



4. Evaluation and recommendations with respect to foundation support of the structure, including allowable soil bearing pressures, recommended bearing elevations, and other foundation design considerations.
5. Provide soil criteria and site preparation procedures for construction of the proposed structure.

2.0 OBSERVATIONS

2.1 Site Observation and Historical Data

The subject property is located at 3090 Sheridan Street in Hollywood, Florida. The site is occupied by multiple commercial buildings and associated paved parking lots that are to be demolished for the proposed construction. No soil staining or visual evidence of chemical or petroleum spillage was apparent. The recovered samples were not examined, either visually or analytically, for chemical composition or environmental hazards. UES would be pleased to perform these services if required.

UES reviewed historic aerials from 1952 through 2022. The aerials display the site containing heavy vegetations through 1995. The commercial buildings and associated paved parking were constructed by 1999. The site has remained relatively unchanged.

2.2 Laboratory Testing and Procedures

Soil samples recovered from UES's field exploration were returned to the laboratory. A geotechnical engineer visually examined and reviewed the field descriptions of the recovered soils in general accordance with ASTM D-2488. Samples were visually examined to accurately evaluate the subsurface soil properties and site geomorphic conditions. Based on UES's analysis of the recovered samples, additional testing was deemed unnecessary.

Representative samples of the soils encountered during the field exploration will be held in the laboratory for your inspection for 30 days unless UES is notified otherwise.

2.3 Geomorphic Conditions

The geology of the immediate vicinity, based on the USDA Soil Survey, is mainly representative of the **Urban land complex, 0 to 2 percent slopes and Matlacha, limestone substratum-Urban land complex**, which consists mostly of gravel and sandy soils.



The South Florida region is a low probable area of sinkhole development or intense seismic activity. There are no known fault lines located on or near the project site. Based on the Seismicity Map of the State of Florida produced by B.G. Reagor 1987, the closest seismic activity occurred near Miami in 1945. This event registered an III on the Modified Mercalli Intensity Scale of 1931. This intensity is similar to vibrations like that due to passing of heavy or heavily loaded trucks.

2.4 Field Exploration

For purposes of this study, the following was performed:

- Eight (8) standard penetration test (SPT) boring (ASTM D-1586) to a depth of 20 feet below existing grade.
- Two (2) exfiltration tests to a depth of 10 feet below existing grade in accordance with the South Florida Water Management District method for open-hole constant head field testing.

Figure 3 shows the approximate test locations performed at the site. The SPT boring method was used as the investigative tool within the borings. Penetration tests were performed in substantial accordance with ASTM Procedure D-1586, "Penetration Test and Split-Barrel Sampling of Soils". This test procedure consists of driving a 1.4-inch I.D. split-tube sampler into the soil profile using a 140-pound automatic hammer falling 30 inches. The number of blows per foot, for the second and third 6-inch increments, is an indication of soil strength. The SPT borings were performed using a CME-75, a truck-mounted drill rig, equipped with an automatic hammer. The soil samples recovered from the soil borings were classified and stratified by a geotechnical engineer. Following completion of the field services, all boreholes were backfilled with excavated soil/rock, and the site generally cleaned, as required.

The results of the classification and stratification are encountered during UES's exploration are presented in **Appendix A** "Record of Test Boring". It should be noted that soil conditions might vary between what is depicted on the attached log and other areas of the site. The soil boring data reflect information from a specific test location only. Site specific survey staking for the test location was not provided for UES's field exploration. The boring location was determined in the field by a project engineer by measuring distances and estimating right angles from existing site features. The latitude, longitude, and elevation noted in UES's boring logs were taken from Google Earth.

Google Earth uses WGS-84 or Local Mean Sea Level (MSL) as datum. It should be noted that elevations may not always be correct if fill is added or site grades change to a site after Google captures the image. The boring location and elevations noted should, therefore, be considered approximate. The boring depths were confined to the zone of soil likely to be stressed by the proposed construction. The boring log depicts the observed soils in graphic detail. The Standard Penetration Test boring indicates the penetration resistance, or N-values logged during the drilling and sampling activities.



LEGEND:

SPT BORINGS

EXFILTRATION TEST



FIGURE 3 – TEST LOCATION PLAN

NOTE: BORING LOCATIONS WERE LOCATED USING A MEASURING TAPE AND EXISTING LANDMARKS AS REFERENCE POINTS. IN ADDITION, THE LATITUDE, LONGITUDE, AND ELEVATION NOTED ON THE BORING LOGS WERE TAKEN FROM GOOGLE EARTH. THEREFORE, LOCATIONS SHOWN ON THE PLAN ARE APPROXIMATE.



Please refer to **Appendix B** "Notes Related to the Test Borings" for further clarification of UES's field exploration. The classifications and descriptions shown on the log are generally based upon visual characterizations of the recovered soil samples. All soil samples reviewed have been depicted and classified in accordance with the Unified Soil Classification System symbols (i.e. SP, SP-SM, SC, etc.). See in **Appendix C** "Discussion of Soil Groups", for a detailed description of various soil groups.

3.0 SUBSURFACE CONDITIONS

The soils at the explored locations generally consisted of 1.5" to 2" of asphalt, with the exception of the location of B06 where a 5" layer of concrete was encountered, atop loose to very dense, fine to medium grained sand with variable amounts of limestone fragments from the ground surface to approximate depths of 6 to 8 feet below ground surface (BGS). The following layer consisted of weathered limestone with some sand to approximately 13 to 18 feet BGS. The borings then showed intermittent layers of medium dense to dense sand and sand with varying amounts of limestone fragments to the termination depth of the borings at 20 feet below ground surface (BGS).

For a more precise description of the conditions encountered within the soil test borings, refer to the "Record of Test Boring" logs included in **Appendix A**.

3.1 Hydrogeological Conditions

On the date of UES's field exploration (April 2022), groundwater was encountered at the approximate depth of 5'3" to 7' BGS during drilling operations, depending on the location. The groundwater table will fluctuate seasonally depending upon local rainfall, and other local influences. Higher temporary water levels may be possible at this site after extended periods of rain. This is based upon the existing static groundwater levels at the time of the exploration and anticipating groundwater table rise through the type of soils encountered during the exploration.

As part of UES's field exploration, UES performed two (2) exfiltration tests to a depth of 10 feet below existing grade in accordance with the South Florida Water Management District method for open-hole constant head field testing. The tests were conducted at the areas presented in **Figure 3**. The calculated hydraulic conductivity coefficients for the exfiltration tests are presented in **Appendix D**.

Exfiltration Test	Hydraulic Conductivity Result
EX-1	$3.13 \times 10^{-4} \text{ ft}^3/\text{sec}/\text{ft}^2\text{-ft}$
EX-2	$3.56 \times 10^{-4} \text{ ft}^3/\text{sec}/\text{ft}^2\text{-ft}$



No additional investigation was conducted in relation to any existing well field in the vicinity. Well fields may influence water table levels and cause significant fluctuations. If a more comprehensive water table analysis is necessary UES recommends contacting a registered professional specialized in hydrogeology.

4.0 FOUNDATION RECOMMENDATIONS

4.1 General

A foundation system for any structure must be designed to resist bearing capacity failures, have settlements within tolerable limits for the structure type, and resist environmental forces, which the foundation may be subjected to over the life of the structure. Environmental forces in Florida can include sinkholes, shrinking and swelling soils, and soil consolidation, among others. It is UES's opinion that these specific environmental forces have a low risk (on a scale of low, moderate, high) of detrimentally affecting shallow foundation performance at this site.

The soil bearing capacity is the soil's ability to support loads without punching into the soil profile. Bearing capacity failures are analogous to shear failures in structural design and are usually sudden and catastrophic. Based on the scope of the proposed project, it is UES's opinion that the soils at the site are generally suitable for shallow foundations to support the proposed structures once ground improvement techniques discussed herein have been completed.

The allowable amount of settlement that a structure may tolerate is dependent on several factors including uniformity of settlement, time rate of settlement, structural dimensions and properties of the structural materials. Generally, total, or uniform settlement does not damage a structure but may affect drainage and utility connections. These can generally tolerate movements of several inches for building construction. In contrast, differential settlement affects a structure's frame and is limited by the structural flexibility. Shallow foundations appear to be suitable for the proposed project and can be used to support the proposed structures at this site, provided that the existing soils and any fill soils are properly prepared as discussed herein. Shallow foundations can consist of conventional shallow continuous strip footings and isolated spread footings, or a monolithic turned down footing and slab type foundation.

4.2 Site Preparation Recommendations

UES's recommendations for site preparation assuming continuous strip footings and/or isolated footings or a monolithic foundation will be utilized to support the planned structure are noted below. This approach to improving and maintaining the site soils has been found to be successful on projects with similar soil conditions.



1. Initial site preparation for the proposed structure should consist of clearing the vegetation and stripping and removal of the topsoil to expose clean granular soils. Disposal of these materials shall be accomplished in accordance with local and municipal guidelines.
2. No information has been provided about previous or existing foundations at the site. Where existing foundations are encountered, they should be completely removed and replaced with compacted fill if they interfere with new foundations. Disposal of these materials shall be accomplished in accordance with local and municipal guidelines.
3. Existing underground drainage/utility pipes (if any) to be relocated shall be abandoned by either complete removal and subsequent soil backfilling in accordance with the recommendation provided herein or left in-place and filled with "flowable fill".
4. Following the site stripping, areas of surficial sand should be compacted prior to the placement of any fill. UES recommends a steel drum vibratory roller with a minimum static weight of 20,000 lbs. and minimum vibratory impact energy of 50,000 lbs. The roller should be operated at 2 mph making at least 10 perpendicular overlapping passes. Densification of the soils should be performed within the proposed development areas plus a 5-foot-wide perimeter extending beyond the outside edge of the same, where practical. Densification operations should continue until the subgrade soils are firm and unyielding. Any area of the exposed surface that deflects excessively under the weight of the compaction equipment should be excavated approximately 24 inches and be replaced with compacted structural fill. No section of the subgrade should receive less than 4 passes of the roller or until at least 98% maximum density (ASTM D 1557) is achieved for a depth of at least 1 foot below the excavated surface. Upon completion of the proof rolling, backfill shall be placed in maximum 12-inch loose lifts and compacted to a minimum density of **98 percent** of the Modified Proctor maximum dry density (ASTM D-1557). Fill to be compacted with a vibratory plate tamper or a small walk behind vibratory roller should be placed in lifts not exceeding six inches in loose thickness.
5. The bottom of footing excavations shall be compacted with a steel drum vibratory roller with a minimum static weight of 20,000 lbs. and minimum vibratory impact energy of 36,000 lbs.; (Dynapac CA-250D or equivalent) or equivalent equipment. The roller should be operated at 2 mph. Additional passes may be necessary if acceptable compaction is not achieved. Density tests shall be completed at footing subgrade to confirm that the soils have achieved a minimum degree of compaction of 95 percent of modified proctor maximum density (ASTM D-1557). The bottom of all footings shall be examined by the engineer or his representative to determine if the soil is free of all organic and/or deleterious materials, and if the required compaction and soil pressures are achieved or if additional compaction is required.



6. Fill material placement (if needed) should be inorganic (classified as SP/SW) containing not more than 5 percent (by weight) fibrous organic materials. Fill materials with silt-size soil fines in excess of 10% should not be used, this includes cyclone sand material. Place fill in maximum 12-inch lifts and compact each lift to a minimum density of 98 percent of the Modified Proctor maximum dry density (ASTM D-1557) with a vibratory roller. Perform compliance tests within the fill at a frequency of not less than one test per 2,500 square feet per lift in the building areas, or a minimum of 2 test locations per lift, whichever is greater.
7. It is likely that proof-rolling and any subsequent backfill compaction with the aforementioned equipment may induce ground vibrations that can affect the existing nearby structures. A representative from UES's office can monitor the vibration disturbance using seismograph equipment capable of recording ground velocities that can be used to determine if construction activity at the site is exceeding tolerable vibration levels on adjacent structures as established by the project structural engineer.
8. Depending on the depth of the footings, groundwater control may be required at this site for either excavation dewatering or removal of temporarily perched water from a rain event. Such water can be controlled by pumping from sumps located in ditches or pits. Groundwater should be maintained at least one foot below the bottom of any excavation made during construction operations, or at least two feet below the surface of any compaction operations.
9. The contractor shall take into account the final contours and grades as established by the plan when executing his backfilling and compaction operations.

Using vibratory compaction equipment can disturb adjacent structures. If vibration related disturbance to nearby structures may be of concern, vibration levels should be monitored during compaction operations. A representative from this office can monitor the vibration disturbance of adjacent structures; and a proposal for these services can be provided upon your request.

4.3 Design of Footings

Following proper site preparation as recommended in this report, it is UES's opinion that the proposed structures can be supported on conventional shallow foundations bearing on existing soils or newly placed engineered fills. A net allowable soil bearing pressure of **3,500 pounds per square foot (psf)** may be used for the design of isolated spread footings and continuous strip footings. Provided that the site is prepared in accordance as discussed in this report, foundation settlement is expected to be less than 1 inch total across the structure and 1/2-inch differential between adjacent columns or a horizontal distance of 20 feet.



Shallow foundations should be embedded a minimum of 18 inches into the bearing soils. The embedment shall be measured from the lowest adjacent exterior grade. Isolated column footings should be at least 30 inches in width and continuous strip footings should have a width of at least 18 inches, regardless of contact pressure. All footings and columns should be structurally separated from the floor slab so that minor differential foundation settlement can occur without causing damage to the slab-on-grade floor unless a monolithic slab-on-grade foundation is planned.

4.4 Floor Slabs

The ground floors slab may be supported directly on a granular fill pad following site preparation and foundation construction outlined in this report. For purposes of design, a modulus of subgrade reaction of 150 pounds per cubic inch may be used.

It should be noted that excessive moisture vapor transmission through concrete floor slabs can result in damage to floor coverings, as well as other deleterious effects to slab supported equipment or stored items. An appropriate moisture vapor retarder should be placed beneath the floor slab to reduce moisture vapor from entering the building through the slab. The retarder should be installed in general accordance with applicable ASTM procedures and manufacturer's installation instructions including sealing the membrane at lapped joints, around pipe penetrations and at the edges of foundations.

5.0 EXCAVATION CONDITIONS

In Federal Register, Volume 54, No. 209 (October 1989), the United States Department of Labor, Occupational Safety and Health Administration (OSHA) amended its "Construction Standards for Excavations, 29 CFR, part 1926, Subpart P". This document was issued to better insure the safety of workmen entering trenches or excavations. It is mandated by this federal regulation that all excavations, whether they be utility trenches, basement excavations or footing excavations, be constructed in accordance with the OSHA guidelines. It is UES's understanding that these regulations are being strictly enforced and if they are not closely followed, the owner and the contractor could be liable for substantial penalties.

The contractor is solely responsible for designing and constructing stable, temporary excavations and should shore, slope, or bench the sides of the excavations as required to maintain stability of both the excavation sides and bottom. The contractor's responsible person, as defined in 29 CFR Part 1926, should evaluate the soil exposed in the excavations as part of the contractor's safety procedures. In no case should slope height, slope inclination, or excavation depth, including utility trench excavation depth, exceed those specified in local, state, and federal safety regulations. UES are providing this information solely as a service to UES's client.

UES is not assuming responsibility for construction site safety or the contractor's activities; such responsibility is not being implied and should not be inferred.



6.0 REPORT LIMITATIONS

This consulting report has been prepared for the exclusive use of the current project owners and other members of the design team for the proposed project. This report has been prepared in accordance with generally accepted local geotechnical engineering practices; no other warranty is expressed or implied. The evaluation submitted in this report, is based in part upon the data collected during a field exploration, however, the nature and extent of variations throughout the subsurface profile may not become evident until the time of construction.

If variations then appear evident, it may be necessary to reevaluate information and professional opinions as provided in this report. In the event changes are made in the nature, design, or locations of the proposed structures, the evaluation and opinions contained in this report shall not be considered valid, unless the changes are reviewed and conclusions modified or verified in writing by UES. Lastly, in accepting this report, the client understands that the data obtained from the soil borings is intended for foundation analysis only and is not to be used for excavating or backfilling pricing estimates.

7.0 BASIS FOR RECOMMENDATIONS

The analysis and recommendations submitted in this report are based on the data obtained from the tests performed at the locations indicated on the attached **Figure 3**. This report does not reflect any variations, which may occur between borings. While the borings are representative of the subsurface conditions at their respective locations and for their vertical reaches, local variations characteristic of the subsurface soils of the region are anticipated and may be encountered. The delineation between soil types shown on the soil logs is approximate and the description represents UES's interpretation of the subsurface conditions at the designated boring locations on the particular date drilled.

UES should be provided the opportunity to review the final foundation specifications and review foundation design drawings, in order to determine whether UES's recommendations have been properly interpreted, communicated and implemented.

If UES is not afforded the opportunity to participate in construction related aspects of foundation installation as recommended in this report or any report addendum, UES will accept no responsibility for the interpretation of UES's recommendations made in this report or on a report addendum for foundation performance.

Any third-party reliance of UES's geotechnical report or parts thereof is strictly prohibited without the expressed written consent of UES. The SPT methodology (ASTM D-1586) used in performing UES's borings and for determining penetration resistance is specific to the sampling tools utilized and does not reflect the ease or difficulty to advance other tools, equipment or materials.



APPENDIX A
Record of Test Borings





GFA International, Inc.
1215 Wallace Drive
Delray Beach, FL 33444
561-347-0070

LOG OF BORING B01

PAGE 1 OF 1

CLIENT Mike Carter Construction, Inc.

PROJECT NAME 3090 Sheridan Street - Hollywood

PROJECT NUMBER 0630.2200058.0000

PROJECT LOCATION 3090 Sheridan Street, Hollywood FL 33021

DRILLING CONTRACTOR Universal Engineering Sciences

HOLE DEPTH 25 ft

HOLE DIAMETER _____

DRILLER Jose Barrios

DATE STARTED 4/25/22

COMPLETED 4/25/22

DRILL RIG CME-75

GROUND WATER LEVEL: ▽ AT TIME OF DRILLING 7.00 ft / Elev -1.00 ft

METHOD Standard Penetration Test

LATITUDE 26.031006

LONGITUDE -80.169871

NOTE: _____

HAMMER TYPE 140# with 30 in Drop - Automatic Hammer

DEPTH (ft)	ELEVATION (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	RECOVERY %	BLOW COUNTS	N VALUE	MOISTURE CONTENT (%)	ORGANIC CONTENT (%)	▲ SPT N VALUE ▲ 20 40 60 80 PL MC LL 20 40 60 80 □ FINES CONTENT (%) □ 20 40 60 80
5			2" of asphalt atop, very dense, gray to tan, fine to medium grained SAND (SP) with LIMESTONE fragments.	1	83	35 30 30 28	60			
2.0			Very dense, gray, fine to medium grained SAND (SP) with some LIMESTONE fragments.	2	83	25 20 22 22	42			
5			Medium dense, gray, fine to medium grained SAND (SP) with some LIMESTONE fragments.	3	75	18 10 5 5	15			
0			Loose, gray, fine to medium grained SAND (SP) with <u>▽</u> LIMESTONE fragments.	4	75	4 4 3 4	7			
8.0			LIMESTONE fragments with some sand.	5	75	4 3 3 5	6			
10										
-5										
13.0			Loose, gray to brown, fine to medium grained SAND (SP).	6	75	5 4 4 3	8			
15										
-10										
20			Medium dense, gray to brown, fine to medium grained SAND (SP).	7	75	5 5 6 6	11			
-15										
25				8	75	7 7 6 8	13			

Bottom of borehole at 25.0 feet.



GFA International, Inc.
1215 Wallace Drive
Delray Beach, FL 33444
561-347-0070

LOG OF BORING B02

PAGE 1 OF 1

CLIENT Mike Carter Construction, Inc.

