinforcing Steel Institute's publication Reinforcing Bar Detailing. Drawings submitted for the review process the same size and layout as the Plans. Electronic submission is required. Drawings and bar lists shall be clear and legible.
2. The Engineer will transmit the documents to the designer for review for conformance with the design requirements and in accordance with §105-16. The designer will not check lengths, number of bars, weights or bar marks. Corrections will be returned to the Contractor. A review time of two days per placement drawing submitted with a minimum of 15 days for each submission will be allowed upon receipt of the submission. When the documents are satisfactory they will be returned to the Contractor stamped "Approved in Conformance with Design Requirements". The Contractor shall supply the Engineer with five (5) copies of the approved documents. No reinforcement shall be placed until copies of the approved documents are received by the Engineer.
3. Construction details for reinforcing steel shall meet the requirements of §556-3. The reinforcement shall be of the type indicated in the contract documents.
4. Partial submissions that require coordination with other drawings will not be accepted.
5. All the provisions of §555-3 shall apply.

METHOD OF MEASUREMENT:

All the provisions of §555-4 shall apply. Separate measurement of the bar reinforcement will not be made.

BASIS OF PAYMENT:

All the provisions of §555-5 shall apply, except that bar reinforcement will be included. No separate payment will be made for reinforcement.

ITEM 603.98XX0007- POLYVINYL CHLORIDE (PVC) SEWER PIPE & FITTINGS

DESCRIPTION:

Under this item the Contractor shall furnish, install and test (PVC) Sewer Pipe and fittings of the size and at the locations shown on the plans or as ordered by the Engineer.

MATERIALS:

The Contractor shall be responsible for all material furnished under this item and shall replace at his expense all material found defective in manufacture or damaged in handling. Materials shall be as follows:

POLYVINYL CHLORIDE (PVC) SEWER PIPE

All Polyvinyl Chloride (PVC) pipe and fittings shall meet or exceed all of the requirements of ASTM specification D3034, "Type PSM Polyvinyl Chloride (PVC) Sewer Pipe and Fittings," 4 NPS through 15 NPS, Class SDR-35 and ASTM F679 "(Polyvinyl Chloride) (PVC) Large Diameter Plastic Gravity Sewer Pipe and Fittings" for 18 NPS through 36 NPS. The minimum modulus of elasticity shall be 19 lbs/sq. ft. All pipes shall be suitable for use as a gravity sewer conduit. Provisions must be made for contraction and expansion at each joint with a rubber ring. The bell shall consist of an integral wall section which securely locks the solid cross-section rubber ring into position. The gasket shall meet the requirements of ASTM F477-76.

Fittings - All fittings and accessories shall be as manufactured and furnished by the pipe supplier, and have bell and/or spigot configurations identical to that of the pipe to which they are connected. Service connections shall be of the "tee-wye" combination. The PVC pipe shall be cut to the correct length in the field as necessary to allow installation of new service connections or service connections to existing laterals.

Saddles - Where it is impractical to install a PVC "tee-wye" service connection, a saddle may be used to make a service connection for new lateral.

The saddle shall contain a rubber (O) - ring gasket cemented in place in accordance with ASTM D1869 specifications. The saddle shall have a spigot or bell inlet suitable for acceptance of the kind and size of lateral pipe to be connected. If necessary, a flexible coupling or gasket may be used to connect the lateral to this saddle. The saddle shall be installed in accordance with the manufacturer's specifications and shall meet any requirements established by the owners of the sewer system.

ITEM 603.98XX0007- POLYVINYL CHLORIDE (PVC) SEWER PIPE & FITTINGS

CONSTRUCTION DETAILS:

- A) EXCAVATION - Excavation shall conform to the requirements of Item 206.02 - Trench and Culvert Excavation or Item 206.04 - Trench and Culvert Excavation - O.G., except as modified herein and the limits are shown in the Contract Plans.
- B) BACKFILLING - No trench, pit or other excavation shall be backfilled until the pipe or appurtenant structures contained therein shall have been completely installed and inspected and approved by the Engineer. In backfilling around and over pipes, stone bedding material shall be spread in layers not over 6 inches in depth on both sides of the pipe and thoroughly spaded and tamped around the pipe so that no displacement of the pipe results. Backfill for a minimum distance of 2 ft above the top of the pipe shall be of the same material and shall be spread in layers not to exceed 6 inches in thickness or depth and each layer shall be thoroughly compacted by spading and tamping before further refilling is done. In all cases, the backfill above the top of the pipe shall be placed to a minimum of 18 inches before compaction is begun directly over the pipe.
- C) DISPOSAL OF WATER - Except when included in another specification (i.e. work area located in a hazardous or contaminated area), water in excavated trenches or pits shall be removed by pumping, bailing or other satisfactory method before the installation of any pipe or structure. Water so removed shall be conveyed to such places and points that it will not interfere with the progress of the work or be a hazard or damage to public or private property. No water containing mud, grit or substances that would settle and be detrimental to the operation of sanitary sewers shall be permitted to flow into any storm or sanitary sewer or drain. No sewage entering excavated trenches or pits shall be pumped or dumped into any surface drainage course. No water, sewage or other material shall be allowed to enter any water main.
- D) LAYING SEWER PIPE - Excavation of trenches for sewer pipe shall be made to the line and grade established or as directed by the Engineer and shall be made straight and true with no deviations from a straight line or grade between manholes.

The sewer pipe shall be bedded on a minimum of 6 inches of stone bedding material.

The trench bottom shall be flat. Holes for bells or couplings shall be dug so that no portion of the bell or coupling will contribute to the support of the pipe. The barrel of the pipe shall be uniformly supported throughout the entire length. Should over digging occur, all loosened material shall be removed and the trench bottom brought back to grade with stone bedding material. Bedding material shall be according to specifications and shall be placed and tamped in a manner satisfactory to the

ITEM 603.98XX0007- POLYVINYL CHLORIDE (PVC) SEWER PIPE & FITTINGS

Engineer. Bedding material in such instances shall be placed at the sole expense of the Contractor.

In areas of rock excavation the pipe shall be bedded on a minimum of 6 inches bedding material.

In areas where unstable trench bottoms are encountered, the trench shall be excavated to an additional depth below the layer of stone bedding material and a layer of stone foundation material placed and graded so as to properly support the bedding material, pipe, and backfill. The depth shall vary according to the actual conditions. Payment for such foundation material shall be as hereinafter specified.

All preformed joints shall be made according to manufacturer's specifications. Where it may be necessary to connect to existing facilities of like or unlike materials, such connection shall be made by use of special manufactured adapters as approved by the Engineer.

The inside of each pipe shall be inspected and all foreign matter, joint material that squeezed through, etc., shall be removed before backfilling. Care shall be taken in placing backfill so that the joints are not loosened or sprung. The backfill shall be packed and tamped into place under the pipe. All loosened or broken joints shall be removed and replaced.

- E) LEAKAGE TESTS - Unless otherwise ordered by the Engineer, all sewers, service connections and sewer laterals, shall be tested for leakage and shall satisfactorily meet the test requirements. No connections to existing sewer laterals shall be made until the leakage requirements are met. The Contractor shall furnish all labor, materials and equipment and shall perform the tests. The Contractor shall make all necessary repairs or replacements and shall repeat the final leakage test(s), until the minimum leakage requirements are met.

Leakage tests shall be made only after backfilling is completed. Two types of tests will be acceptable: (a) Exfiltration Test or (b) Low Pressure Air Test. The type of test used will depend upon the extent and type of installation and shall be as directed by the Engineer.

(a) Exfiltration Test

This leakage test consists of an exfiltration test wherein the main sewer, sewer laterals and manholes are filled with clear water to provide a head of at least 5 ft above the top of the pipe or 5 ft above the level of the groundwater table, whichever is higher, at the highest point of the sewer line under test, and measuring the loss of water from the line by the amount which must be added to maintain the original level. In this test the

ITEM 603.98XX0007- POLYVINYL CHLORIDE (PVC) SEWER PIPE & FITTINGS

line must remain filled with water for at least 24 hours prior to taking measurements, and the actual test period shall not be less than two (2) hours.

For purposes of determining the elevation of the top of the groundwater table, the Contractor shall furnish and install an open-end standpipe of perforated pipe. The standpipe shall be installed at least 24 hours before the line is filled with water. One (1) standpipe shall be installed for each section of sewer line tested. A section of sewer is defined as the length of main sewer, including sewer laterals, between two consecutive manholes. Following successful completion of the leakage tests, the standpipe shall be filled with approved material and the top cut off at least 2 ft below finished grade.

Exfiltration shall be measured by the drop of water level in a standpipe or in one of the sewer manholes. When a standpipe and plug arrangement is used in the upper manhole of a line under test, there must be some positive method of releasing entrapped air in the sewer prior to taking measurements. In the case of sewers laid on steep grades, the length of line to be tested at any one time may be limited by the maximum allowable internal pressure on the pipe and joints at the lower end of the line. The recommendations of the pipe manufacturer shall be followed.

When the level of the groundwater table is of such height that the manholes cannot be used for convenient measuring, or if the vertical distance between the top of the pipe and the manhole rim is less than 5 ft, the Contractor shall test the pipe separately from the manholes utilizing the standpipe method including plugs, hoses, etc., to establish the required head of water. Manholes shall then be tested separately.

The total leakage of any section tested shall not exceed the rate of 30 gallons per mile of pipe per 24 hours per 1 inch of nominal pipe diameter. For purposes of determining the maximum allowable leakage, manholes shall be considered as sections of 4 ft or 5 ft diameter pipe, depending on the type manhole included in the test. The equivalent leakage allowance shall be 5 gallons per manhole per 24 hours for 4 ft diameter manholes, and 6 gallons per manhole per 24 hours for 5 ft diameter manholes.