PROJECT NAME 3090 Sheridan Street - Hollywood

PROJECT NUMBER 0630.2200058.0000

PROJECT LOCATION 3090 Sheridan Street, Hollywood FL 33021

DRILLING CONTRACTOR Universal Engineering Sciences

HOLE DEPTH 25 ft

HOLE DIAMETER _____

DRILLER Jose Barrios

DATE STARTED 4/26/22

COMPLETED 4/26/22

DRILL RIG CME-75

GROUND WATER LEVEL: ▽ AT TIME OF DRILLING 7.00 ft / Elev -1.00 ft

METHOD Standard Penetration Test

LATITUDE 26.031009

LONGITUDE -80.169634

NOTE: _____

HAMMER TYPE 140# with 30 in Drop - Automatic Hammer

DEPTH (ft)	ELEVATION (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	RECOVERY %	BLOW COUNTS	N VALUE	MOISTURE CONTENT (%)	ORGANIC CONTENT (%)	▲ SPT N VALUE ▲			
										20	40	60	80
										PL	MC	LL	
										20	40	60	80
										□ FINES CONTENT (%) □			
										20	40	60	80
5	5		1.5" of asphalt atop, medium dense, gray to tan, fine to medium grained SAND (SP) with LIMESTONE fragments.	1	83	28 15 6 8	21						
	2.0		Loose, gray, fine to medium grained SAND (SP) with some LIMESTONE fragments.	2	83	5 4 4 3	8						
	4.0		Loose, gray to tan, fine to medium grained SAND (SP) with LIMESTONE fragments.	3	83	3 3 4 6	7						
5	0		LIMESTONE fragments with some sand.	4	83	4 4 3 2	7						
	6.0			5	83	5 4 4 6	8						
10	-5												
	13.0		Medium dense, gray to tan, fine to medium grained SAND (SP) with LIMESTONE fragments.	6	83	4 6 6 7	12						
15	-10												
	18.0		Medium dense, gray to brown, fine to medium grained SAND (SP).	7	83	8 8 10 10	18						
20	-15												
				8	83	10 12 12 14	24						
25		25.0	Bottom of borehole at 25.0 feet.										



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Delray Beach, FL 33444
561-347-0070

LOG OF BORING B03

PAGE 1 OF 1

CLIENT Mike Carter Construction, Inc.

PROJECT NAME 3090 Sheridan Street - Hollywood

PROJECT NUMBER 0630.2200058.0000

PROJECT LOCATION 3090 Sheridan Street, Hollywood FL 33021

DRILLING CONTRACTOR Universal Engineering Sciences

HOLE DEPTH 25 ft

HOLE DIAMETER _____

DRILLER Jose Barrios

DATE STARTED 4/26/22

COMPLETED 4/26/22

DRILL RIG CME-75

GROUND WATER LEVEL: ▽ AT TIME OF DRILLING 7.00 ft / Elev -2.00 ft

METHOD Standard Penetration Test

LATITUDE 26.030367

LONGITUDE -80.169598

NOTE: _____

HAMMER TYPE 140# with 30 in Drop - Automatic Hammer

DEPTH (ft)	ELEVATION (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	RECOVERY %	BLOW COUNTS	N VALUE	MOISTURE CONTENT (%)	ORGANIC CONTENT (%)	▲ SPT N VALUE ▲ 20 40 60 80 PL MC LL 20 40 60 80 □ FINES CONTENT (%) □ 20 40 60 80
5			2" of asphalt atop, dense, gray to tan, fine to medium grained SAND (SP) with LIMESTONE fragments.	1	83	30 20 15 12	35			
2.0			Medium dense, gray, fine to medium grained SAND (SP).	2	83	10 6 5 3	11			
4.0			Loose, gray to brown, fine to medium grained SAND (SP) with trace of limestone fragments.	3	83	3 3 4 3	7			
6.0			Medium dense, brown, fine to medium grained SAND (SP) with LIMESTONE fragments.	4	83	5 5 6 5	11			
8.0			LIMESTONE fragments with some sand.	5	83	4 6 6 7	12			
10										
15				6	83	8 8 10 10	18			
18.0										
20			Medium dense, gray to brown, fine to medium grained SAND (SP).	7	75	10 12 12 10	24			
25.0			Dense, gray to brown, fine to medium grained SAND (SP).	8	75	12 12 14 14	26			

Bottom of borehole at 25.0 feet.



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1215 Wallace Drive
Delray Beach, FL 33444
561-347-0070

LOG OF BORING B04

PAGE 1 OF 1

CLIENT Mike Carter Construction, Inc.

PROJECT NAME 3090 Sheridan Street - Hollywood

PROJECT NUMBER 0630.2200058.0000

PROJECT LOCATION 3090 Sheridan Street, Hollywood FL 33021

DRILLING CONTRACTOR Universal Engineering Sciences

HOLE DEPTH 25 ft

HOLE DIAMETER _____

DRILLER Jose Barrios

DATE STARTED 4/25/22

COMPLETED 4/25/22

DRILL RIG CME-75

GROUND WATER LEVEL: ▽ AT TIME OF DRILLING 7.00 ft / Elev -2.00 ft

METHOD Standard Penetration Test

LATITUDE 26.030349

LONGITUDE -80.169853

NOTE: _____

HAMMER TYPE 140# with 30 in Drop - Automatic Hammer

DEPTH (ft)	ELEVATION (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	RECOVERY %	BLOW COUNTS	N VALUE	MOISTURE CONTENT (%)	ORGANIC CONTENT (%)	▲ SPT N VALUE ▲			
										20	40	60	80
										PL	MC	LL	
										20	40	60	80
										□ FINES CONTENT (%) □			
										20	40	60	80
5	0		2" of asphalt atop, medium dense, gray to tan, fine to medium grained SAND (SP) with LIMESTONE fragments.	1	83	30 14 10 8	24						
			2.0 Medium dense, brown, fine to medium grained SAND (SP) with some limestone fragments.	2	83	8 6 4 4	10						
			4.0 Loose, gray to tan, fine to medium grained SAND (SP) with LIMESTONE fragments.	3	83	4 4 3 2	7						
			6.0 LIMESTONE fragments with some sand.	4	83	2 2 3 2	5						
				5	83	4 4 6 5	10						
10	-5												
			13.0 Medium dense, tan, fine to medium grained SAND (SP).	6	83	7 8 4 7	12						
15	-10												
			18.0 Medium dense, gray to tan, fine to medium grained SAND (SP) with LIMESTONE fragments.	7	83	6 6 5 7	11						
20	-15												
			23.0 Dense, gray to brown, fine to medium grained SAND (SP).	8	83	12 14 14 12	28						
25	-20		25.0 Bottom of borehole at 25.0 feet.										



GFA International, Inc.
1215 Wallace Drive
Delray Beach, FL 33444
561-347-0070

LOG OF BORING B05

PAGE 1 OF 1

CLIENT Mike Carter Construction, Inc.

PROJECT NAME 3090 Sheridan Street - Hollywood

PROJECT NUMBER 0630.2200058.0000

PROJECT LOCATION 3090 Sheridan Street, Hollywood FL 33021

DRILLING CONTRACTOR Universal Engineering Sciences

HOLE DEPTH 25 ft

HOLE DIAMETER _____

DRILLER Jose Barrios

DATE STARTED 4/26/22

COMPLETED 4/26/22

DRILL RIG CME-75

GROUND WATER LEVEL: ▽ AT TIME OF DRILLING 7.00 ft / Elev -1.00 ft

METHOD Standard Penetration Test

LATITUDE 26.030685

LONGITUDE -80.169628

NOTE: _____

HAMMER TYPE 140# with 30 in Drop - Automatic Hammer

DEPTH (ft)	ELEVATION (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	RECOVERY %	BLOW COUNTS	N VALUE	MOISTURE CONTENT (%)	ORGANIC CONTENT (%)	▲ SPT N VALUE ▲			
										20	40	60	80
										PL	MC	LL	
										20	40	60	80
										□ FINES CONTENT (%) □			
										20	40	60	80
5			2" asphalt atop, dense, gray to tan, fine to medium grained SAND (SP) with LIMESTONE fragments.	1	83	35 22 18 15	40						
2.0			Medium dense, light gray, fine to medium grained SAND (SP).	2	83	10 5 5 4	10						
4.0			Loose, brown, fine to medium grained SAND (SP) with some limestone fragments.	3	83	4 4 3 3	7						
5				4	83	3 3 4 3	7						
0				5	83	5 4 4 6	8						
8.0			LIMESTONE fragments with some sand.										
10													
-5													
13.0			Medium dense, gray, fine to medium grained SAND (SP) with some limestone fragments.	6	83	5 5 6 6	11						
15													
-10													
18.0			Medium dense, gray to brown, fine to medium grained SAND (SP).	7	71	6 6 7 8	13						
20													
-15													
25.0				8	71	8 10 12 12	22						

Bottom of borehole at 25.0 feet.



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1215 Wallace Drive
Delray Beach, FL 33444
561-347-0070

LOG OF BORING B06

PAGE 1 OF 1

CLIENT Mike Carter Construction, Inc.

PROJECT NAME 3090 Sheridan Street - Hollywood

PROJECT NUMBER 0630.2200058.0000

PROJECT LOCATION 3090 Sheridan Street, Hollywood FL 33021

DRILLING CONTRACTOR Universal Engineering Sciences

HOLE DEPTH 25 ft

HOLE DIAMETER _____

DRILLER Jose Barrios

DATE STARTED 4/25/22

COMPLETED 4/25/22

DRILL RIG CME-75

GROUND WATER LEVEL: ▽ AT TIME OF DRILLING 7.00 ft / Elev -1.00 ft

METHOD Standard Penetration Test

LATITUDE 26.030679

LONGITUDE -80.169868

NOTE: _____

HAMMER TYPE 140# with 30 in Drop - Automatic Hammer

DEPTH (ft)	ELEVATION (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	RECOVERY %	BLOW COUNTS	N VALUE	MOISTURE CONTENT (%)	ORGANIC CONTENT (%)	▲ SPT N VALUE ▲			
										20	40	60	80
										PL	MC	LL	
										20	40	60	80
										□ FINES CONTENT (%) □			
										20	40	60	80
5			5" of concrete atop, loose, dark gray, fine to medium grained SAND (SP) with trace of limestone fragments.	1	83	3 4 4 3	8						
2.0			Medium dense, gray, fine to medium grained SAND (SP) with some limestone fragments.	2	83	4 5 5 4	10						
5				3	83	6 4 5 5	9						
0				4	83	6 6 5 4	11						
8.0			LIMESTONE fragments with some sand.	5	75	4 5 4 4	9						
10													
-5													
13.0			Medium dense, gray to brown, fine to medium grained SAND (SP).	6	75	6 8 8 10	16						
15													
-10				7	75	8 10 10 11	20						
20													
-15													
25.0				8	75	10 10 12 15	22						

Bottom of borehole at 25.0 feet.



GFA International, Inc.
1215 Wallace Drive
Delray Beach, FL 33444
561-347-0070

LOG OF BORING B07

PAGE 1 OF 1

CLIENT Mike Carter Construction, Inc.

PROJECT NAME 3090 Sheridan Street - Hollywood

PROJECT NUMBER 0630.2200058.0000

PROJECT LOCATION 3090 Sheridan Street, Hollywood FL 33021

DRILLING CONTRACTOR Universal Engineering Sciences

HOLE DEPTH 25 ft

HOLE DIAMETER _____

DRILLER Jose Barrios

DATE STARTED 4/26/22

COMPLETED 4/26/22

DRILL RIG CME-75

GROUND WATER LEVEL: ▽ AT TIME OF DRILLING 7.00 ft / Elev -3.00 ft

METHOD Standard Penetration Test

LATITUDE 26.030841

LONGITUDE -80.169729

NOTE: _____

HAMMER TYPE 140# with 30 in Drop - Automatic Hammer

DEPTH (ft)	ELEVATION (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	RECOVERY %	BLOW COUNTS	N VALUE	MOISTURE CONTENT (%)	ORGANIC CONTENT (%)	▲ SPT N VALUE ▲			
										20	40	60	80
										PL	MC	LL	
										20	40	60	80
										☐ FINES CONTENT (%) ☐			
										20	40	60	80
			2" of asphalt atop, dense, gray to tan, fine to medium grained SAND (SP) with LIMESTONE fragments.	1	83	32 18 15 12	33						
	2.0		Medium dense, gray, fine to medium grained SAND (SP).	2	83	8 8 6 5	14						
	0		Loose, light brown, fine to medium grained SAND (SP) with LIMESTONE fragments.	3	83	5 4 4 3	8						
5			LIMESTONE fragments with some sand.	4	83	4 3 3 5	6						
	6.0			5	83	6 6 7 7	13						
	-5												
10													
	13.0		Medium dense, tan, fine to medium grained SAND (SP) with LIMESTONE fragments.	6	83	5 5 6 6	11						
	-10												
15													
	18.0		Medium dense, gray to brown, fine to medium grained SAND (SP).	7	83	9 8 8 10	16						
	-15												
20													
	-20			8	75	10 10 11 12	21						
	25.0												

Bottom of borehole at 25.0 feet.



GFA International, Inc.
1215 Wallace Drive
Delray Beach, FL 33444
561-347-0070

LOG OF BORING B08

PAGE 1 OF 1

CLIENT Mike Carter Construction, Inc.

PROJECT NAME 3090 Sheridan Street - Hollywood

PROJECT NUMBER 0630.2200058.0000

PROJECT LOCATION 3090 Sheridan Street, Hollywood FL 33021

DRILLING CONTRACTOR Universal Engineering Sciences

HOLE DEPTH 25 ft

HOLE DIAMETER _____

DRILLER Jose Barrios

DATE STARTED 4/26/22

COMPLETED 4/26/22

DRILL RIG CME-75

GROUND WATER LEVEL: ▽ AT TIME OF DRILLING 7.00 ft / Elev -3.00 ft

METHOD Standard Penetration Test

LATITUDE 26.030506

LONGITUDE -80.169723

NOTE: _____

HAMMER TYPE 140# with 30 in Drop - Automatic Hammer

DEPTH (ft)	ELEVATION (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	RECOVERY %	BLOW COUNTS	N VALUE	MOISTURE CONTENT (%)	ORGANIC CONTENT (%)	▲ SPT N VALUE ▲			
										20	40	60	80
										PL	MC	LL	
										20	40	60	80
										□ FINES CONTENT (%) □			
										20	40	60	80
			2" of asphalt atop, very dense, gray to tan, fine to medium grained SAND (SP) with LIMESTONE fragments.	1	83	32 28 26 18	54						
2.0			Medium dense, gray, fine to medium grained SAND (SP).	2	83	10 8 6 6	14						
0			Loose, light brown, fine to medium grained SAND (SP) with some limestone fragments.	3	83	5 4 4 3	8						
5			LIMESTONE fragments with some sand.	4	83	4 3 3 2	6						
6.0				5	83	5 5 7 8	12						
-5													
10													
-10				6	83	7 6 6 9	12						
15													
-15			Medium dense, gray to brown, fine to medium grained SAND (SP).	7	71	10 10 12 10	22						
20													
-20			Dense, gray to brown, fine to medium grained SAND (SP).	8	71	12 12 14 12	26						
25													

Bottom of borehole at 25.0 feet.

GENERAL BH / TP / WELL - GINT STD US.GDT - 5/5/22 12:06 - C:\USERS\IDLOPEZ3\TEAM\UES\UNIVERSAL ENGINEERING-TEAM UES\UES SFL GEO - DOCUMENTS\ACTIVE PROJECTS\0630.2200058.0000 - 3090 SHERIDAN STREET - HOLLYWOOD\6 - GINT\0630.2200



GFA International, Inc.
1215 Wallace Drive
Delray Beach, FL 33444
561-347-0070

BORING NUMBER EX01

PAGE 1 OF 1

CLIENT Mike Carter Construction, Inc.	PROJECT NAME 3090 Sheridan Street - Hollywood
PROJECT NUMBER 0630.2200058.0000	PROJECT LOCATION 3090 Sheridan Street, Hollywood FL 33021
DATE STARTED 4/25/22 COMPLETED 4/25/22	LATITUDE 26.031202 LONGITUDE -80.169956
DRILLING CONTRACTOR Universal Engineering Sciences	GROUND WATER LEVELS:
DRILLING METHOD	▽ AT TIME OF DRILLING 5.25 ft / Elev -0.25 ft
LOGGED BY Jose Barrios CHECKED BY David Lopez	AT END OF ---
NOTES	AFTER DRILLING ---

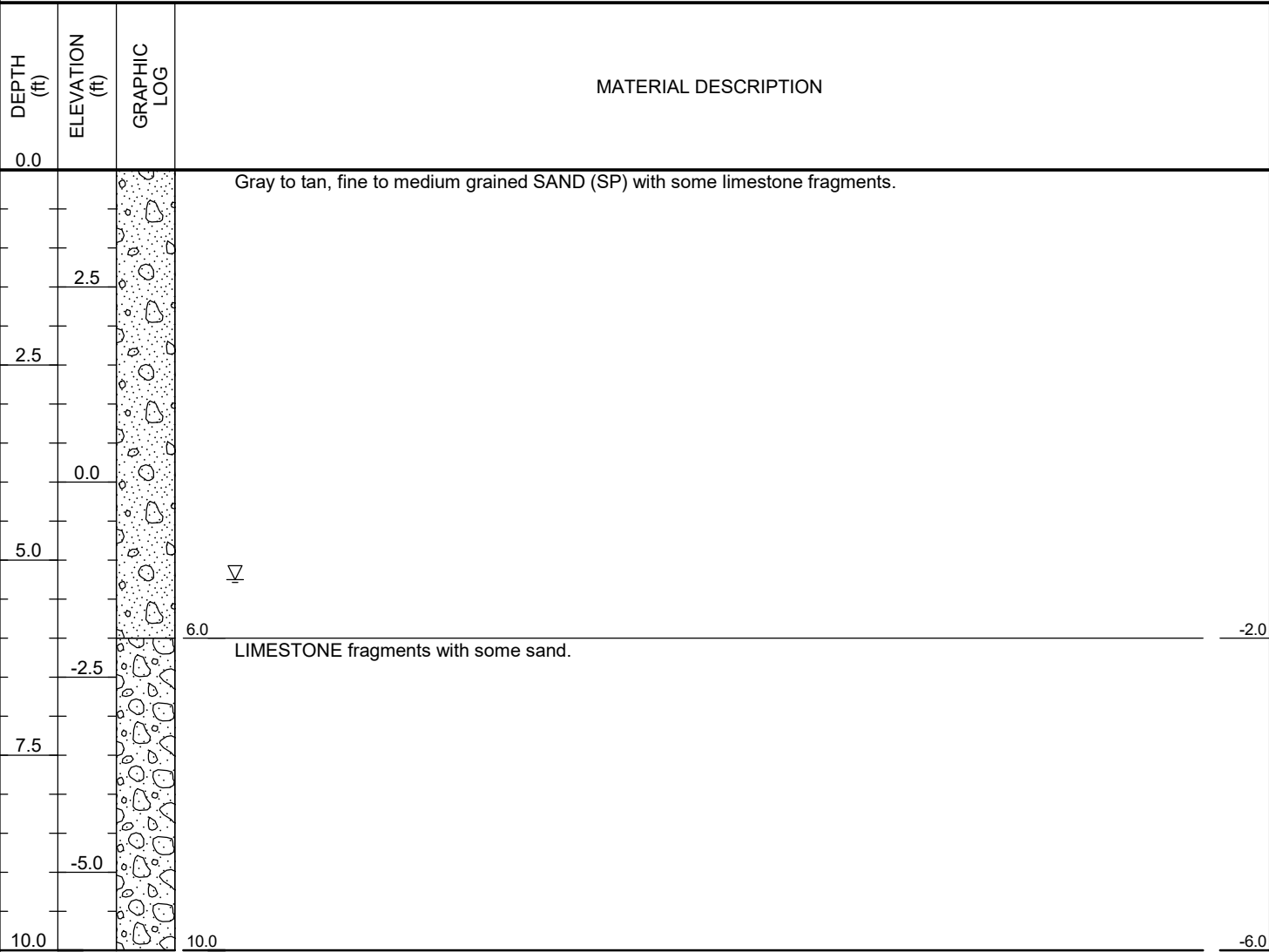
DEPTH (ft)	ELEVATION (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION
0.0	5.0		
2.5	2.5		Gray to tan, fine to medium grained SAND (SP) with some limestone fragments.
5.0	0.0		▽ LIMESTONE fragments with some sand.
7.5	-2.5		
10.0	-5.0		Bottom of borehole at 10.0 feet.