(b) Low Pressure Air Test

This leakage test consists of plugging each section of sewer, pressurizing the line with air, and measuring the pressure drop time relationship.

Each end of the section of line to be tested shall be sealed off with inflatable pneumatic or manual plugs which shall hold against the air pressure without external bracing and without movement. Plugs shall have at least two valved connections opening into the pipe section, one for introducing low pressure air and one for

ITEM 603.98XX0007- POLYVINYL CHLORIDE (PVC) SEWER PIPE & FITTINGS

connecting an approved air gauge calibrated in .25 psi increments.

Air shall be introduced into the test section to a pressure of 4 psi above the average pressure of any ground water that may be over the pipe. In such ground water areas, the Contractor shall install during the original installation a ½ inch capped pipe nipple through the manhole wall at a level of the top of the lowest pipe. The ground water level shall be determined by clearing the nipple with air and connecting a clear plastic hose to the same and measuring the water level in the hose. The height of the water level in feet above the pipe invert divided by 2.3 shall establish the pounds pressure to be added to all readings.

A minimum of two minutes shall be allowed for the pressure to stabilize during which time the pressure shall not drop more than 0.5 psi. The air supply shall then be disconnected and the time in minutes shall be recorded for the pressure to drop no more than 1 psi. Such time shall not be less than the following:

<u>NOMINAL SIZE</u>	<u>MINUTES</u>
4 NPS	2.0
6 NPS	3.0
8 NPS	4.0
10 NPS	5.0
12 NPS	5.5
15 NPS	7.5
18 NPS	8.5
21 NPS	10.0
24 NPS	11.5
27 NPS	13.0
30 NPS	14.5
33 NPS	16.0
36 NPS	17.5

ITEM 603.98XX0007 M-POLYVINYL CHLORIDE (PVC) SEWER PIPE & FITTINGS

METHOD OF MEASUREMENT:

The quantity to be paid for under these items will be the number of feet of new sewer pipe (including all necessary connections and fittings) furnished and installed in accordance with the plans, specifications and as ordered by the Engineer.

BASIS OF PAYMENT:

The unit prices bid per yard for these items shall include the cost of furnishing all labor, materials, and equipment necessary to satisfactorily complete the work including fittings, plugs, connections, and leakage tests.

Excavation, sheeting, and backfill material will be paid for separately under their respective items. Payment will be made under:

<u>ITEM NO.</u>	<u>DESCRIPTION</u>	<u>UNIT OF</u>	<u>PAYMENT</u>
603.98040007	PVC Sewer Pipe & Fittings	4 NPS	Feet
603.98060007	"	6 NPS	Feet
603.98080007	"	8 NPS	Feet
603.98100007	"	10 NPS	Feet
603.98120007	"	12 NPS	Feet
603.98150007	"	15 NPS	Feet
603.98180007	"	18 NPS	Feet
603.98210007	"	21 NPS	Feet
603.98240007	"	24 NPS	Feet
603.98270007	"	27 NPS	Feet
603.98300007	"	30 NPS	Feet
603.98330007	"	33 NPS	Feet
603.98360007	"	36 NPS	Feet

"Progress payments will be made at the unit price bid for 80 percent of the quantity of pipe installed. The remaining 20 percent will be paid for when the testing of the system has been completed."

ITEM 604.06000006 - TRENCH DRAIN SYSTEM

DESCRIPTION

This work shall consist of furnishing and installing a trench drain system and accessories in accordance with the contract documents and as directed by the Engineer.

MATERIALS

Manufacturer:

ABT, Inc PO Box 837
259 Murdock Rd
Troutman, NC 28166
800-438-6057

www.abtdrains.com

ACO Polymer Products 12080 Ravenna Rd Chardon, OH
800-543-4764

www.acousa.com

Zurn Industries, Inc. 2855 Girts Rd
Jamestown, NY 14701
716-665-1135

www.zurn.com

Or equal as approved by Engineer.

Trench drain units shall be interlocking channels and includes an attached grate meeting the requirements of §655, Frames, Grates, and Covers.

Channel units shall be able to accept connections to 4" or 6" underdrain pipe on the ends, bottom, and/or sides.

The trench drain system shall meet a design load of HS 20 and the grate shall be ADA compliant.

CONSTRUCTION DETAILS

Excavation shall be in conformance with the Construction Details of §206-3 Trench, Culvert, and Structure Excavation.

Install trench drain system with manufacturer's instructions. Drainage units shall be laid in close conformity to line and grade and have a full, firm and even bearing at each joint and along their entire length.

Backfill shall comply with §206-3.02, Structure Excavation.

METHOD OF MEASUREMENT

This work will be measured as the number of linear feet of Trench Drain System satisfactorily furnished and installed.

BASIS OF PAYMENT

The unit price bid shall include the cost of furnishing all labor, materials, and equipment necessary to satisfactorily complete the work. Excavation and backfill will be paid for under the items shown in the contract documents.

ITEM 604.07260011 – CONNECTION TO EXISTING DRAINAGE FACILITIES

Description:

Under this item, the Contractor shall remove portions of existing drainage facilities and connect new drainage facilities thereto at the locations shown on the plans as ordered by the Engineer.

Materials:

Concrete	Class A Section 501
Concrete Grouting Material	Section 701-05
Bar Reinforcement	Grade 60 Section 709-01

Construction Details:

The work under this item provides for connecting new pipe lines to existing pipe lines or structures. The Contractor shall maintain the existing pipe lines and structures in continuous service as required and/or directed by the Engineer.

The Contractor shall perform all excavation and backfill and dispose of all excess materials as required to complete the work. Backfilling shall be compacted in conformance with Section 203 of the Standard Specifications.

When connecting to the existing pipe line or structures, the existing facility shall be broken into and reinforcement cut back only as needed to accommodate the new pipe as indicated on the plans. The new pipe shall be set to required grade and the existing pipe wall shall be repaired and patched as required to provide a secure and waterproof connection. Ends of the new pipe projecting into the existing drainage facility shall be neatly cut off and trimmed flush with the inside face of the structure.

Method of Measurement:

The quantity to be paid for shall be the actual number of connections made in conformance with the plans and specifications and the orders of the Engineer.

Basis of Payment:

Payment will be made at the unit price bid for each connection which shall include the cost of all materials, labor and equipment necessary to complete the work except excavation and backfill which will be paid under Trench and Culvert Excavation Item 206.02 and the new pipe which shall be paid under the appropriate pipe item.

ITEM 607.02XX0039 – MOVABLE CONSTRUCTION FENCE

DESCRIPTION:

The work shall include furnishing, installing, and maintaining a moveable construction fence in accordance with the contract documents and as directed by the Engineer.

To prevent disturbance or damage to existing pavements, the movable construction fence shall be installed in timber curbs or in water filled plastic barriers.

MATERIALS:

The following sections of the standard specification shall apply:

Timber and Lumber	594-2
Steel and Iron Posts, Rails, Braces and Fittings for Chain Link Fence	710-10
Water	712-01
Galvanized Coatings and Repair Methods	719-01

Construction Fence

Fabric

Fabric shall be 11 gauge galvanized steel wire woven into 2 inch diamond mesh, knuckled at the bottom and barbed at the top.

Line Posts

Line posts shall be in accordance with §710-10 - Class A, and be 2 ½ inch O.D., galvanized steel, schedule 40.

Terminal Posts

Terminal posts, including corner posts and gate posts, shall be in accordance with §710-10, Class A, and be 3 inch O.D., galvanized steel, schedule 40.

Top and Bottom Tension Wire

Tension wire shall be No. 6 gauge galvanized wire.

Fittings and Hardware

Hardware, fittings and post caps shall be ductile iron, cast steel or pressed steel, all hot-dipped galvanized Tie wire shall be aluminum alloy.

Gates and Keyed Padlocks

Gates shall be of similar construction as the fence and shall be provided with keyed padlocks.

Gates shall be 8'-0" high and shall be placed at locations as shown in the contract documents, or as approved. The Contractor shall supply a set of keys, one (1) key for every lock, one lock for every gate.

ITEM 607.02XX0039 – MOVABLE CONSTRUCTION FENCE

Braces

Braces for gates, if required, shall be in accordance with §710-10 Class A and, be

- 5/8 inch O.D.
- galvanized steel,
- schedule 40,

Trusses shall be 5/16" diameter adjustable truss rods.

Timber Curbs and Water Filled Plastic Barriers

Plate Brackets

Plate brackets shall be 6" x 6" square 1/4" thick galvanized steel plates with 3" holes to slide over posts and welded in place 11 1/2" from bottom of posts.

Base Plates

Base plates shall be 1/4" thick galvanized steel with schedule 40 galvanized steel pipe welded to plate, inner dimension of pipe to receive line posts and end posts without gaps.

Steel Splice Plate Assemblies

Steel splice plate assemblies shall include:

- 3'-0" splice plate with attached 3/4" diameter threaded stud.
 - threads on the stud shall extend 6" down the length of the stud,
 - stud shall be 16" in length.

Hardware

Hardware shall be galvanized steel. Lag screws shall be 3/4" diameter by 10" long. Anchor spikes shall be 1" diameter by not less than 24" long

Timber Curb

Timber curb shall be:

12" x 12" Timbers,

Timbers shall be predrilled and painted with white and orange stripes. White stripes shall be 13" in width by 12" high; orange stripes shall be 11" in width by 12" high. Paint shall be exterior enamel paint. Color shall comply with ASTM D1535:

WATER FILLED PLASTIC BARRIER: Plastic barrier shall be:

- constructed of high density polyethylene,
- minimum sixty (60") inches in length,
- minimum thirty-two (32") inches in height,
- minimum base width of eighteen (18") inches
- have the capability to be linked together to form a continuous barrier,
- capable of being linked together to form angles or radii,

ITEM 607.02XX0039 – MOVABLE CONSTRUCTION FENCE

- have pre-formed holes on top for insertion of construction fence posts, and
- filled with water after installation to increase weight and stability,

CONSTRUCTION DETAILS:

Install timber curb or water filled plastic barriers with the chain link fence atop, at locations indicated in the contract documents. The intent is to secure the site at all times. All gaps between the chain link fence panels are to be filled with chain link mesh, to secure the site from any unauthorized entry.