GENERAL BH / TP / WELL - GINT STD US.GDT - 5/5/22 12:06 - C:\USERS\IDLOPEZ3\TEAM\UES\UNIVERSAL ENGINEERING-TEAM\UES\SFL GEO - DOCUMENTS\ACTIVE PROJECTS\0630.2200058.0000 - 3090 SHERIDAN STREET - HOLLYWOOD\6 - GINT\0630.2200



GFA International, Inc.
1215 Wallace Drive
Delray Beach, FL 33444
561-347-0070

CLIENT Mike Carter Construction, Inc.	PROJECT NAME 3090 Sheridan Street - Hollywood
PROJECT NUMBER 0630.2200058.0000	PROJECT LOCATION 3090 Sheridan Street, Hollywood FL 33021
DATE STARTED 4/25/22 COMPLETED 4/25/22	LATITUDE 26.030429 LONGITUDE -80.16995
DRILLING CONTRACTOR Universal Engineering Sciences	GROUND WATER LEVELS:
DRILLING METHOD	∇ AT TIME OF DRILLING 5.25 ft / Elev -1.25 ft
LOGGED BY Jose Barrios CHECKED BY David Lopez	AT END OF ---
NOTES	AFTER DRILLING ---



APPENDIX B
Notes Related to Test Borings



NOTES RELATED TO RECORDS OF TEST BORING AND GENERALIZED SUBSURFACE PROFILE

1. Groundwater level was encountered and recorded (if shown) following the completion of the soil test boring on the date indicated. Fluctuations in groundwater levels are common; consult report text for a discussion.
2. The boring location was identified and located in the field based on measured and estimated distances from existing site features.
3. The borehole was backfilled to site grade following boring completion, patched with asphalt cold patch mix when pavement was encountered.
4. The Record of Test Boring represents our interpretation of field conditions based on engineering examination of the soil samples.
5. The Record of Test Boring is subject to the limitations, conclusions, and recommendations presented in the report text.
6. The Standard Penetration Test (SPT) was performed in accordance ASTM Procedure D-1586. SPT testing procedure consists of driving a 1.4-inch I.D. split-tube sampler into the soil profile using a 140-pound hammer falling 30 inches.
7. On the Record of Test Boring listed as "Blow Counts", the N-value is the sum of the SPT hammer blows required to drive the split-tube sampler through the second and third 6-inch increment of the sampling layer, and is an indication of soil strength.
8. Shown on the Record of Test Boring an SPT N-value expressed as 50/2" is descriptive of the fact that 50 hammer blows were required to drive the split-spoon sampler a distance of approximately 2 inches.
9. The soil/rock strata interfaces shown on the Records of Test Boring are approximate and may vary from those in the field. The soil/rock conditions shown on the Records of Test Boring refer to conditions at the specific location tested; soil/rock conditions may vary between test locations.

10. Relative density and consistency for sands/gravels, silts/clays, and limestone are described as follows:

Cohesionless Soils		Silts and Clays		Limestone	
SPT (N-Value)	Relative Density	SPT (N-Value)	Consistency	SPT (N-Value)	Relative Density
0 – 3	Very Loose	0 – 1	Very Soft	0 – 19	Very Soft
4 – 8	Loose	2 – 4	Soft	20 – 49	Soft
9 – 24	Medium Dense	4 – 6	Firm	50 – 100	Medium Hard
25 – 40	Dense	7 – 12	Stiff	50 for 3 to 5"	Moderately Hard
Over 40	Very Dense	13 – 24	Very Stiff	50 for 0 to 2"	Hard
		Over 24	Hard		

11. Definition of descriptive terms of modifiers for silts/clays/shells/gravels are described as follows:

Percentage of Modifier Material	First Qualifier	Second Qualifier
0 – 5	With a Trace of + Silt, Clay, Shell	With a Trace
5 – 12	Slightly + Silty, Clayey, Shelly	With Some
12 – 30	Silty, Clayey, Shelly	With
30 – 50	Very + Silty, Clayey, Shelly	And

12. Descriptive characteristics for organic content percentages are described as follows:

Percentage of Organic Material	Descriptor
0 – 5	With a Trace
5 – 20	With Organics
20 – 75	Highly Organic
75 – 100	Peat

APPENDIX C

Discussion of Soil Groups



DISCUSSION OF SOIL GROUPS

COARSE GRAINED SOILS

GW and SW GROUPS. These groups comprise well-graded gravelly and sandy soils having little or no plastic fines (less than 5 percent passing the No. 200 sieve). The presence of the fines must not noticeably change the strength characteristics of the coarse-grained fraction and must not interface with its free-draining characteristics.

GP and SP GROUPS. Poorly graded gravels and sands containing little or no plastic fines (less than 5 percent passing the No. 200 sieve) are classed in GP and SP groups. The materials may be called uniform gravels, uniform sands or non-uniform mixtures of very coarse material and very fine sands, with intermediate sizes lacking (sometimes called skip-graded, gap-graded or step-graded). This last group often results from borrow pit excavation in which gravel and sand layers are mixed.

GM and SM GROUPS. In general, the GM and SM groups comprise gravels or sands with fines (more than 12 percent passing the No. 200 sieve) having low or no plasticity. The plasticity index and liquid limit of soils in the group should plot below the "A" line on the plasticity chart. The gradation of the material is not considered significant and both well and poorly graded materials are included.

GC and SC GROUPS. In general, the GC and SC groups comprise gravelly or sandy soils with fines (more than 12 percent passing the No. 200 sieve), which have a fairly high plasticity. The liquid limit and plasticity index should plot above the "A" line on the plasticity chart.

FINE GRAINED SOILS

ML and MH GROUPS. In these groups, the symbol M has been used to designate predominantly silty material. The symbols L and H represent low and high liquid limits, respectively, and an arbitrary dividing line between the two is set at a liquid limit of 50. The soils in the ML and MH groups are sandy silts, clayey silts or inorganic silts with relatively low plasticity. Also included are loess type soils and rock flours.

CL and CH GROUPS. In these groups the symbol C stands for clay, with L and H denoting low or high liquid limits, with the dividing line again set at a liquid limit of 50. The soils are primarily inorganic clays. Low plasticity clays are classified as CL and are usually lean clays, sandy clays or silty clays. The medium and high plasticity clays are classified as CH. These include the fat clays, gumbo clays and some volcanic clays.



APPENDIX D
Hydraulic Conductivity Results





HYDRAULIC CONDUCTIVITY TEST RESULTS

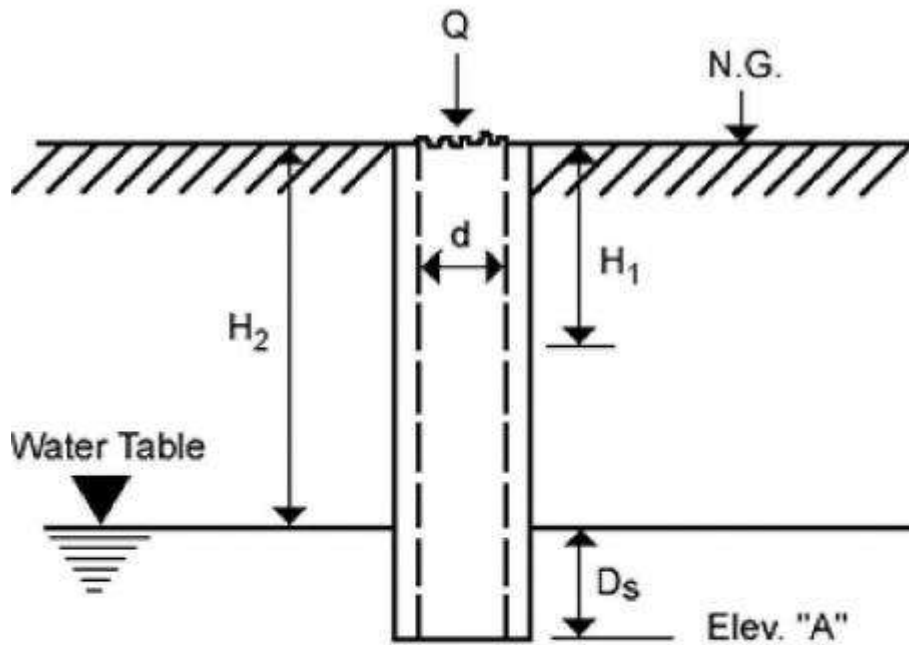
Project name: 3090 Sheridan Street - Hollywood
Project number: 0630.2200058.0000
Date: 4/25/2022

SFWMD USUAL Open Hole Formula:

$$K = \frac{4Q}{\pi d(2H_2^2 + 4H_2D_s + H_2d)}$$

Exfiltration Number	First volume of water reading (after stabilization)	Final volume of water reading	Elapsed time	Average flow rate at constant head Q	Average flow rate at constant head Q*0.00223	Perforated casing diameter or hole diameter (d)	Water table H ₂	Total length of bore hole	Length of bore hole below stabilized ground water (Ds)	Hydraulic Conductivity (K)
	gallon	gallon	min.	gallon/minute	ft ³ /sec	ft	ft	ft	ft	ft ³ /sec/ft ² - ft of head
E-1	0.0	43.00	10	4.30	0.0096	0.25	5.25	10.0	4.8	3.13E-04
E-2	0.0	49.00	10	4.90	0.0109	0.25	5.25	10.0	4.8	3.56E-04

USUAL OPEN-HOLE TEST



$$K = \frac{4Q}{\pi d (2H_2^2 + 4H_2D_s + H_2d)}$$

K = Hydraulic Conductivity (cfs/ft.² – ft. head)

Q = “Stabilized” Flow Rate (cfs)

d = Diameter of Test Hole (ft)

H₂ = Depth to Water Table (ft)

D_s = Saturated Hole Depth (ft)

Elev. “A” = Proposed Trench Bottom Elev. (ft – NGVD)

H₁ = Average Head on Unsaturated Hole Surface (ft. head)





3325 S. University Drive, Suite 111, Davie, FL 33328

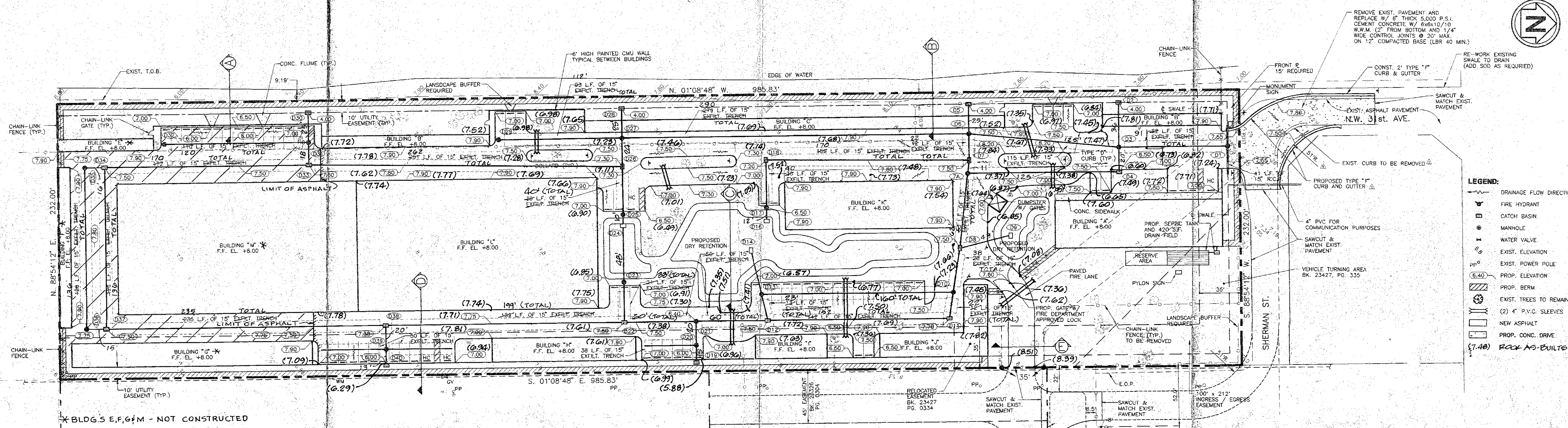
Main Office: 954.318.0624

Fax: 954.358.0190

Web: www.rossengineers.com

APPENDIX E

Drainage As-Builts

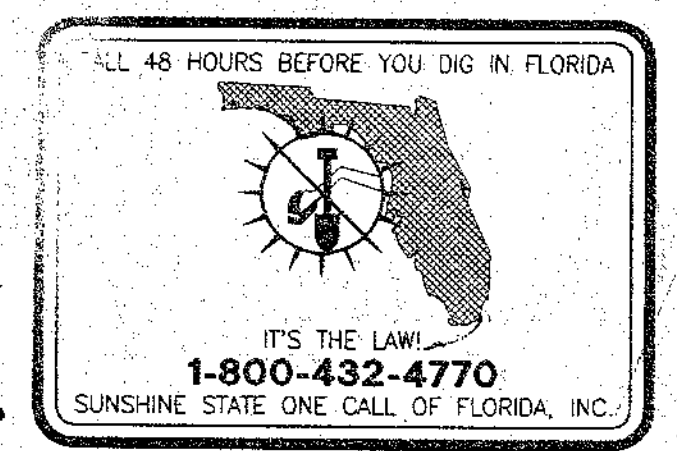


- LEGEND:**
- DRAINAGE FLOW DIRECTION
 - FIRE HYDRANT
 - CATCH BASIN
 - MANHOLE
 - WATER VALVE
 - EXIST. ELEVATION
 - EXIST. POWER POLE
 - PROP. ELEVATION
 - PROP. BERM
 - EXIST. TREES TO REMAIN
 - (2) 4" P.V.C. SLEEVES
 - NEW ASPHALT
 - PROP. CONC. DRIVE
 - (7.40) ROCK AS-BUILT

DRAINAGE STRUCTURE TABULATION													
STRUCTURE NUMBER	TYPE	ELEVATIONS (N.G.V.D.)					STRUCTURE SIZE INSIDE DIMENSIONS	POLLUTION BAFFLE LOCATION	POLLUTION BAFFLE SIZE	AS-BUILTS COMMENTS			
		GRADE ROW	PIPE INVERTS			BOTTOM OF SOUP				H S E W			
			NORTH	SOUTH	EAST					WEST	H	S	E
D1	M-1.18	2.58	---	---	---	---	36"x36"	---	---	---	4.00	4.00	4.00
D2	C-3.08	2.00	---	---	---	---	24"x36"	---	---	---	---	1.00	---
D3	M-1.80	2.00	---	---	---	---	36"x36"	N. S.	---	---	4.00	4.00	4.00
D4	C-1.80	2.00	---	---	---	---	36"x36"	---	24"	---	3.50	---	3.50
D5	C-3.08	2.00	---	---	---	---	24"x36"	---	---	---	---	1.00	---
D6	M-1.80	2.00	---	---	---	---	36"x36"	---	---	---	4.00	4.00	4.00
D7	C-4.08	2.00	---	---	---	---	36"x36"	S. W.	24"	---	4.00	4.00	2.00
7A	M-1.80	2.00	---	---	---	---	36"x36"	---	---	---	4.00	---	4.00
D8	C-4.08	2.00	---	---	---	---	36"x36"	4. E. W.	24"	1.00	7.00	4.00	4.00
D9	C-2.08	2.00	---	---	---	---	24"x24"	---	---	---	0.00	---	---
D10	M-1.00	2.60	---	---	---	---	36"x36"	---	---	---	3.95	3.95	3.95
D11	C-4.08	2.00	---	---	---	---	36"x36"	S. W.	24"	---	4.00	---	4.00
D12	C-4.08	2.00	---	---	---	---	36"x36"	N. S. W.	24"	---	3.95	3.95	3.95
D13	M-1.80	2.00	---	---	---	---	36"x36"	---	---	---	3.43	---	3.43
D14	C-3.08	2.00	---	---	---	---	24"x24"	---	---	---	0.00	---	---
D15	M-1.80	2.00	---	---	---	---	36"x36"	---	---	---	3.95	3.95	---
D16	C-2.08	2.00	---	---	---	---	24"x24"	---	---	---	---	---	0.00
D17	M-1.80	2.00	---	---	---	---	36"x36"	---	---	---	---	1.00	3.00
D18	C-4.08	2.00	---	---	---	---	36"x36"	N. E.	24"	4.00	---	6.00	---
D19	C-3.08	2.00	---	---	---	---	24"x36"	---	---	---	---	---	1.83
D20	M-1.80	2.00	---	---	---	---	36"x36"	---	---	---	3.53	2.65	3.53
D21	M-1.80	2.00	---	---	---	---	36"x36"	---	---	---	3.33	3.33	---
D22	C-4.08	2.00	---	---	---	---	36"x36"	N. S. W.	24"	4.00	4.00	---	4.00
D23	M-1.80	2.00	---	---	---	---	36"x36"	---	---	---	---	3.19	2.01
D24	C-2.08	2.00	---	---	---	---	24"x24"	---	---	---	---	0.00	0.00
D25	M-1.80	2.00	---	---	---	---	36"x36"	---	---	---	---	0.03	3.55
D26	C-4.08	2.00	---	---	---	---	36"x36"	S. E.	24"	---	---	3.59	4.00
D27	M-1.80	2.00	---	---	---	---	36"x36"	N. S.	---	---	---	4.00	2.00
D28	C-3.08	2.00	---	---	---	---	24"x36"	---	---	---	---	1.00	---
D29	M-1.80	2.00	---	---	---	---	36"x36"	---	---	---	---	---	---
D30	C-3.08	2.00	---	---	---	---	24"x36"	---	---	---	---	---	---
D31	M-1.80	2.00	---	---	---	---	36"x36"	S.	---	---	---	4.00	2.00
D32	M-1.80	2.00	---	---	---	---	36"x36"	---	---	---	4.00	---	---
D33	C-4.08	2.00	---	---	---	---	36"x36"	N. S.	24"	3.88	4.00	---	4.00
D34	C-4.08	2.00	---	---	---	---	36"x36"	N. E.	24"	4.00	4.00	6.00	---
D35	M-1.80	2.00	---	---	---	---	36"x36"	E.	24"	4.00	---	4.00	---
D36	M-1.80	2.00	---	---	---	---	36"x36"	W.	---	---	4.00	---	---
D37	C-4.08	2.00	---	---	---	---	36"x36"	N. W.	24"	4.00	4.00	---	4.00
D38	C-4.08	2.00	---	---	---	---	36"x36"	N. S.	24"	4.00	4.00	---	---
D39	C-4.08	2.00	---	---	---	---	36"x36"	N. S.	---	4.00	4.00	3.00	---
D40	C-3.08	2.00	---	---	---	---	24"x36"	---	---	---	---	---	3.00

- NOTES:**
- PROJECT WILL BE DIVIDED INTO THE FOLLOWING PHASES:
PHASE A = ACCESS ROAD
PHASE B = ALL ON-SITE IMPROVEMENTS
PHASE C = ALL OFF-SITE IMPROVEMENTS
 - ALL ROOF WATER LEADERS SHALL BE CONNECTED TO THE UNDERGROUND DRAINAGE SYSTEM.

AS-BUILT
Date: _____



7-97 ROCK AS-BUILTS

2-97 DRAINAGE AS-BUILTS

6/13/98 ADDED DUMPSTER GATES

4/10/98 REV. PER FIELD CONDITIONS

REVISION

BY

NO

DATE

DESIGNED

DATE

8/95

DRAWN

DATE

8/95

CHECKED

DATE

8/95

APPROVED

DATE

8/95

berry&calvin inc.