Chain link fabric shall be secured to line posts with 3/16 inch aluminum tie-wire spaced 18 inches apart on posts. Fabric shall be secured to terminal posts with tension bars and bands and to top and bottom tension wires with 9 gauge hot rings spaced 24 inches apart. Post caps shall be installed on all posts.

LINE POST SPACING SHALL NOT EXCEED 8'-0" ON CENTER.

Finished fence shall not display fence company name or other forms of advertising. Upon completion of the work the fence and timber curbs/plastic barriers shall be removed from the site.

Timber Curb

Movable construction fence shall be installed in pre-drilled holes in timber curbs, and bolted in place through plate brackets, to prevent removal. Contractor shall also have the option of securing posts to timber with base plates with sleeves to receive them. Timber shall be joined with steel splice plate assemblies.

Water Filled Plastic Barrier

Fence posts of movable construction fence shall be set in holes which shall have been formed in the plastic barrier. The barriers are to be shimmed and leveled to ensure a smooth, continuously aligned fence. All the fences shall be secured to each section of barriers to ensure ease of mobility. The plastic barriers shall be filled with water to prevent lateral displacement and increase stability. Water in plastic barriers can be drained to facilitate moving the fence and must be refilled once it is set in the new location.

Maintenance

Relocation of Fence

Contractor shall move the construction fence, as required, to accommodate the work. The movable construction fence shall be relocated up to (3) three times, not including initial installation and final removal. If directed by the Engineer, movable construction fence shall be removed prior to the completion of the work.

Contractor shall be responsible for coordinating work throughout construction in a timely manner.

ITEM 607.02XX0039 – MOVABLE CONSTRUCTION FENCE

The Contractor shall maintain the moveable construction fence and gates during the life of this contract. Upon completion of the work the fence and timber curbs/plastic barriers shall be removed and become the property of the Contractor.

METHOD OF MEASUREMENT:

The work will be measured as the number of linear feet of moveable construction fence installed.

BASIS OF PAYMENT:

The unit price bid per linear foot of movable construction fence furnished, installed, and maintained shall include the cost of all labor, material, and equipment necessary to satisfactorily complete the work.

Progress payments will be made at the unit price bid for 80% of the quantity of movable construction fence installed. The remaining 20% will be paid after the movable construction fence has been removed.

Where XX is the height of the movable construction fence in feet.

ITEM 607.41010010 - TEMPORARY PLASTIC BARRIER FENCE

DESCRIPTION

This work shall consist of furnishing, installing, and maintaining Temporary Plastic Barrier Fences of the type and at the locations shown in the plans or where directed by the Engineer.

MATERIALS

Materials for Temporary Plastic Barrier Fences shall meet the following requirements:

- **Fence:** High-density polyethylene mesh, ultraviolet-stabilized min. 2 years; minimum height 4.0 feet. Color: high-visibility orange or green. When used to protect trees or other vegetation, color shall be high-visibility orange.
- **Posts:** Rigid metal or wood posts, minimum length 6.0 feet.
- **Ties:** Steel wire, #14 gauge or nylon cable ties.
- **Warning signs:** Sheet metal, plastic or other rigid, waterproof material, 1.5 feet by 2.0 feet with 4 inch black letters on a white background. Text shall be: "Protected Site - Keep Out" unless otherwise specified.

CONSTRUCTION DETAILS

Fences shall be erected prior to moving construction equipment onto any area designated for protection.

The line of fences as indicated on the plans shall be staked or marked out on the ground by the Contractor and approved by the Engineer before any fence is installed. Where used for protection of individual trees, fence shall be placed at the drip line (extent of canopy). If not possible, placement shall be as close to the drip line as possible and in no case less than 5.0 feet away from the tree trunk.

On approval of the stakeout, posts shall be securely driven on 6.0 foot-maximum centers, normal to the ground, to a depth 1/3 of the total post length. Plastic barrier fence shall be placed along the side of all posts. Ends of fencing segments shall overlap a distance of at least one half the fence height.

Fencing shall be secured to posts with wire or cable ties at top, middle and bottom of post. Fastener shall be tight enough to prevent the fencing from slipping down. Overlaps shall also be securely fastened.

Barrier fence which is not orange in color shall be flagged at 6.0 foot intervals with red or orange florescent tape. Warning signs shall be mounted on the fence at no more than 100 foot intervals.

Maintenance shall commence immediately after erection of the fence and continue until one week prior to acceptance of the contract, and shall consist of: replacing damaged post(s) and fencing; re-fastening and tightening fencing; and restoring fence to its intended height.

Fencing used for tree or other vegetation protection shall not be temporarily removed to allow equipment access over a protected area, except as required for items of work specifically shown on the plans and approved by the Engineer in writing.

ITEM 607.41010010 - TEMPORARY PLASTIC BARRIER FENCE

METHOD OF MEASUREMENT

The quantity to be measured for payment will be the number of feet of Temporary Plastic Barrier Fence erected, measured along the top, to the nearest whole foot.

BASIS OF PAYMENT

The unit price bid shall include the cost of all labor, materials and equipment necessary to satisfactorily complete the work. Relocation of a fence from one location to another as directed by the Engineer shall be considered as a new location and will be separately paid.

Seventy percent (70%) of the price bid will be paid after satisfactory installation of the fence. The remaining Thirty percent (30%) will be paid after complete removal of the fence.

ITEM 608.21000003 - CAST IRON EMBEDDED DETECTABLE WARNING UNITS

DESCRIPTION

Section §608-1 of the Standard Specifications shall apply.

MATERIALS

Section §608-2.07 of the Standard Specification shall apply with the following modifications:

Embedded Detectable Warning Units 726-02

All embedded detectable warning units shall be cast iron. No other material will be accepted. Installation of detectable warning units shall be in accordance with manufacturer's recommendations. All detectable warning units shall have a natural finish color.

CONSTRUCTION DETAILS

Cast iron detectable warning units shall be installed in wet concrete as directed by the manufacturer. Follow all applicable manufacturer's requirements for environmental conditions, surface preparation, installation procedures, curing procedures, and materials compatibility.

METHOD OF MEASUREMENT

Section §608-4.07 of the Standard Specifications shall apply.

BASIS OF PAYMENT

The unit bid price per square yard shall include all labor, material, and equipment necessary to satisfactorily complete the work, including bedding material. No adjustment shall be made for concrete removed to accommodate embedded units.

Payment will be made under:

Item No.	Item	Pay Unit
608.21000003	Cast Iron Embedded Detectable Warning Units	Square Yard

ITEM 611.21XXYY09 – TREE PROTECTION SYSTEM

DESCRIPTION

This work shall consist of furnishing and installing a tree protection system at the locations indicated in and in accordance with the contract documents and as directed by the Engineer.

A tree protection system shall be a commercially available horticultural product created for the purpose of protecting trees from herbivory (deer, rodents, etc.), animal damage (rubbing), wind, winter crack, sun scald, mechanical damage (mowers, string line trimmers), chemical damage (pesticides, herbicides) and other hazards. The tree protection system may consist of the following:

- Tree tube,
- Stakes,
- Ties, and
- Bird Protection Netting.

Refer to contract documents for a special note, titled “*Tree Protection System*” for a complete description of the tree protection system.

MATERIALS

The following sections of the standard specifications shall apply:

Materials for the Protection of Plants

713-08

with the following exceptions:

Tree Tube

Tree tube shall be a tubular, translucent, light-colored, vented (allowing air circulation and reducing excessive moisture retention), flared at the top (to prevent abrasion) commercially available horticultural product created for the purpose of protecting trees. Tubes shall be designed to open, split, burst or fall off the tree as the tree grows and the trunk expands.

The height of tree shelter shall be as indicated in the contract documents. The diameter of the tree shelter shall be wide enough to provide air circulation around the tree trunk, but narrow enough to prevent animal herbivory.

Stakes

Unless otherwise specified in the contract documents, stakes shall be

- wood or bamboo, and
- 5 to 6' high and 1" to 1.5" in diameter.

Ties

Ties shall be a commercially available product created for this purpose. As the tree grows and trunk expands, ties shall:

- not prevent the tree tube from opening, splitting, bursting or falling off, and/or

ITEM 611.21XXYY09 – TREE PROTECTION SYSTEM

- if installed around the tree trunk, be designed to split.

Bird Exclusion Netting

Bird Exclusion Netting, if specified, shall be a commercially available product created for this purpose. Refer to the contract documents to determine if bird exclusion netting is required.

CONSTRUCTION DETAILS

All components of the tree protection system shall be installed per manufacturer's instructions and, if applicable, the contract documents. Pruning of side branches of seedlings may be required to install the product. The Contractor shall take care during installation to not damage the plants the product is specified to protect.

METHOD OF MEASUREMENT

The work will be measured as the number of each tree protection systems furnished and installed.

BASIS OF PAYMENT

The unit price bid per each tree protection system shall include the cost of all labor, materials, and equipment, necessary to satisfactorily complete the work.

XXYY = height of tree protection system in feet (XX) and inches (YY).

ITEM 619.02300039 - CONSTRUCTION SIGN ON FENCE

DESCRIPTION:

Under this item, the Contractor shall furnish, install, and maintain a **CONSTRUCTION SIGN ON FENCE** in accordance with the contract documents.