ENGINEERS SURVEYORS PLANNERS

2 OAKWOOD BLVD., SUITE 120 HOLLYWOOD, FL 33020

BROWARD (305) 921-7781 / FAX (305) 921-8807

LEX LEXOW

SHERIDAN EXTRA CLOSETS

PAVING AND DRAINAGE PLAN

DATE

8/95

SCALE

1" = 40'

SHEET

D1

4-1271D1.DWG

OF

07

Safeguard Self Storage - Hollywood

3090 SHERMAN ST. HOLLYWOOD, FL 33021

CITY OF HOLLYWOOD FINAL TAC MEETING - MAY 8, 2023
CITY OF HOLLYWOOD FINAL TAC SUBMITTAL - APRIL 17, 2023

LAND DESCRIPTION:

THE NORTH 985.83 FEET OF PARCEL "A", TAFT STREET INDUSTRIAL PARK, ACCORDING TO THE PLAT THEREOF, AS RECORDED IN PLAT BOOK 122, PAGE 25, OF THE PUBLIC RECORDS OF BROWARD COUNTY, FLORIDA

SAID LANDS LYING IN THE CITY OF HOLLYWOOD, BROWARD COUNTY, FLORIDA AND CONTAINING NET TOTAL OF 228,712.56 SQUARE FEET (5.25 ACRES) MORE OR LESS.



LOCATION MAP

NOT TO SCALE

CITY OF HOLLYWOOD PERMIT SET	
Sheet Number	Sheet Title
COVER	COVER SHEET
C-1	GENERAL NOTES AND SPECIFICATIONS
C-1.1	Civil Site Plan
C-2	DEMOLITION PLAN
C-3	GRADING AND DRAINAGE PLAN
C-3.1	PAVING SIDEWALK AND CURBING PLAN
C-3.2	PAVING GRADING AND DRAINAGE DETAILS (SHEET 1 OF 3)
C-3.3	PAVING GRADING AND DRAINAGE DETAILS (SHEET 2 OF 3)
C-3.4	PAVING GRADING AND DRAINAGE DETAILS (SHEET 3 OF 3)
C-3.5	RAINTANK DETAILS
C-4	WATER AND SEPTIC PLAN
C-4.1	WATER AND SEPTIC PLAN DETAILS (SHEET 1 OF 2)
C-4.2	WATER AND SEPTIC PLAN DETAILS (SHEET 2 OF 2)
C-5	PAVEMENT MARKING AND SIGNAGE PLAN
C-5.1	PAVEMENT MARKING AND SIGNAGE DETAILS
C-6	POLLUTION PREVENTION CONTROL PLAN
C-6.1	POLLUTION PREVENTION PLAN DETAILS
EXHIBIT	FIRE TRUCK TRACKING

REVISION # Date: 4/14/2023

PREVIOUS CITY OF HOLLYWOOD SUBMISSIONS

CITY OF HOLLYWOOD PRELIMINARY TAC MEETING - FEBRUARY 21, 2023
CITY OF HOLLYWOOD PRELIMINARY TAC SUBMITTAL - FEBRUARY 6, 2023
CITY OF HOLLYWOOD PACO MEETING - NOVEMBER 17, 2022

PREPARED FOR:

MIKE CARTER CONSTRUCTION, INC.



3325 S. UNIVERSITY DRIVE, SUITE 111
DAVIE, FLORIDA 33328
(954)318-0624 (954)358-0190 FAX
CERTIFICATE OF AUTHORIZATION No. 9808

1. APPLICABLE CODES

- 1.1. ALL CONSTRUCTION AND MATERIALS SHALL CONFORM TO THE STANDARD AND SPECIFICATIONS OF CITY OF HOLLYWOOD AND ALL OTHER LOCAL, STATE AND NATIONAL CODES WHERE APPLICABLE EXCEPT WITHIN DEPARTMENT OF TRANSPORTATION (D.O.T.) R/W WHEREIN FLORIDA DEPARTMENT OF TRANSPORTATION (F.D.O.T.) GOVERNS.
- 1.2. ALL CONSTRUCTION SHALL BE DONE IN A SAFE MANNER AND IN STRICT COMPLIANCE WITH ALL THE REQUIREMENTS OF FEDERAL OCCUPATIONAL SAFETY AND HEALTH ACT OF 1970, AND ALL STATE AND LOCAL SAFETY AND HEALTH REGULATIONS.
- 1.3. ALL ELEVATIONS SHOWN ON THE CONSTRUCTION DRAWINGS ARE BASED ON THE NORTH AMERICAN VERTICAL DATUM 1988, (NAVD) UNLESS OTHERWISE NOTED.
- 1.4. CITY OF HOLLYWOOD WATER AND SEWER DEPARTMENT WATER AND SEWER SPECIFICATIONS SHALL DIGTATE WHEN IN CONFLICT WITH ANY OF THE FOLLOWING SPECIFICATIONS.
- 1.5. ALL MATERIALS AND CONSTRUCTION WITHIN THE D.O.T. R/W SHALL CONFORM TO THE D.O.T. "DESIGN STANDARDS" (2015) AND "STANDARD SPECIFICATIONS" (2015).
- 1.6. THE CONTRACTOR IS RESPONSIBLE FOR PROVIDING THE MAINTENANCE OF TRAFFIC (M.O.T) PLAN PRIOR TO CONSTRUCTION. THE CONSULTANT'S ENGINEER SHALL ENSURE THAT THE M.O.T PLAN FOR THE PROJECT CONFORMS WITH STANDARD INDEX SERIES 600, APPLICABLE INDEX FOR WORK BEING PERFORMED, THE CONTRACTOR SHALL ENSURE THE M.O.T. PLAN IS IMPLEMENTED EXACTLY AS APPROVED.

2. PRECONSTRUCTION RESPONSIBILITIES

- 2.5. UPON THE RECEIPT OF THE "NOTICE TO PROCEED", THE CONTRACTOR SHALL CONTACT THE ENGINEER OF RECORD AND ARRANGE A PRECONSTRUCTION CONFERENCE TO INCLUDE ALL INVOLVED GOVERNMENTAL AGENCIES, UTILITY OWNERS, THE OWNER AND THE ENGINEER OF RECORD.
- 2.6. THE CONTRACTOR SHALL OBTAIN A SUNSHINE STATE ONE CALL OF FLORIDA, INC. CERTIFICATION NUMBER AT LEAST 48 HOURS PRIOR TO BEGINNING ANY EXCAVATION, CALL 1-800-432-4770.
- 2.7. ALL UTILITY EASEMENTS TO BE SECURED PRIOR TO CONSTRUCTION (IF REQUIRED).
- 2.8. LOCATION OF EXISTING FACILITIES AS SHOWN ON CONSTRUCTION DRAWINGS ARE DRAWN FROM AVAILABLE RECORDS. THE ENGINEER ASSUMES NO RESPONSIBILITY FOR THE ACCURACY OF THE FACILITIES SHOWN OR FOR ANY FACILITY NOT SHOWN. THE CONTRACTOR SHALL VERIFY, IF POSSIBLE, THE ELEVATIONS AND LOCATIONS OF EXISTING FACILITIES PRIOR TO CONSTRUCTION. IF AN EXISTING FACILITY IS FOUND TO CONFLICT WITH THE PROPOSED CONSTRUCTION UPON EXCAVATION, THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE ENGINEER OF RECORD SO THAT APPROPRIATE MEASURES CAN BE TAKEN TO RESOLVE THE PROBLEM.
- 2.9. THE CONTRACTOR MUST CALL CITY OF HOLLYWOOD AT LEAST 48 HOURS BEFORE ANY EXCAVATION WITHIN THE R/W TO DETERMINE THE LOCATION TO OF THE EXISTING TRAFFIC SIGNAL INTERCONNECT CABLE.

3. INSPECTIONS

- 3.1. THE CONTRACTOR SHALL NOTIFY CITY OF HOLLYWOOD, AND ANY OTHER GOVERNMENTAL AGENCIES HAVING JURISDICTION AT LEAST 24 HOURS PRIOR TO BEGINNING CONSTRUCTION AND PRIOR TO THE INSPECTION OF THE FOLLOWING ITEMS, WHERE APPLICABLE:
- 3.1.1. CLEARING AND FILLING
- 3.1.2. STORM DRAINAGE SYSTEM
- 3.1.3. SANITARY SEWER SYSTEM
- 3.1.4. WATER DISTRIBUTION SYSTEM
- 3.1.5. SUBGRADE
- 3.1.6. LIMEROCK BASE
- 3.1.7. ASPHALTIC CONCRETE
- 3.1.8. SIDEWALK
- 3.1.9. FINAL

4. SHOP DRAWINGS

- 4.1. PRIOR TO THEIR CONSTRUCTION OR INSTALLATION, SHOP DRAWINGS SHALL BE SUBMITTED TO AND APPROVED BY THE ENGINEER OF RECORD AND CITY OF HOLLYWOOD FOR THE FOLLOWING: SANITARY MANHOLES, STORM DRAIN MANHOLES, CATCH BASINS, FIRE HYDRANTS, PIPING, VALVES AND ALL REQUIRED ACCESSORIES. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO OBTAIN ALL OTHER AGENCY APPROVALS IF REQUIRED.

5. TEMPORARY FACILITIES

- 5.1. TEMPORARY FACILITIES:
- 5.1.1. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO ARRANGE FOR OR SUPPLY TEMPORARY WATER SERVICE, SANITARY FACILITIES AND ELECTRICITY.
- 5.2. TRAFFIC REGULATION:
- 5.2.1. MAINTENANCE OF TRAFFIC IN THE PUBLIC RIGHTS-OF-WAY SHALL BE IN ACCORDANCE WITH MANUAL TRAFFIC CONTROL DEVICES (M.U.T.C.D.).
- 5.2.2. ALL OPEN TRENCHES AND HOLES ADJACENT TO ROADWAYS OR WALKWAYS SHALL BE PROPERLY MARKED AND BARRICADED TO ASSURE THE SAFETY OF BOTH VEHICULAR AND PEDESTRIAN TRAFFIC.
- 5.2.3. NO TRENCHES OR HOLES NEAR WALKWAYS, IN ROADWAYS OR THEIR SHOULDERS ARE TO BE LEFT OPEN DURING NIGHTTIME HOURS WITHOUT EXPRESS PERMISSION OF CITY OF HOLLYWOOD.
- 5.2.4. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR FOR ANY NECESSARY CONSTRUCTION, PAVEMENT MARKING AND SIGNAGE OR ANY PEDESTRIAN SIGNALIZATION AND/OR SIGNAL MODIFICATION TO ACCOMMODATE AN ALTERNATE SAFE WALK ROUTE.

6. WATER DISTRIBUTION SYSTEM

- 6.1. SEPARATION OF WATER AND SEWER MAINS:
- 6.1.1. SANITARY SEWERS, STORM SEWERS, AND FORCE MAINS SHOULD CROSS UNDER WATER MAINS WHENEVER POSSIBLE. SANITARY SEWERS, STORM SEWERS, AND FORCE MAINS CROSSING WATER MAINS SHALL BE LAID TO PROVIDE A MINIMUM VERTICAL DISTANCE OF 12" INCHES BETWEEN THE INVERT OF THE UPPER PIPE AND THE CROWN OF THE LOWER PIPE WHENEVER POSSIBLE.
- 6.1.2. WHERE SANITARY SEWERS, STORM SEWERS, OR FORCE MAINS MUST CROSS A WATER MAIN WITH LESS THAN 12" INCHES VERTICAL DISTANCE, BOTH THE SEWER AND THE WATER MAIN SHALL BE CONSTRUCTED OF DUCTILE IRON PIPE (DIP) AT THE CROSSING. SUFFICIENT LENGTHS OF DIP MUST BE USED TO PROVIDE A MINIMUM SEPARATION OF 10 FEET BETWEEN ANY TWO JOINTS. ALL JOINTS ON THE WATER MAIN WITHIN 20 FEET OF THE CROSSING MUST BE MECHANICALLY RESTRAINED. A MINIMUM VERTICAL CLEARANCE OF 6 INCHES MUST BE MAINTAINED AT ALL CROSSINGS.
- 6.1.3. ALL CROSSINGS SHALL BE ARRANGED SO THAT THE SEWER PIPE JOINTS AND THE WATER MAIN PIPE JOINTS ARE EQUIDISTANT FROM THE POINT OF CROSSING (PIPES CENTERED ON THE CROSSING).
- 6.1.4. WHERE A NEW PIPE CONFLICTS WITH AN EXISTING PIPE WITH LESS THAN

- 12" INCHES VERTICAL CLEARANCE, THE NEW PIPE SHALL BE CONSTRUCTED OF DIP, AND THE CROSSING SHALL BE ARRANGED TO MEET THE REQUIREMENTS ABOVE.
- 6.1.5. A MINIMUM 10-FOOT HORIZONTAL SEPARATION SHALL BE MAINTAINED BETWEEN ANY TYPE OF SEWER AND WATER MAIN IN PARALLEL INSTALLATIONS WHENEVER POSSIBLE.
- 6.1.6. IN CASES WHERE IT IS NOT POSSIBLE TO MAINTAIN A 10 FOOT HORIZONTAL SEPARATION, THE WATER MAIN MUST BE LAID IN A SEPARATE TRENCH OR ON AN UNDISTURBED EARTH SHELF LOCATED ON ONE SIDE OF THE SEWER OR FORCE MAIN AT SUCH AN ELEVATION THAT THE BOTTOM OF THE WATER IS AT LEAST 18 INCHES ABOVE THE TOP OF THE SEWER.
- 6.1.7. WHERE IT IS NOT POSSIBLE TO MAINTAIN A VERTICAL DISTANCE OF 12" INCHES IN PARALLEL INSTALLATIONS, THE WATER MAIN SHALL BE CONSTRUCTED OF DIP AND THE SANITARY SEWER OR THE FORCE MAIN SHALL BE CONSTRUCTED OF DIP WITH A MINIMUM VERTICAL DISTANCE OF 6 INCHES. THE WATER MAIN SHOULD ALWAYS BE ABOVE THE SEWER. JOINTS ON THE WATER MAIN SHALL BE LOCATED AS FAR APART AS POSSIBLE FROM JOINTS ON THE SEWER OR FORCE MAIN (STAGGERED JOINTS).
- 6.1.8. CONTRACTOR SHALL MAINTAIN WATER SERVICE TO ALL EXISTING FACILITIES DURING CONSTRUCTION.
- 6.2. MATERIALS:
- 6.2.1. POLYVINYL CHLORIDE (PVC) PIPE SHALL BE DR 18 ANSI / AWWA C900-99 OR LATEST REVISION.
- 6.2.2. ALL PIPE LARGER THAN 12" DIAMETER MUST BE DUCTILE IRON (MIN. CLASS 50), 8" AND 10" DIP (MIN. CLASS 50) 4" AND 6" DIP (MIN. CLASS 52). ALL DUCTILE IRON PIPE SHALL CONFORM TO THE REQUIREMENTS OF ANSI/AWWA C151/A21.51-96 AND CEMENT MORTAR LINED AND SEAL COATED PER ANSI/AWWA C104/A21.4-95.
- 6.2.3. FITTINGS SHALL BE DUCTILE IRON MEETING ANSI/AWWA C-153/A21.53-00 SPECIFICATIONS. FITTINGS MUST BE CEMENT LINED AND SEAL COATED PER ANSI/AWWA C104/A21.4-95.
- 6.2.4. VALVES SHALL BE GATE VALVES, IRON BODY, FULLY RESILIENT SEAT BRONZED MOUNTED NON-RIISING STEM, RATED AT 200 PSI AND CONFORMING TO ANSI/AWWA C509-94 OR LATEST REVISION, AND SHALL HAVE MECHANICAL JOINTS.
- 6.2.4.1. GATE VALVES 4" AND LARGER SHALL BE MUELLER A-2380-20, RESILIENT SEATED GATE VALVES SHALL BE AMERICAN 80 LINE OR CLOW F-6100, CONFORMING TO ANSI/AWWA C500-93.
- 6.2.4.2. TAPPING VALVES SHALL BE MUELLER H667 OR APPROVED EQUAL.
- 6.2.4.3. GATE VALVES 3" OR LESS SHALL HAVE THE SAME REQUIREMENTS AS LARGER GATE VALVES. THEY SHALL BE 2" RSW VALUE WITH 2" OPERATING NUT.
- 6.2.5. TAPPING SLEEVES SHALL BE MUELLER H615, CLOW F-2505 OR APPROVED EQUAL.
- 6.2.6. VALVE BOXES SHALL BE TYLER OR APPROVED EQUAL.
- 6.2.7. RETAINER GLANDS SHALL BE MEGA-LUG AND CONFORM TO ANSI / AWWA C111/A21.11-00 OR LATEST REVISION. ALL GLANDS SHALL BE MANUFACTURED FROM DUCTILE IRON AS LISTED BY UNDERWRITERS LABORATORIES FOR 250 PSI MINIMUM WATER PRESSURE RATING.
- 6.2.8. NO DRESSER COUPLINGS SHALL BE ALLOWED ON DISTRIBUTION SYSTEM.
- 6.2.9. FIRE HYDRANTS SHALL BE MUELLER CENTURION TRAFFIC TYPE A-423 WITH 5 1/4" INTERNAL VALVE OPENING OR APPROVED EQUAL. MAIN VALVE OPENING TO BE DETERMINED BY THE WATER DEPARTMENT. PUMPER NOZZLE TO BE 18" FROM FINISHED GRADE OR CENTERLINE OF ADJACENT ROADWAY WHICHEVER IS GREATER. ALL HYDRANTS TO BE INSTALLED WITH CONTROL VALVE. RETAINER GLANDS ARE PREFERRED FOR RESTRAINING. FIRE HYDRANT SHALL COMPLY WITH ANSI/AWWA C502-94.

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- 6.2.10. FIRE HYDRANTS SHALL BE PAINTED YELLOW. (RUSTOLEUM #944 SAFETY YELLOW OR APPROVED EQUAL)
- 6.3. SERVICE CONNECTION:
- 6.3.1. SERVICE SADDLES SHALL BE STAINLESS STEEL STRAPS. SADDLES SHALL BE DOUBLE STRAP TYPE. ALL SERVICE SADDLES SHALL CONFORM TO ANSI/AWWA C111/A21.11-00 AND ASTM A-588.
- 6.3.2. SERVICE LINES SHALL BE POLYETHYLENE (3408), 250 PSI RATED, SDR9 PIPE JOINTS SHALL BE OF THE COMPRESSION TYPE TOTALLY CONFINED GRIP SEAL AND COUPLING NUT WITH STAINLESS STEEL INSERTS.
- 6.3.3. CORPORATION STOPS SHALL BE MANUFACTURED OF BRASS ALLOY IN ACCORDANCE WITH ASTM B-62 WITH THREADED ENDS, AS MANUFACTURED BY MUELLER H10046 OR APPROVED EQUAL.
- 6.3.4. CURB STOPS SHALL BE MUELLER H10203 OR APPROVED EQUAL.
- 6.3.5. METER STOPS SHALL BE LOCKWING TYPE AND SHALL BE OF BRONZE CONSTRUCTION IN ACCORDANCE WITH ASTM B-62. METER STOPS SHALL BE CLOSED BOTTOM DESIGN AND RESILIENT "O" RING SEALED AGAINST EXTERNAL LEAKAGE AT THE TOP. STOPS SHALL BE EQUIPPED WITH A METER COUPLING NUT ON THE OUTLET SIDES, AS MANUFACTURED BY MUELLER OR APPROVED EQUAL.

- 6.4. INSTALLATION:
- 6.4.1. ALL PVC PIPE SHALL BE INSTALLED IN ACCORDANCE WITH THE UNI-BELL PLASTIC PIPE ASSOCIATIONS "GUIDE FOR INSTALLATION OF PVC PRESSURE PIPE FOR MUNICIPOAL WATER DISTRIBUTION SYSTEM."
- 6.4.2. ALL DIP SHALL BE INSTALLED IN ACCORDANCE WITH ANSI/AWWA C600-99 OR LATEST REVISION.
- 6.4.3. ALL WATER MAINS SHALL BE LAID WITH A MINIMUM 36" COVER FOR PVC AND 30" FOR DIP.
- 6.4.4. NO CONNECTIONS TO EXISTING LINES SHALL BE MADE UNTIL PRESSURE TESTS & BACTERIOLOGICAL TESTS HAVE BEEN PERFORMED AND THE SYSTEM IS ACCEPTABLE TO CITY OF HOLLYWOOD AND THE HEALTH DEPARTMENT.
- 6.4.5. PIPE DEFLECTION SHALL NOT EXCEED 75% OF THE MAXIMUM DEFLECTION RECOMMENDED BY THE MANUFACTURER.
- 6.4.6. A CONTINUOUS AND UNIFORM BEDDING SHALL BE PROVIDED. BACKFILL MATERIAL SHALL BE TAMPED IN LAYERS AROUND THE PIPE AS SHOWN ON THE PLANS. STONES FOUND IN THE TRENCH SHALL BE REMOVED TO A DEPTH OF AT LEAST 6" BELOW THE BOTTOM OF THE PIPE.
- 6.4.7. ALL VALVES SHALL BE INSTALLED WITH ADJUSTABLE CAST IRON VALVE BOXES WITH THE WORD "WATER" CAST IN THE COVER. U.S.F. OR APPROVED EQUAL.
- 6.4.8. ALL FITTINGS TO BE RESTRAINED WITH MEGALUG OR APPROVED EQUAL.
- 6.4.9. LOCATOR TAPE AND WIRE MUST BE INSTALLED 12" ABOVE NEW WATER

- MAINS. TAPE WILL BE 3" WIDE AND COLOR CODED. LOCATE WIRE WILL SHALL BE NO.14 STRAND AND COLOR CODED.
- 6.4.10. R.P.M.'S TO BE INSTALLED, PRIOR TO C/O, AT CENTER OF NEAREST DRIVE AISLE ADJACENT TO ALL HYDRANTS (BLUE) AND GATE VALVES (WHITE). FOR HYDRANTS AT CORNERS (2) TWO R.P.M.'S SHALL BE INSTALLED, ONE AT EACH ROADWAY.

- 6.5. TESTING:
- 6.5.1. BEFORE ANY PHYSICAL CONNECTIONS TO THE EXISTING WATER MAINS ARE MADE, THE COMPLETE WATER SYSTEM SHALL BE PRESSURE TESTED AND DISINFECTED. HYDROSTATIC TESTING OF NEW MAINS SHALL BE PERFORMED AT A MINIMUM STARTING PRESSURE OF 150 PSI FOR TWO HOURS IN ACCORDANCE WITH ANSI/AWWA C600-99 OR LATEST REVISION, THE PRESSURE TEST SHALL NOT VARY MORE THAN 5 PSI DURING THE TEST.
- 6.5.2. THE PRESSURE TEST SHALL BE WITNESSED BY A REPRESENTATIVE OF CITY OF HOLLYWOOD UTILITIES DEPARTMENT AND THE ENGINEER OF RECORD.
- 6.5.3. ALL NEW WATER MAINS SHALL BE PIGGED AND CANON FLUSHED PRIOR TO DISINFECTION.
- 6.5.4. BEFORE ACCEPTANCE FOR OPERATION, THE WATER SYSTEM SHALL BE DISINFECTED IN ACCORDANCE WITH THE ANSI/AWWA C691-99; 150 PSI MINIMUM STARTING TEST PRESSURE. METER RECONNECTIONS MAY BE MADE TO NEW LINES AFTER TWO CONSECUTIVE DAYS OF BACTERIOLOGICAL SAMPLES HAVE PASSED, AND COPIES OF RESULTS HAVE BEEN RECEIVED BY THE ENGINEER, CITY OF HOLLYWOOD, AND HRS.
- 6.5.5. SAMPLING POINTS SHALL BE PROVIDED AT THE LOCATIONS SHOWN ON THE PLANS. IF NOT SPECIFIED, SAMPLING POINTS SHALL BE PROVIDED AT INTERVALS OF 1200' MAXIMUM FOR LINES GREATER THAN 2000' IN LENGTH.
- 6.5.6. SINCE THE ALLOWABLE LEAKAGE IS DEFINED IN GALLONS PER HOUR, TESTING SHALL BE CONDUCTED IN, AT A MINIMUM, TWO INDEPENDENT 1 HOUR TEST PERIODS.
- 6.5.7. THE MAXIMUM ALLOWABLE LEAKAGE FOR DUCTILE IRON MAINS SHALL BE DETERMINED BY THE FOLLOWING FORMULA FROM THE ANSI/AWWA STANDARD C600 "INSTALLATION OF DUCTILE-IRON WATER MAINS AND THEIR APPURTENANCES," LATEST EDITION:
- $$L = 80 \text{ TIMES THE SQUARE ROOT OF } P$$

WHERE: L IS THE ALLOWABLE LEAKAGE IN GALLONS PER HOUR S IS THE LENGTH OF PIPE (LINEAR FEET) D IS THE NOMINAL DIAMETER OF PIPE (INCHES) P IS THE AVERAGE TEST PRESSURE DURING THE LEAKAGE TEST, IN POUNDS PER SQUARE INCH GAGE.

7. GRAVITY SEWER COLLECTION SYSTEM

- 7.1. GENERAL:
- 7.1.1. DISTANCE AND LENGTHS SHOWN ON PLANS ARE REFERENCED TO THE CENTER OF STRUCTURES.
- 7.2. MATERIALS:
- 7.2.1. ALL SEWER PIPE AND FITTINGS SHALL BE PVC SDR35 PIPE CONFORMING TO ANSI/AWWA STANDARD C900-89, CLASS 150, WITH PUSH-ON RUBBER GASKET JOINTS OR DUCTILE IRON PIPE WITH EPOXY COATING, PROTECTED 401 (MIN.CLASS 52), AS INDICATED ON THE DRAWINGS.
- 7.2.2. MANHOLES SHALL BE PRECAST PER ASTM C 478 WITH 4,000 PSI CONCRETE AND GRADE 60 STEEL MONOLITHICALLY POURED BASES ONLY.
- 7.2.3. MANHOLES ARE TO BE SEALED WITH ANTI-HYDRO CEMENT OR APPROVED EQUAL - NO MouldING PLASTER.
- 7.3. INSTALLATION:
- 7.3.1. PVC SEWER PIPE SHALL BE LAID IN ACCORDANCE WITH ASTM D 2321 AND THE UNI-ASSOCIATION'S "RECOMMENDED PRACTICE FOR THE INSTALLATION OF PVC SEWER PIPE."
- 7.3.2. DUCTILE IRON PIPE SHALL BE INSTALLED IN ACCORDANCE WITH ANSI/AWWA C600-93 OR LATEST REVISION.
- 7.3.3. SAND COLLAR SHALL BE GROUTED IN PLACE AT EACH PIPE CONNECTION INTO A MANHOLE WALL.
- 7.3.4. MANHOLES SHALL BE SET PLUMB TO LINE AND GRADE ON FIRM SUBGRADE PROVIDING UNIFORM BEARING UNDER THE BASE.
- 7.3.5. ALL OPENINGS AND JOINTS SHALL BE SEALED WATERTIGHT.
- 7.3.6. THE ENTIRE INSIDE AND OUTSIDE OF THE MANHOLES SHALL BE PAINTED WITH TWO COATS: FIRST COAT RED, SECOND COAT BLACK (8 MILS EACH) OF KOPPERS 300-M BITUMASTIC PAINT OR ENGINEER'S APPROVED EQUAL.
- 7.3.7. EXISTING SEWER SYSTEM MUST REMAIN SEPERATE FROM NEW SEWER SYSTEM WITH A WING-NUT TYPE MECHANICAL PLUG UNTIL CERTIFICATION.

- 7.4. TESTING:
- 7.4.1. AFTER CONSTRUCTION OF THE SEWER SYSTEM, THE ENGINEER MAY REQUIRE A VISUAL INFILTRATION AND/OR EXFILTRATION TEST TO BE PERFORMED ON THE ENTIRE SYSTEM OR ANY PART THEREOF.
- 7.4.2. AN AIR TEST MAY BE SUBSTITUTED FOR THE WATER EXFILTRATION TEST, UPON APPROVAL OF THE ENGINEER.
- 7.4.3. MANHOLE LEAKAGE TEST SHALL NOT EXCEED FOUR GALLONS PER DAY PER UNIT. NO VISIBLE LEAKAGE ALLOWED.
- 7.4.4. SEWER PIPE LEAKAGE ALLOWABLE SHALL NOT EXCEED 150 GALLONS PER DAY PER INCH DIAMETER PER MILE IN A TWO HOUR TEST PERIOD FOR ANY SECTION TESTED. NO VISIBLE LEAKAGE SHALL BE ALLOWED.

8. SEWAGE FORCEMAIN

- 8.1. GENERAL:
- 8.1.1. NO CONNECTIONS TO THE EXISTING LINES SHALL BE MADE UNTIL PRESSURE TESTS HAVE BEEN PERFORMED AND THE SYSTEM IS ACCEPTABLE TO CITY OF HOLLYWOOD.
- 8.1.2. INITIAL BACK FILL (WITHIN 12" OF PIPE) FOR MAINS SHALL BE SAND WITH NO ROCKS LARGER THAN 3" IN DIAMETER.
- 8.2. MATERIALS:
- 8.2.1. DUCTILE IRON PIPE (D.I.P.) SHALL BE CLASS 50, CLASS 57 IN PAVED AREAS, EPOXY LINED AND BITUMINOUS COATED OUTSIDE, MANUFACTURED IN ACCORDANCE WITH ANSI/AWWA C104/A21.4-95 AND C151/A21.51-96 OR LATEST REVISION. THE PIPE SHALL WITHSTAND A WORKING PRESSURE OF 250 PSI. THE JOINTS SHALL BE BELL AND SPIGOT PUSH-ON TYPE.
- 8.2.2. FITTING FOR MAINS 4" AND LARGER SHALL BE D.I.P. MECHANICAL JOINT CONFORMING TO ANSI/AWWA C110/A21.10-98 OR LATEST REVISION.

- COMPLETE WITH GLANDS, GASKETS, BOLTS AND NUTS.
- 8.2.3. VALVES SHALL BE GATE VALVES (FOR WATER) OR PLUG VALVES (FOR SEWER), IRON BODY, FULLY RESILIENT SEAT, BRONZED MOUNTED NON-RIISING STEM, RATED AT 200 PSI AND CONFORMING TO ANSI/AWWA C509-94 OR LATEST REVISION, AND SHALL HAVE MECHANICAL JOINTS.
- 8.3. INSTALLATION:
- 8.3.1. VALVES SHALL BE INSTALLED WITH ADJUSTABLE CAST IRON VALVE BOXES WITH THE WORD "SEWER" CAST IN THE COVER.

9. STORM DRAINAGE

- 9.1. GENERAL:
- 9.1.1. DISTANCES AND LENGTHS SHOWN ON PLANS ARE REFERENCED TO THE CENTER OF STRUCTURES.
- 9.2. MATERIALS:
- 9.2.1. HIGH-DENSITY POLYETHYLENE (H.D.P.E.) SHALL MEET THE REQUIREMENTS OF ASTM F2619 / F2619M, LATEST REVISION.
- 9.2.2. REINFORCED CONCRETE PIPE (R.C.P.) SHALL MEET THE REQUIREMENTS OF ASTM C-76, LATEST REVISION. RUBBER GASKETS OR OTHER MANUFACTURER SUPPLIED JOINT SEALER SHALL BE USED.
- 9.2.3. CORRUGATED ALUMINUM PIPE (C.A.P.) SHALL BE HELICAL TYPE, CONFORMING TO ASTM B209 AND AASHTO M196, AS MANUFACTURED BY KAISER ALUMINUM, INC., OR APPROVED EQUAL. THE CORRUGATION PATTERN AND GAUGE SHALL BE AS FOLLOWS:
- | DIA. | CORRUGATION | GAUGE |
|------------|---------------|-------|
| 12" to 21" | 2 2/3" x 1/2" | 16 |
| 24" to 27" | 2 2/3" x 1/2" | 16 |
| 30" | 2 2/3" x 1/2" | 14 |
| 36" to 54" | 3" x 1" | 14 |
| 60" to 78" | 3" x 1" | 12 |
- 9.2.4. PIPE COUPLINGS FOR C.A.P. SHALL BE 12" WIDE (MINIMUM) 24" FOR 60" DIAMETER OR LARGER. SPLIT BANDS OF THE SAME ALLOY AS THE PIPE MAY BE ONE GAUGE LIGHTER THAN THE PIPE. POLYURETHANE OR OTHER MANUFACTURER SUPPLIED SEALANT SHALL BE USED WITH THE COUPLINGS.
- 9.2.5. FIELD JOINTS IN THE PIPE SHALL BE MADE WITH ALUMINUM SPIRAL RIB PIPE FORMED FROM COILED ALUMINUM SHEETS AND SHALL CONFORM TO ASTM B2-09 AND AASHTO M196, AS APPROVED BY KAISER ALUMINUM, INC., OR APPROVED EQUAL.
- 9.2.6. ALL DRAINAGE CATCH BASINS AND STRUCTURES SHALL BE PRECAST CONCRETE AS MANUFACTURED BY U.S. PRECAST CORPORATION, UNLESS OTHERWISE NOTED ON THE PLANS. BLOCK CATCH BASINS WILL BE ALLOWED ONLY WITH APPROVAL OF THE ENGINEER.

- 9.3. INSTALLATION:
- 9.3.1. PIPE SHALL BE PLACED ON A MINIMUM OF 8" STABLE GRANULAR MATERIAL FREE OF ROCK FORMATION AND OTHER FOREIGN FORMATIONS, AND CONSTRUCTED TO A UNIFORM GRADE AND LINE.
- 9.3.2. BACKFILL MATERIAL SHALL BE WELL GRADED GRANULAR MATERIAL, WELL TAMPED TO A HEIGHT OF 12 INCHES ABOVE PIPE AS SHOWN ON THE PLANS. TAMPING TO BE DONE IN LAYERS NOT TO EXCEED 12 INCHES.
- 9.3.3. PROVIDE A MINIMUM PROTECTIVE COVER OF 18 INCHES OVER STORM SEWER AND AVOID UNNECESSARY CROSSING BY HEAVY CONSTRUCTION VEHICLES DURING CONSTRUCTION.
- 9.3.4. THE CONTRACTOR SHALL NOTIFY CITY OF HOLLYWOOD ENGINEERING DIVISION AT LEAST 7 DAYS PRIOR TO THE START OF THE CONSTRUCTION AND INSPECTION.

10. PAVING AND SIDEWALKS

- 10.1. GENERAL:
- 10.1.1. ALL MUCK AND YIELDING MATERIAL WITHIN THE LIMITS OF CONSTRUCTION SHALL BE REMOVED AND REPLACED WITH CLEAN FILL MATERIAL WHICH SHALL BE COMPACTED AND SHAPED TO CONFORM TO THE REQUIRED SECTION. COMPACTED AREAS, AS SHOWN ON THE PLANS AND OR AS DETERMINED BY THE ENGINEER, SHALL BE COMPACTED TO NOT LESS THAN 98% OF MAXIMUM DENSITY AT OPTIMUM MOISTURE, AS DETERMINED BY AASHTO T-180, LATEST REVISION. AREAS TO BE STABILIZED, AS DETERMINED BY THE ENGINEER, SHALL HAVE A MINIMUM LBR=40.
- 10.1.2. ALL UNDERGROUND UTILITIES SHALL BE COMPLETED PRIOR TO CONSTRUCTION OF LIMEROCK BASE.
- 10.1.3. ALL EXISTING PAVEMENT, CUT OR DAMAGED BY CONSTRUCTION, SHALL BE PROPERLY RESTORED AT THE CONTRACTOR'S EXPENSE.
- 10.1.4. WHERE ANY PROPOSED PAVEMENT IS TO BE CONNECTED TO EXISTING PAVEMENT, THE EXISTING EDGE OF PAVEMENT SHALL BE SAW CUT.
- 10.2. MATERIALS:
- 10.2.1. BASE COURSE SHALL BE CRUSHED LIMEROCK WITH A MINIMUM OF 70% CARBONATES OF CALCIUM AND MAGNESIUM.
- 10.2.2. ASPHALT SURFACES SHALL BE TYPE S-III ASPHALTIC CONCRETE, UNLESS OTHERWISE SPECIFIED ON THE PLANS, TWO (2) SHALL BE A MINIMUM OF 1-1/2" THICK, A AND SHALL BE APPLIED IN (2) 3/4" LIFTS.
- 10.2.3. MINIMUM SIDEWALK CONSTRUCTION SHALL BE 4 INCH THICK CONCRETE, MINIMUM 3000psi COMPRESSIVE STRENGTH AT 28 DAYS. SAWCUT CONSTRUCTION JOINTS 5 FOOT O.C. WITHIN 48 HOURS OF PLACING. EXPANSION JOINTS SHALL BE 20 FOOT O.C.
- 10.2.4. CURBS AND GUTTERS: CONCRETE 3000psi COMPRESSIVE STRENGTH AT 28 DAYS. SAWCUT CONSTRUCTION JOINTS 10 FOOT O.C. WITHIN 48 HOURS OF PLACING.
- 10.2.5. REINFORCED CONCRETE SLABS SHALL BE CONSTRUCTED OF CLASS I CONCRETE WITH A MINIMUM STRENGTH OF 3,000 PSI AND SHALL BE REINFORCED WITH A 6" x 6" NO. 10 GAUGE WIRE MESH.
- 10.3. INSTALLATION:
- 10.3.1. SUBGRADE FOR PAVEMENT AREAS SHALL BE COMPACTED TO A MINIMUM OF 98% OF THE MAXIMUM DENSITY (AASHTO T-99(C)), AND SHALL HAVE A MINIMUM LBR 40.
- 10.3.2. BASE COURSE MATERIAL FOR PAVED AREAS SHALL BE AS SHOWN ON PLANS FOR VARIOUS LOCATIONS.
- 10.3.3. BASE COURSE MATERIAL FOR CURBS AND GUTTERS SHALL BE A MINIMUM THICKNESS OF 6 INCH.
- 10.3.4. BASE COURSE SHALL BE COMPACTED TO 98% OF THE MAXIMUM DENSITY AS PER AASHTO T-180 AND SHALL HAVE A MINIMUM LBR OF 100.
- 10.3.5. INSTALLATION OF THE WEARING SURFACE SHALL CONFORM WITH THE REQUIREMENTS OF THE D.O.T. STANDARD SPECIFICATIONS FOR TYPE S-3 ASPHALTIC CONCRETE.
- 10.4. TESTING:
- 10.4.1. THE FINISHED SURFACE OF THE BASE COURSE AND THAT OF THE WEARING SURFACE SHALL NOT VARY MORE THAN 1/4" FROM THE

- TEMPLATE. ANY IRREGULARITIES EXCEEDING THIS LIMIT SHALL BE CORRECTED.
- 10.4.2. DENSITY TESTS SHALL BE TAKEN BY AN INDEPENDENT TESTING LABORATORY CERTIFIED BY THE STATE OF FLORIDA, WHERE DIRECTED BY THE ENGINEER.
- 10.4.3. ALL TESTING COSTS (PAVING) SHALL BE PAID FOR BY THE CONTRACTOR.
- 10.4.4. DENSITY TESTS ON THE STABILIZED SUBGRADE SHALL BE SUPPLIED TO THE ENGINEER OF RECORD AND APPROVED BEFORE ANY LIMEROCK BASE IS CONSTRUCTED.
- 10.4.5. DENSITY TESTS AND AS-BUILTS ON THE FINISHED LIMEROCK BASE SHALL BE SUPPLIED TO THE ENGINEER OF RECORD, AND APPROVED BEFORE ANY ASPHALT PAVEMENT IS CONSTRUCTED.