MATERIALS:

The sign shall be a vinyl film four-color image photo transfer laminated on M.D.O. board. Over lamination will not be required. All plywood shall be one-half inch (1/2") thick Douglas Fir, exterior grade, five (5) plies. The front side of the sign shall be a Medium Density Overlay (M.D.O.) which is plywood with a resin impregnated fiber overlay. Reverse side to be grade 'C' or better. Size of sign shall be 66.75" X 46.375" (approximately 5'-6" X 3'-10"). All edges and back shall be sealed with one coat of exterior grade primer. Color of primer to be white unless otherwise directed.

A compact disc with the custom image in Illustrator 8.0 format (50% actual size) will be provided to the Contractor at the pre-construction meeting.

The Construction Sign shall be as manufactured by:

Sign Design Group of NY, Inc.
Long Island City, NY

Mineola Awnings & Signs
Mineola, NY

Or approved equal.

CONSTRUCTION DETAILS:

The Construction Sign shall be installed on the construction fence at the locations shown on the plans. Construction Sign shall be installed in a true vertical position and mounted to fence with four (4) one-half (1/2") inch diameter x six (6") inch long galvanized lag bolt, bolted to additional two (2) 2 x 4 lumber slats in the back of the fence as shown on the contract documents, mounted between vertical posts, with extra post at no more than 4'-0" o.c.

MAINTENANCE:

The Contractor shall maintain the sign during the life of the contract, in a condition satisfactory to the Engineer. Maintenance of the construction sign includes, but is not limited to, restoration of any portion of the sign that has been defaced by graffiti, or any necessary changes to text as required by the Engineer. Modifications to the text and names printed on the sign may occur throughout the life of the contract. Modifications such as name revisions, dignitary title changes, completion dates, and text revisions may be required to maintain the sign in accordance with current information. All modification to the text on the construction sign shall match the font and format of the original text. The Contractor shall attach the modified text to the construction sign in a manner that will not peel off. The Contractor shall install custom information on the sign within forty-eight (48) hours of direction by the Engineer.

NOTE: Upon completion of the contract, the construction sign shall be removed by the Contractor.

ITEM 619.02300039 - CONSTRUCTION SIGN ON FENCE

METHOD OF MEASUREMENT:

The quantity of **CONSTRUCTION SIGN ON FENCE** to be paid for under this item shall be the number of units furnished and installed in accordance with the construction documents and directions of the Engineer.

BASIS OF PAYMENT:

The price bid shall be a unit price for **EACH** Construction Sign on Fence furnished and erected and shall include the cost of all labor, materials and equipment necessary to complete the work, including hardware for mounting on fence or frame and continuous maintenance, all in accordance with the contract documents, to the satisfaction of the Engineer.

Payment for work performed under this item shall be made as follows:

50% - upon initial installation

50% - at the final inspection, having maintained the construction sign for the life of the contract to the satisfaction of the Engineer.

ITEM 660.97020011 – SANITARY SEWER CLEANOUTS

DESCRIPTION:

This work shall consist of furnishing and installing a Sanitary Sewer Cleanout system at the location shown in the plans, specifications and/or as directed by the Engineer.

Sanitary Sewer Cleanout shall be defined as any bends, tees, crosses, reducers, caps, plugs, sleeves, or other pieces necessary to complete the installation. Where AWWA or ANSI specifications are noted, the most recent revision of that specification shall apply.

MATERIALS:

- A. Concrete Manhole. The manhole shall conform to Section 604-2 Materials of the NYSDOT Standard Specifications. Dimensions shall be as shown on the Plans or as ordered by the Engineer.
- B. Fittings. Fittings shall conform to AWWA C110. All pipe and fittings shall be lined with cement-mortar on the inside and shall have a petroleum asphaltic coating on the outside. The cement-mortar lining shall conform to AWWA C104. The thickness of the lining shall be double the standard thickness required by this Specification.
- C. Pipe and Fitting Joints. Pipe and fitting joints shall be rubber gasket joints, either the mechanical type or the push-on type, and shall conform to AWWA C111.
- D. Bedding for pipe: as shown on Contract Drawings

CONSTRUCTION DETAILS:

- A. General. All work shall be done in accordance with the Plans and the Specifications, and shall be satisfactory to the Engineer and the owner of the sanitary sewer system.

The Contractor shall make all necessary arrangements, obtain all permits, and pay all charges as required to satisfy the requirements and regulations of the local sewer department.

Before the start of work, the Contractor shall prepare and submit for approval to the Engineer, schedules of the proposed sequence of work and drawings or catalog cuts of the sewer pipes, details of the connection to the sanitary sewer utility service and appurtenances comprising the work.

The Contractor shall, as directed by the Engineer, provide temporary connection when the sanitary sewer service is interrupted and shall notify the user sufficiently in advance of this interruption.

- B. Excavation and Backfill. Installation details and payment lines shall be as shown on the NYSDOT Standard Sheet entitled "Installation Details for Reinforced Concrete and Other Rigid Pipes".