11. PROJECT CLOSEOUT

- 11.1. CLEANING UP:
- 11.1.1. DURING CONSTRUCTION, THE PROJECT SITE AND ALL ADJACENT AREAS SHALL BE MAINTAINED IN A NEAT AND CLEAN MANNER, AND UPON FINAL CLEAN-UP THE PROJECT SITE SHALL BE LEFT CLEAR OF ALL SURPLUS MATERIAL OR TRASH. THE PAVED AREAS SHALL BE SWEEP BROOM CLEAN.
- 11.1.2. THE CONTRACTOR SHALL RESTORE OR REPLACE, WHEN AND AS DIRECTED, ANY PUBLIC OR PRIVATE PROPERTY DAMAGED BY HIS WORK, EQUIPMENT, OR EMPLOYEES, TO A CONDITION AT LEAST EQUAL TO THAT EXISTING IMMEDIATELY PRIOR TO THE BEGINNING OF OPERATIONS. TO THAT END, THE CONTRACTOR SHALL DO, AS REQUIRED, ALL NECESSARY HIGHWAY, DRIVEWAY, WALK AND LANDSCAPING WORK, USING SUITABLE MATERIALS AND METHODS SHALL BE USED FOR SUCH RESTORATION.
- 11.1.3. WHERE MATERIAL OR DEBRIS HAS WASHED OR FLOWED INTO OR HAS BEEN PLACED IN WATER COURSES, DITCHES, DRAINS, CATCH BASINS, OR ELSEWHERE AS A RESULT OF THE CONTRACTOR'S OPERATIONS, SUCH MATERIAL OR DEBRIS SHALL BE REMOVED AND SATISFACTORILY DISPOSPOSED OF DURING THE PROGRESS OF THE WORK, AND THE AREA KEPT IN A CLEAN AND NEAT CONDITION.
- 11.2. ALL PROPERTY MONUMENTS OR PERMANENT REFERENCES, REMOVED OR DESTROYED BY THE CONTRACTOR DURING CONSTRUCTION SHALL BE RESTORED BY A STATE OF FLORIDA REGISTERED LAND SURVEYOR AT THE CONTRACTOR'S EXPENSE.
- 11.3. ALL UNPAVED SURFACES DISTURBED AS A RESULT OF CONSTRUCTION ACTIVITIES SHALL BE RESTORED TO A CONDITION EQUAL TO OR BETTER THAN THAT WHICH EXISTED BEFORE THE CONSTRUCTION.

12. ENGINEER'S AS-BUILT REQUIREMENTS

- 12.1. AS-BUILTS OF WATER LINES SHALL INCLUDE THE FOLLOWING INFORMATION:
- 12.1.1. TOP OF PIPE ELEVATIONS EVERY 100 LF.
- 12.1.2. LOCATIONS AND ELEVATIONS OF ALL FITTINGS INCLUDING BENDS, TEES, GATE VALVES, DOUBLE DETECTOR CHECK VALVES, FIRE HYDRANTS, ETC.
- 12.1.3. ALL TIE INS TO EXISTING LINES SHALL BE AS-BUILT.
- 12.1.4. THE ENDS OF ALL WATER SERVICES AT THE BUILDINGS OR HOMES SHALL BE AS-BUILT OR WHERE THE WATER SERVICE TERMINATES.
- 12.2. AS-BUILTS OF ALL GRAVITY SANITARY SEWER LINES SHALL INCLUDE THE FOLLOWING INFORMATION:
- 12.2.1. RIMS, INVERTS AND LENGTH OF PIPING BETWEEN STRUCTURES AS WELL AS SLOPES.
- 12.2.2. THE STUB ENDS OF ALL SEWER LATERALS SHALL BE LOCATED AND IF THERE ARE ANY CLEANOUTS INSTALLED ON THE SEWER LATERALS THEN THE INVERT ELEVATION OF THESE CLEANOUTS SHALL BE OBTAINED.
- 12.2.3. LIFT STATION AS-BUILTS SHALL CONSIST OF TOP OF WET WELL ELEVATION, INVERT ELEVATION OF THE INCOMING LINE, BOTTOM OF THE WET WELL AND AS-BUILTS OF THE COMPOUND AREA.
- 12.3. AS-BUILTS OF ALL DRAINAGE LINES SHALL INCLUDE THE FOLLOWING INFORMATION:
- 12.3.1. RIMS, INVERTS AND LENGTH OF PIPING BETWEEN STRUCTURES AND WEIR ELEVATIONS IF APPLICABLE.
- 12.3.2. THE SIZE OF THE PIPING SHALL BE VERIFIED BY THE SURVEY CREW AT THE TIME OF AS-BUILT.
- 12.3.3. DRAINAGE WELL STRUCTURE AS-BUILTS SHALL INCLUDE, BUT NOT BE LIMITED TO, TOP OF CASING ELEVATION, TOP AND BOTTOM ELEVATIONS OF THE BAFFLE WALLS, RIM ELEVATIONS AND INVERTS OF PIPING.
- 12.4. ALL ROCK AS-BUILTS FOR PARKING LOT AREAS SHALL CONSIST OF THE FOLLOWING:
- 12.4.1. ROCK ELEVATIONS AT ALL HIGH AND LOW POINTS, AND AT ENOUGH INTERMEDIATE POINTS TO CONFIRM SLOPE CONSISTENCY.
- 12.4.2. ROCK AS-BUILTS SHALL BE TAKEN AT ALL LOCATIONS WHERE THERE IS A FINISH GRADE ELEVATION SHOWN ON THE DESIGN PLANS.
- 12.4.3. ALL CATCH BASIN AND MANHOLE RIM ELEVATIONS SHALL BE SHOWN.
- 12.4.4. ELEVATIONS AROUND ISLAND AREAS WILL ALSO BE REQUIRED.
- 12.4.5. WHERE CONCRETE IS TO BE USED AS A FINISHED PRODUCT FOR THE ROADWAY OR PARKING LOT ROCK AS-BUILTS WILL BE REQUIRED AS INDICATED ABOVE AS WELL AS AS-BUILTS ON THE FINISHED CONCRETE AT LOCATIONS WHERE THERE IS A FINISH GRADE ELEVATION SHOWN ON THE DESIGN PLANS. F AS-BUILTS SHALL BE TAKEN ON ALL PAVED AND UNPAVED SVALES, PRIOR TO PLACEMENT OF ASPHALT OR TOPSOIL/SOD, AT ENOUGH INTERMEDIATE POINTS TO CONFIRM SLOPE CONSISTENCY AND CONFORMANCE TO THE PLAN DETAILS.
- 12.5. RETENTION AREA AS-BUILT ELEVATIONS SHALL BE TAKEN AT THE BOTTOM OF THE RETENTION AREA AND AT THE TOP OF BANK, IF THERE ARE CONTOURS INDICATED ON THE DESIGN PLANS, THEN THEY SHALL BE AS-BUILT AS WELL.
- 12.6. UPON COMPLETION OF THE WORK, THE CONTRACTOR SHALL PREPARE RECORD DRAWINGS, "AS-BUILTS", ON FULL SIZE, 24" X 36" REPRODUCIBLE MATERIAL WHERE WATER AND SEWER INFORMATION ARE ON THE SAME PAGE THE WATER LINE SHALL BE AS-BUILT BY STATION AND OFFSET UTILIZING THE SANITARY SEWER SYSTEM AS THE BASE LINE. IF IT IS NOT PRACTICAL TO UTILIZE THE SEWER SYSTEM AS A BASE LINE, THEN THE SURVEYOR SHALL CONTACT THE ENGINEER OF RECORD SO THAT A SUBSTITUTE BASELINE MAY BE CHOSEN. ALL RECORD DRAWING, "AS-BUILT", INFORMATION SHALL BE PUT ON THE LATEST ENGINEERING DRAWING. ONE (1) SET OF REPRODUCIBLE RECORD DRAWINGS, "AS-BUILTS", SHALL BE SUBMITTED ALONG WITH EIGHT (8) SETS OF BLUE OR BLACKLINE DRAWINGS. THESE DRAWINGS SHALL BE SIGNED AND SEALED BY A FLORIDA REGISTERED PROFESSIONAL LAND SURVEYOR. ADDITIONALLY, AN ELECTRONIC COPY OF THESE RECORD DRAWINGS, "AS-BUILTS", SHALL BE SUBMITTED TO THE ENGINEER OF RECORD IN AUTOCAD, VERSION 2014.

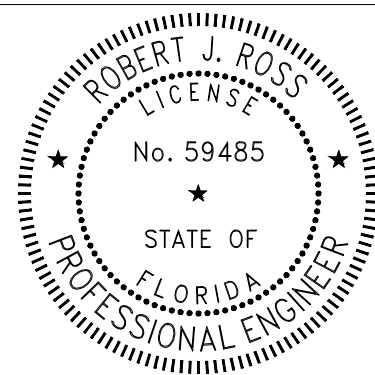
100% CONSTRUCTION DOCUMENTS

RE	4/14/23		3/27/23	CITY OF HOLLYWOOD – TAB SUBMITTAL COMMENTS	
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RE	4/14/23				
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CERTIFICATE OF AUTHORIZATION No. 9808

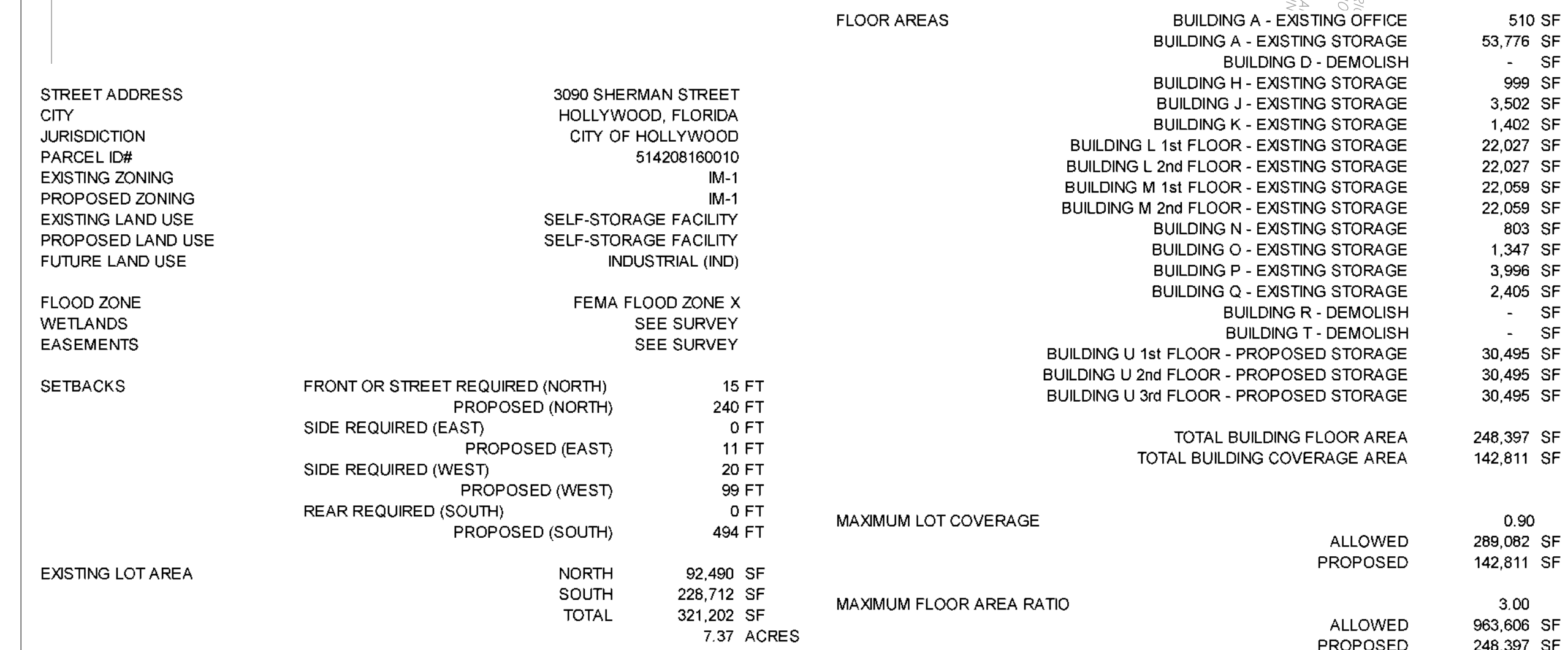
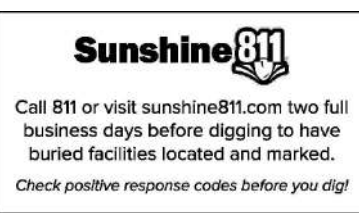


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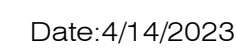
SHEET No. C-1



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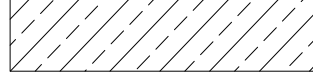

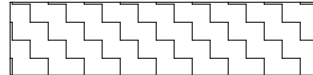

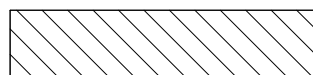





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CIVIL SITE PLAN

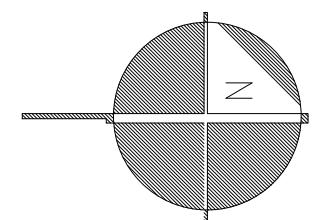
SCALE: 1"=30'

SHEET No. C-1.1

LEGEND			
	PROPERTY LINE		EXISTING ASPHALT TO BE REPAVED
	EXISTING DRAINAGE		EXISTING ASPHALT TO BE REPAVED
	EXISTING WATER		EXISTING BUILDING TO BE REMOVED
	EXISTING UTILITIES TO BE REMOVED		EXISTING ASPHALT AND D-CURB TO BE REMOVED
	EXISTING CONCRETE TO BE REMOVED		
	EXISTING SODD TO BE REMOVED		EXISTING SODD TO REMAIN

NOTES:

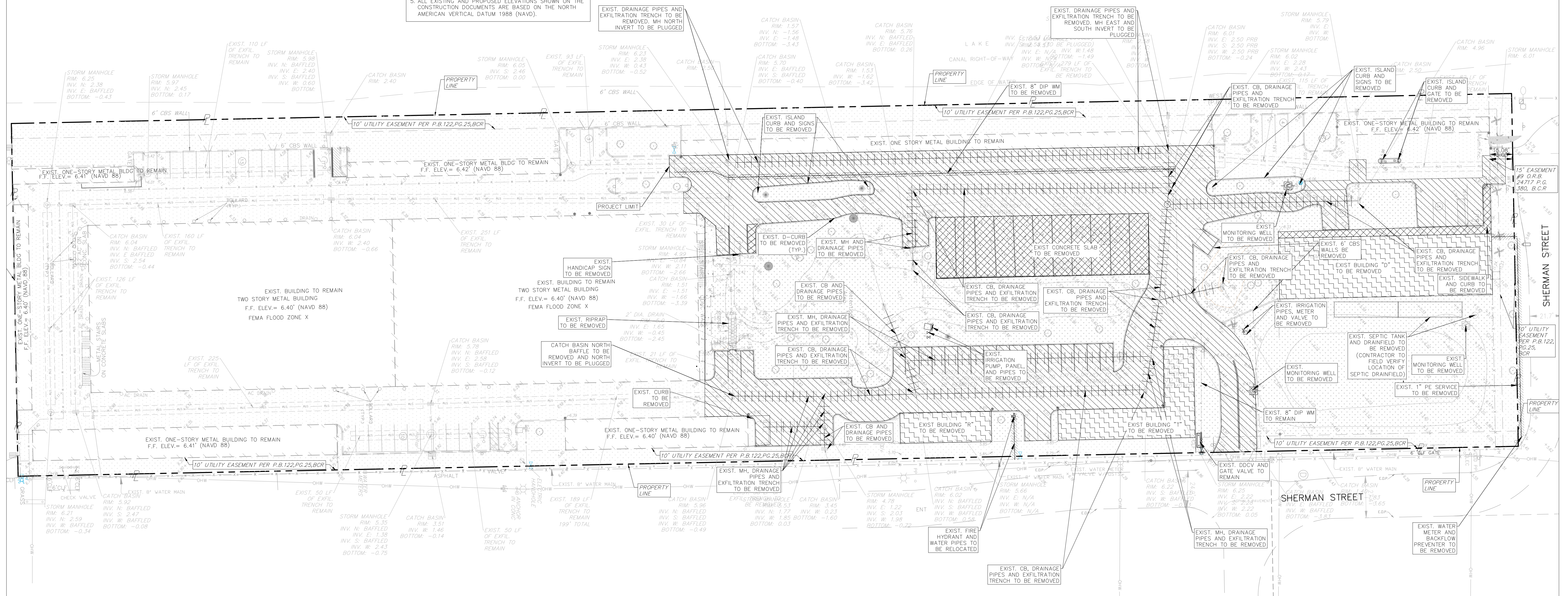
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
SCALE: 1"=30'



Call 811 or visit sunshine811.com two full business days before digging to have buried facilities located and marked.



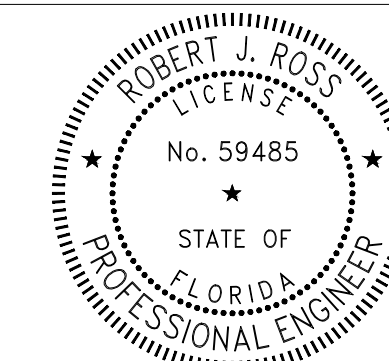
100% CONSTRUCTION DOCUMENTS

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CERTIFICATE OF AUTHORIZATION No. 9808



Date: 4/14/2023

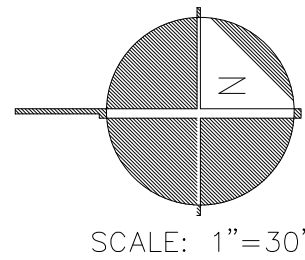
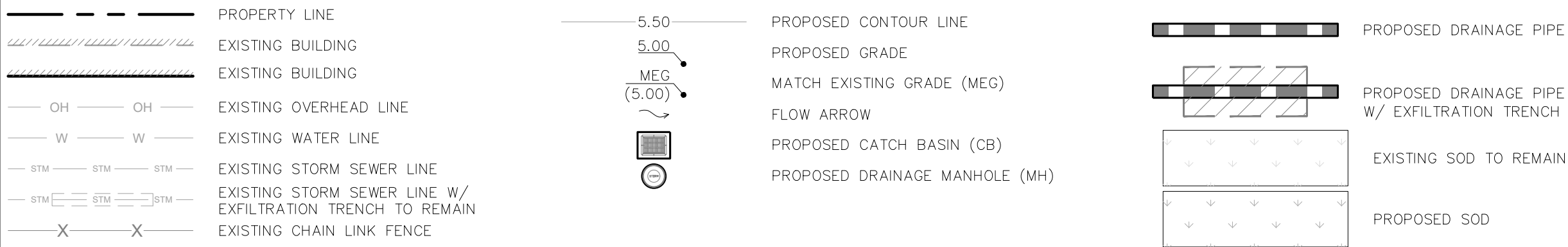
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SCALE: 1" = 30'

SHEET No. C-2

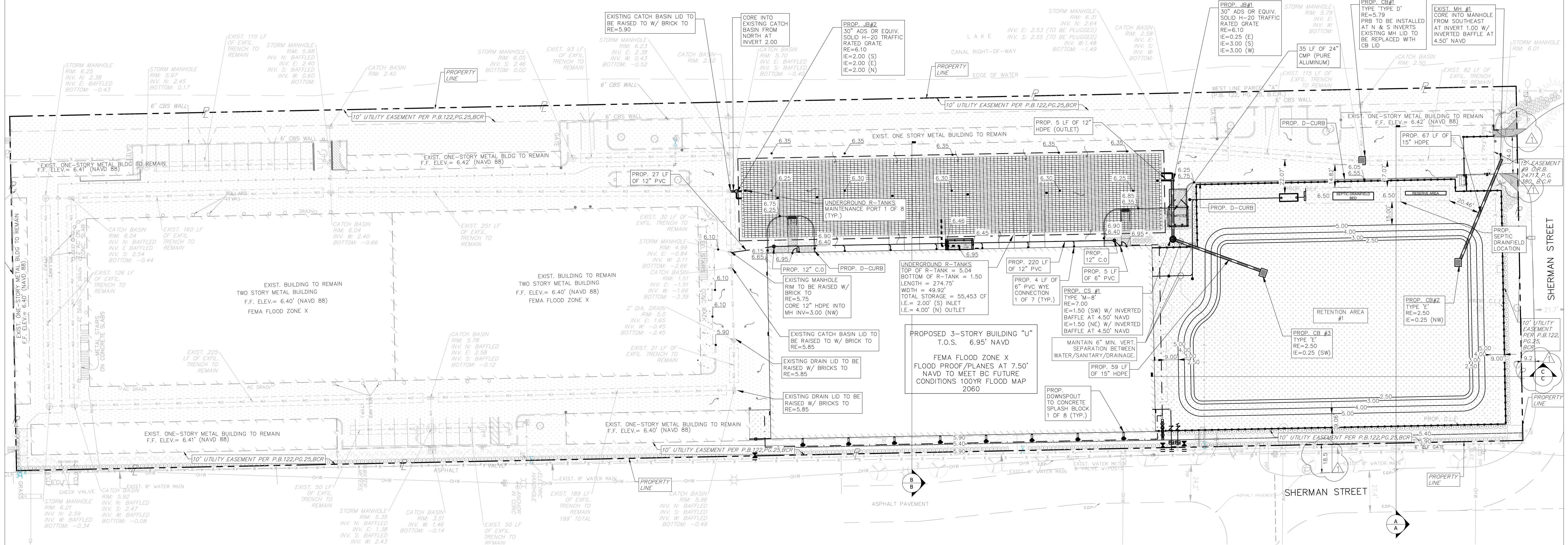
DEMOLITION PLAN

LEGEND



Sunshine811

Call 811 or visit sunshine811.com two full business days before digging to have buried facilities located and marked. Check positive response codes before you dig!



NOTES:

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- ANY LIP FROM $\frac{1}{4}$ " BUT NOT GREATER THAN $\frac{1}{2}$ " WILL BE BEVELED TO MEET ADA REQUIREMENTS

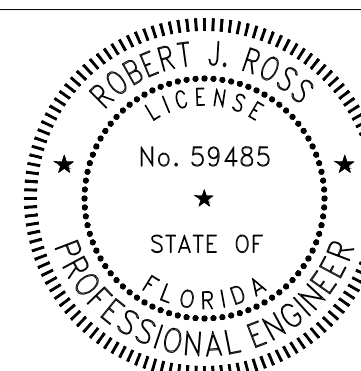
100% CONSTRUCTION DOCUMENTS

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GRADING AND DRAINAGE PLAN

SCALE: 1"=30'

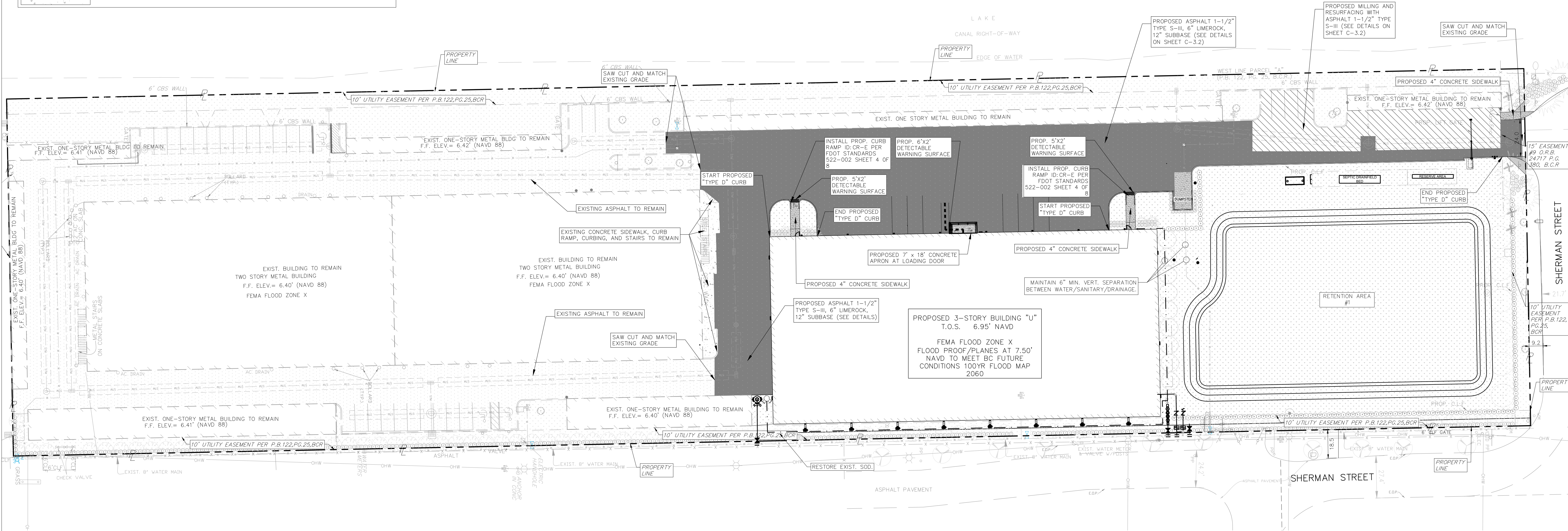
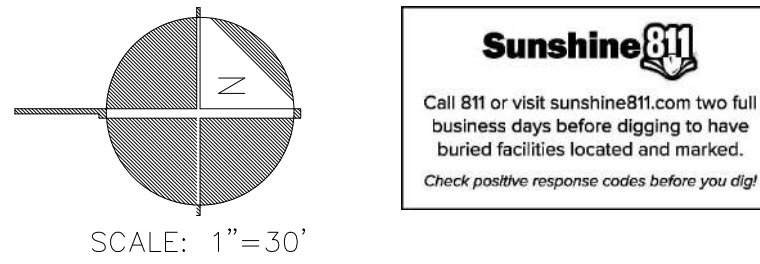
SHEET No. c-3

LEGEND

	PROPERTY LINE		EXISTING SOD TO REMAIN
	EXISTING BUILDING		PROPOSED SOD
	EXISTING OVERHEAD LINE		PROPOSED MILLING AND RESURFACING WITH 1-1/2" OF TYPE S-III ASPHALT
	EXISTING WATER LINE		PROPOSED CONCRETE
	EXISTING SANITARY SEWER LINE		PROPOSED ASPHALT 1-1/2" TYPE S-III, 6" LIMEROCK, 12" SUBBASE (SEE DETAILS)
	EXISTING STORM SEWER LINE		
	EXISTING CHAIN LINK FENCE		
	EXISTING ASPHALT TO REMAIN		
	EXISTING CONCRETE TO REMAIN		

NOTES:

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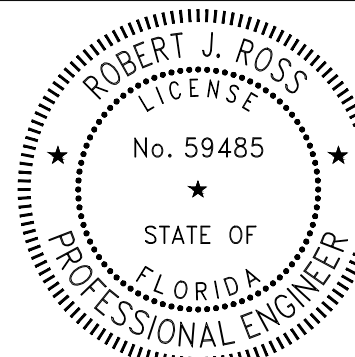
100% CONSTRUCTION DOCUMENTS