ITEM 660.97020011 – SANITARY SEWER CLEANOUTS

- C. Pipe Installations. Excess coating, blisters, etc., shall be removed from the bell and spigot end of each pipe, and the outside of the spigot and the inside of the bell shall be wire brushed and wiped clean and dry before the pipe is laid.

Every precaution shall be taken to prevent foreign material from entering the pipe while it is being placed. All pipe connections shall be made in the trench. No joining of pipes will be allowed before lowering and setting in the trench. Pipe shall be placed with bell ends facing in the direction of laying. The spigot end shall be centered in the bell and the pipe forced home and brought to correct line and grade.

METHOD OF MEASUREMENT:

The work to furnish and completely install the sanitary sewer cleanout will be measured on a Lump Sum basis.

BASIS OF PAYMENT:

Payment will be made at the contract Lump Sum price and shall include all labor, equipment, materials, testing, documentation, utility fees, and labor detailed in the contract documents for this bid item.

ITEM 660.97020110 - SANITARY SEWER CLEANOUT ASSEMBLY

ITEM 660.97020210 - SANITARY SEWER CLEANOUT AND AIR RELEASE ASSEMBLY

DESCRIPTION:

This work shall consist of furnishing and installing a sanitary sewer cleanout system with and without an incorporated air release / blow off assembly at the location shown in the plans and/or as directed by the Engineer.

Sanitary sewer cleanout assembly shall include a concrete manhole as well as any bends, tees, crosses, reducers, caps, plugs, sleeves, or other pieces necessary to complete the installation. Air release or blow-off assembly shall consist of a complete and operable air release / blow-off valve as shown on the plans or equal. Where AWWA or ANSI specifications are noted, the most recent revision of that specification shall apply.

MATERIALS:

- A. Concrete Manhole shall conform to Section 604-2 "Materials" of the NYSDOT Standard Specifications. Dimensions shall be as shown on the Plans or as directed by the Engineer.
- B. Fittings shall conform to AWWA C110. All pipe and fittings shall be lined with cement-mortar on the inside and shall have a petroleum asphaltic coating on the outside. The cement-mortar lining shall conform to AWWA C104. The thickness of the lining shall be double the standard thickness required by this Specification.
- C. Pipe and Fitting Joints shall be rubber gasket joints, either the mechanical type or the push-on type, and shall conform to AWWA C111.
- D. PVC and Ductile Iron Pipe shall conform to Sections 706 "Concrete, Clay and Plastic Pipe" & 707 "Metal Pipe" of the NYSDOT Standard Specifications respectively.
- E. Bedding for Manhole: as shown on Contract Drawings

CONSTRUCTION DETAILS:

- A. General. All work shall be done in accordance with the Plans and the Specifications, and shall be satisfactory to the Engineer and the owner of the sanitary sewer system.

The Contractor shall make all necessary arrangements, obtain all permits, and pay all charges as required to satisfy the requirements and regulations of the local sewer department.

Before the start of work, the Contractor shall prepare and submit for approval to the Engineer, schedules of the proposed sequence of work and drawings or catalog cuts of the sewer pipes, details of the connection to the sanitary sewer utility service and appurtenances comprising the work.

The Contractor shall, as directed by the Engineer, provide temporary connection when the sanitary sewer service is interrupted and shall notify the user sufficiently in advance of this interruption.

ITEM 660.97020110 - SANITARY SEWER CLEANOUT ASSEMBLY

ITEM 660.97020210 - SANITARY SEWER CLEANOUT AND AIR RELEASE ASSEMBLY

- B. Excavation and Backfill. Installation details and payment lines shall be as shown on the NYSDOT Standard Sheet 203-04 entitled "Installation Details for Reinforced Concrete Pipes".
- C. Pipe Installations. Excess coating, blisters, etc., shall be removed from the bell and spigot end of each pipe, and the outside of the spigot and the inside of the bell shall be wire brushed and wiped clean and dry before the pipe is laid.

Every precaution shall be taken to prevent foreign material from entering the pipe while it is being placed. All pipe connections shall be made in the trench. No joining of pipes will be allowed before lowering and setting in the trench. Pipe shall be placed with bell ends facing in the direction of laying. The spigot end shall be centered in the bell and the pipe forced home and brought to correct line and grade.

METHOD OF MEASUREMENT:

- A. The quantity to be paid for will be the number of Sanitary Sewer Cleanouts that are installed in accordance with this specification and the contract documents.
- B. The quantity to be paid for will be the number of Sanitary Sewer Cleanouts and Air-Release Assemblies that are installed in accordance with this specification and the contract documents.

BASIS OF PAYMENT:

The unit price bid shall include the cost of all labor, materials, including the concrete manhole, crushed stone bedding, frame and grates, manhole steps, pipe, fittings, testing, documentation and equipment to complete the work.



J. Ryan McMahon II
County Executive



Department
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