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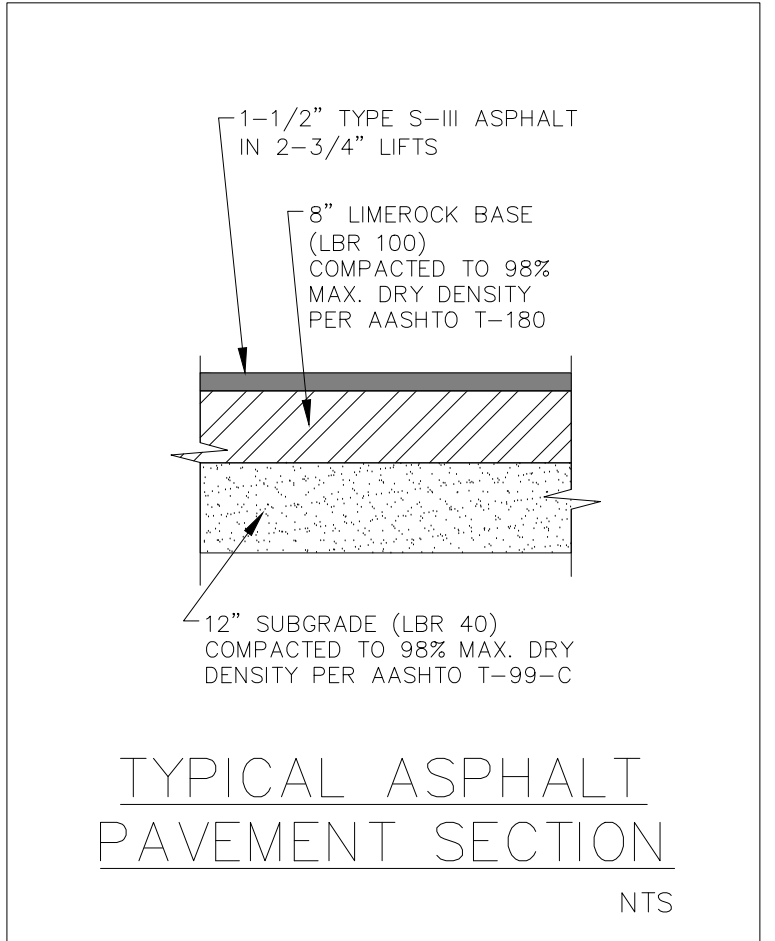
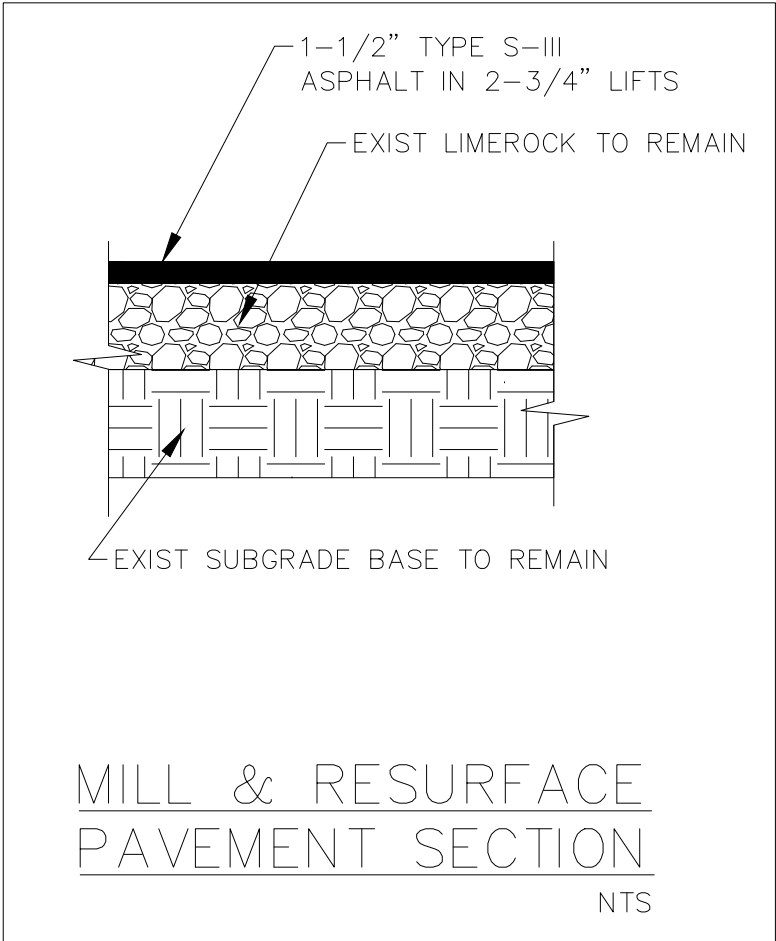
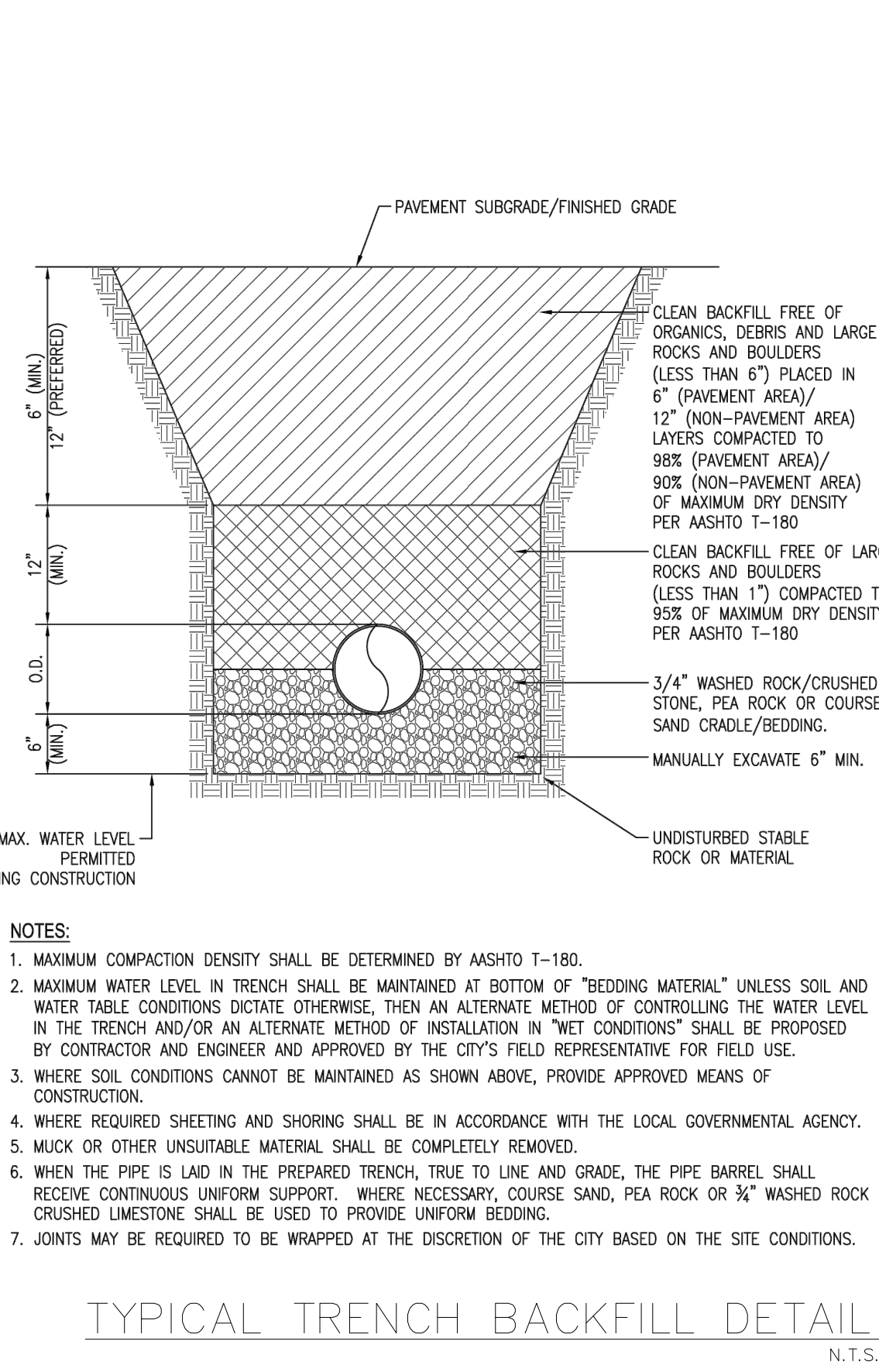
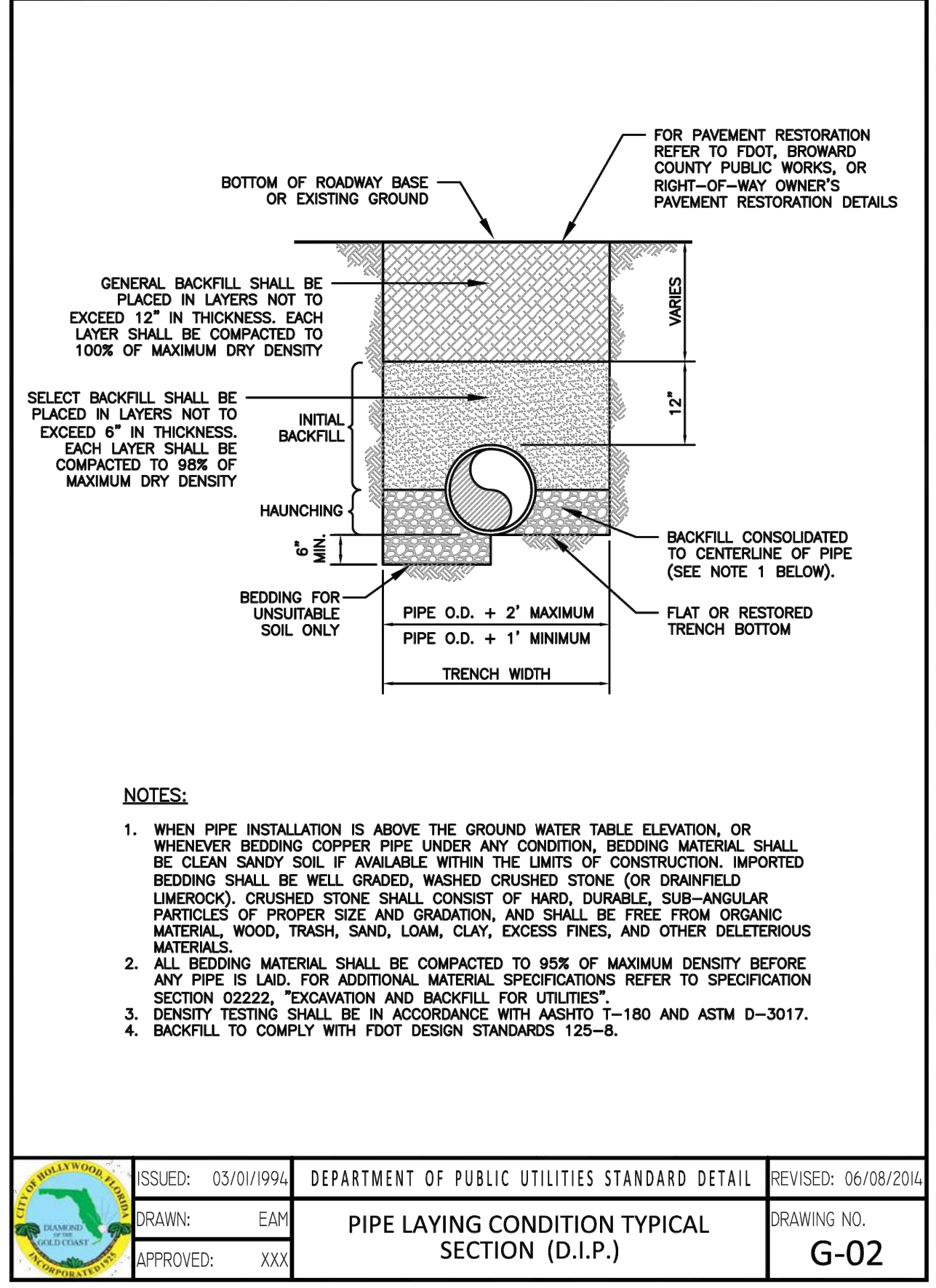
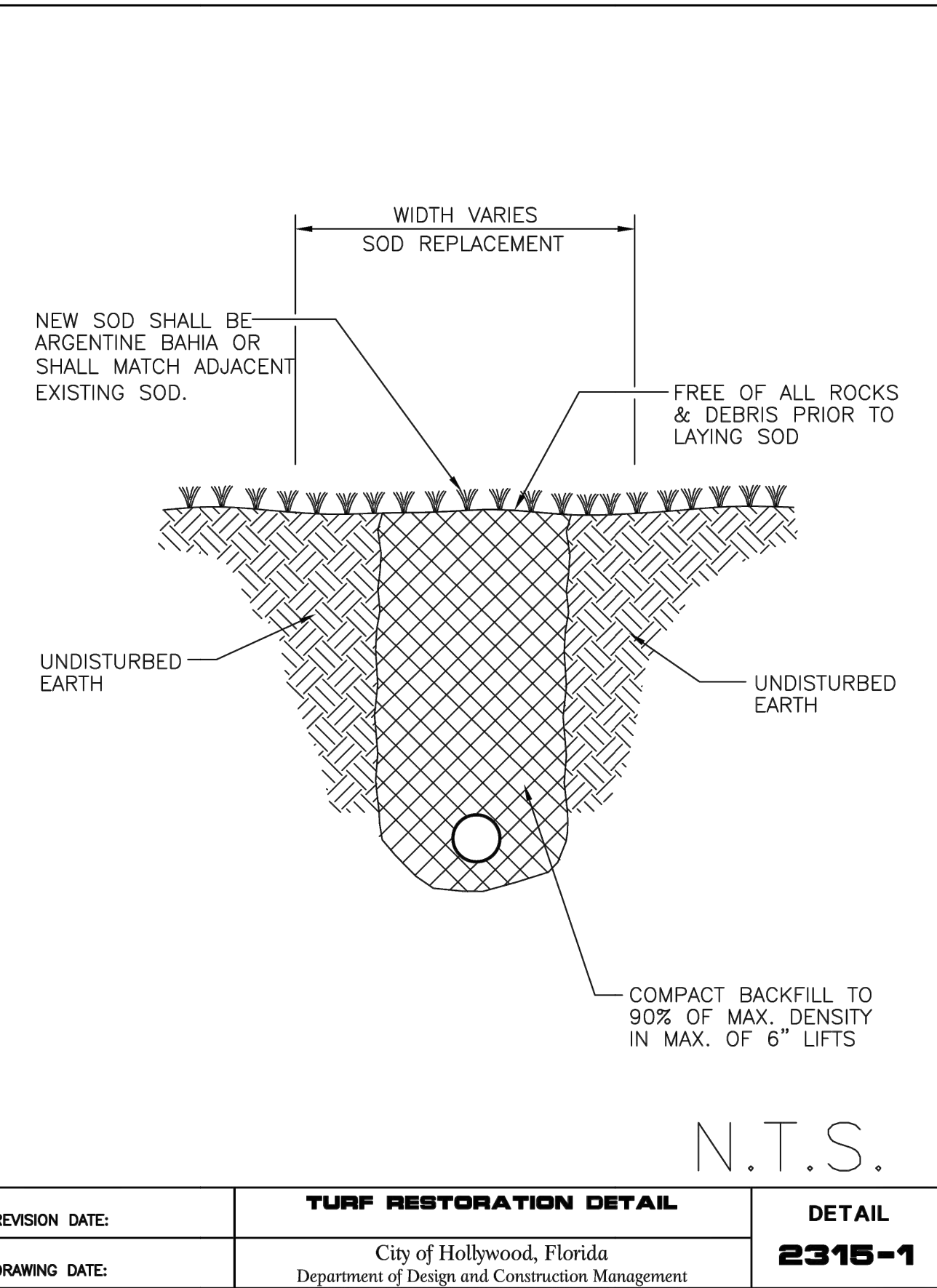
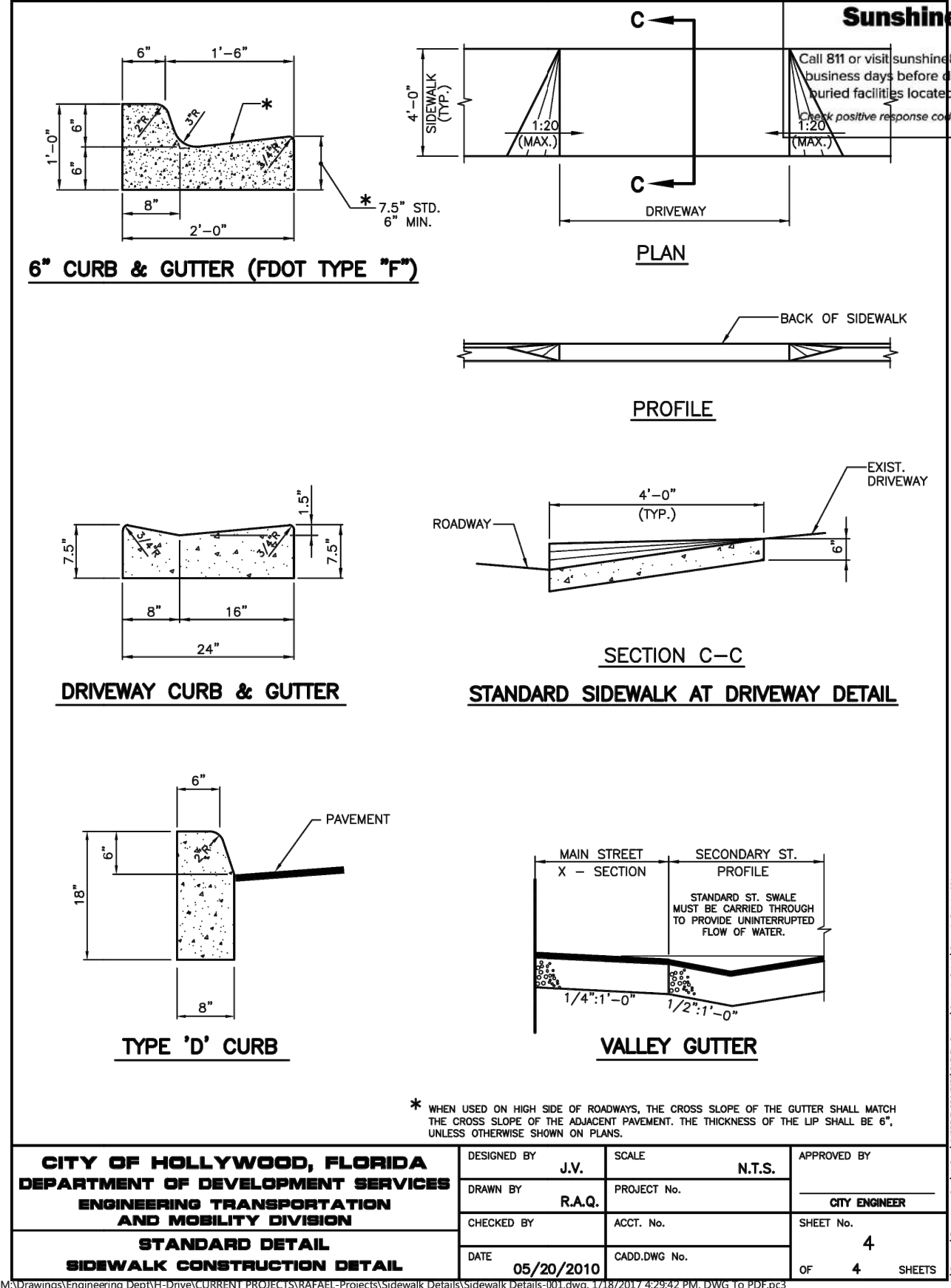
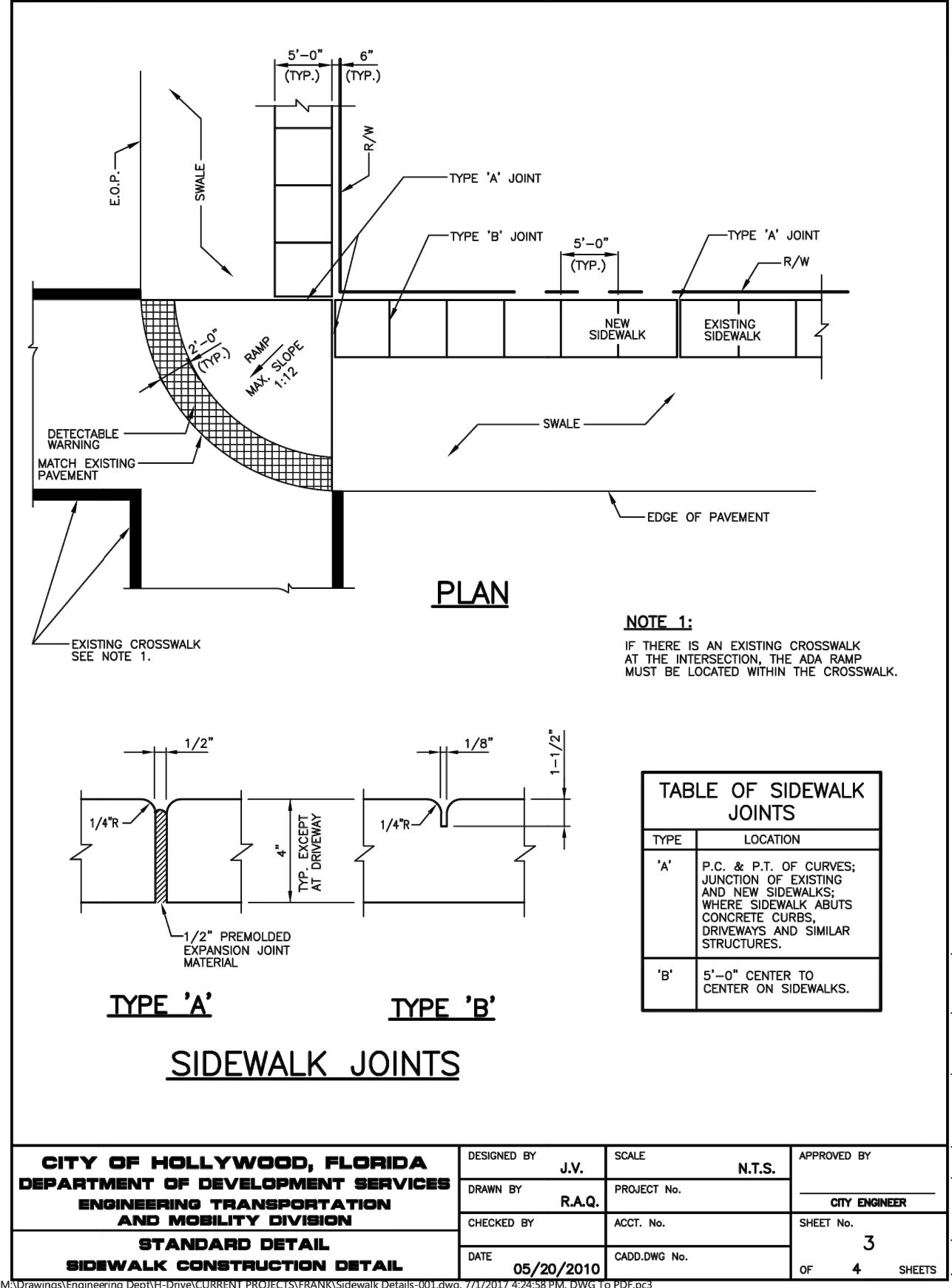
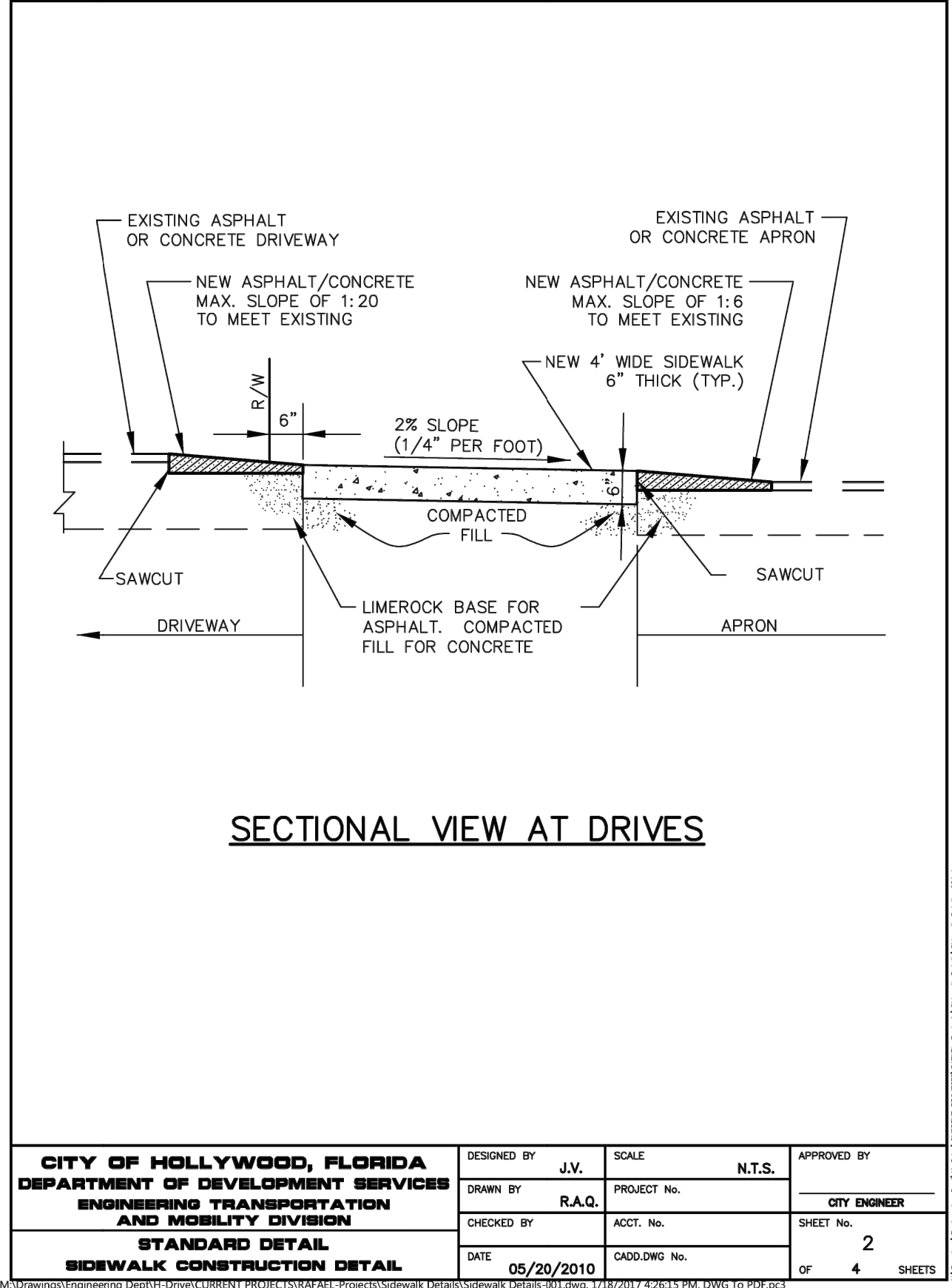
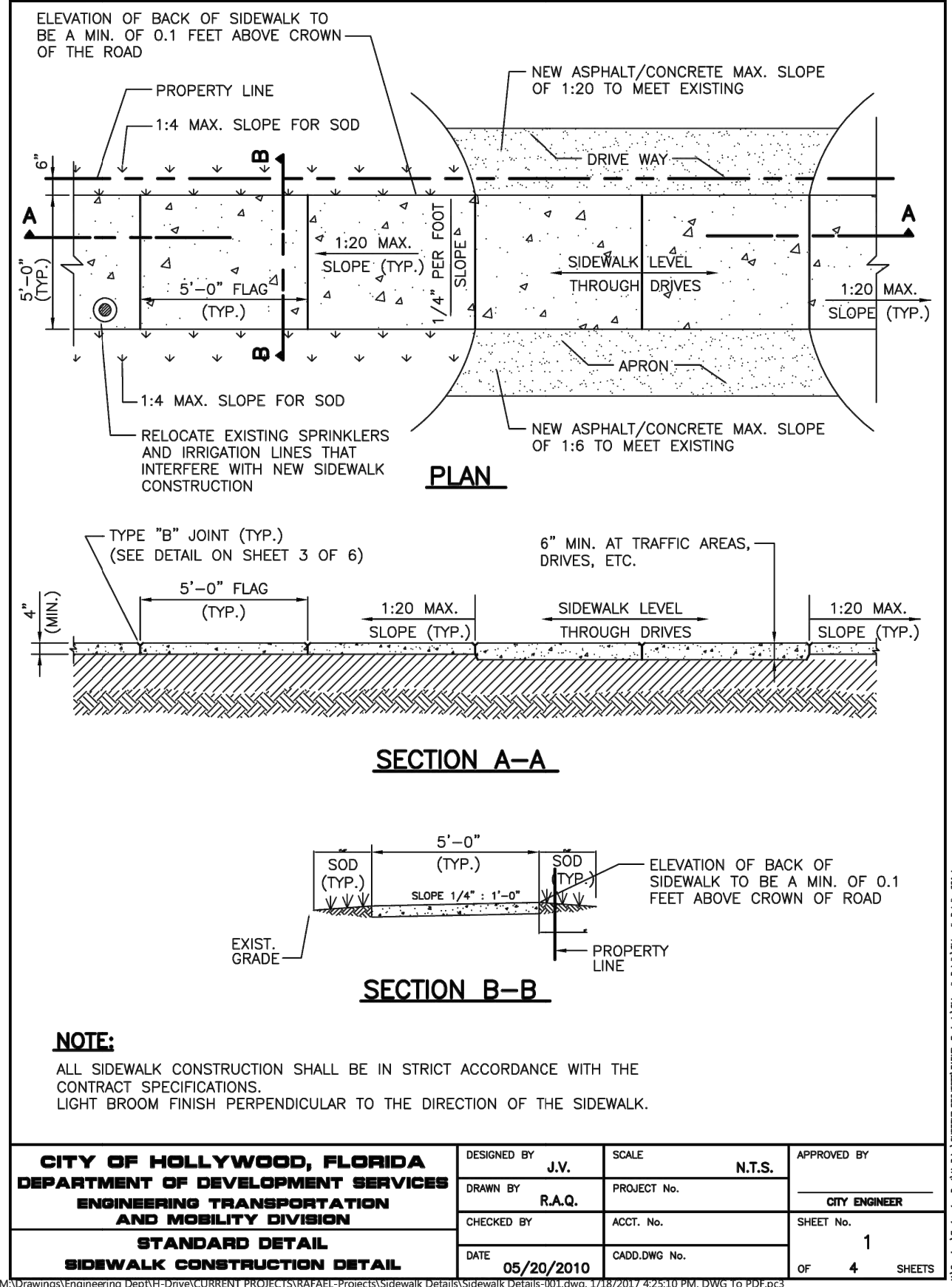
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PAVING SIDEWALK AND CURBING PLAN

SCALE: 1"=30'

SHEET No. c-3.1



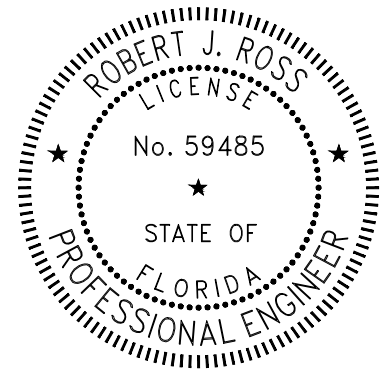
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SAFEGUARD STORAGE
3090 SHERMAN STREET
HOLLYWOOD, FL 33021



3325 S. UNIVERSITY DRIVE, SUITE 111
DAVIE, FLORIDA 33328
(954)318-0624 (954)358-0190 FAX
CERTIFICATE OF AUTHORIZATION No. 9808



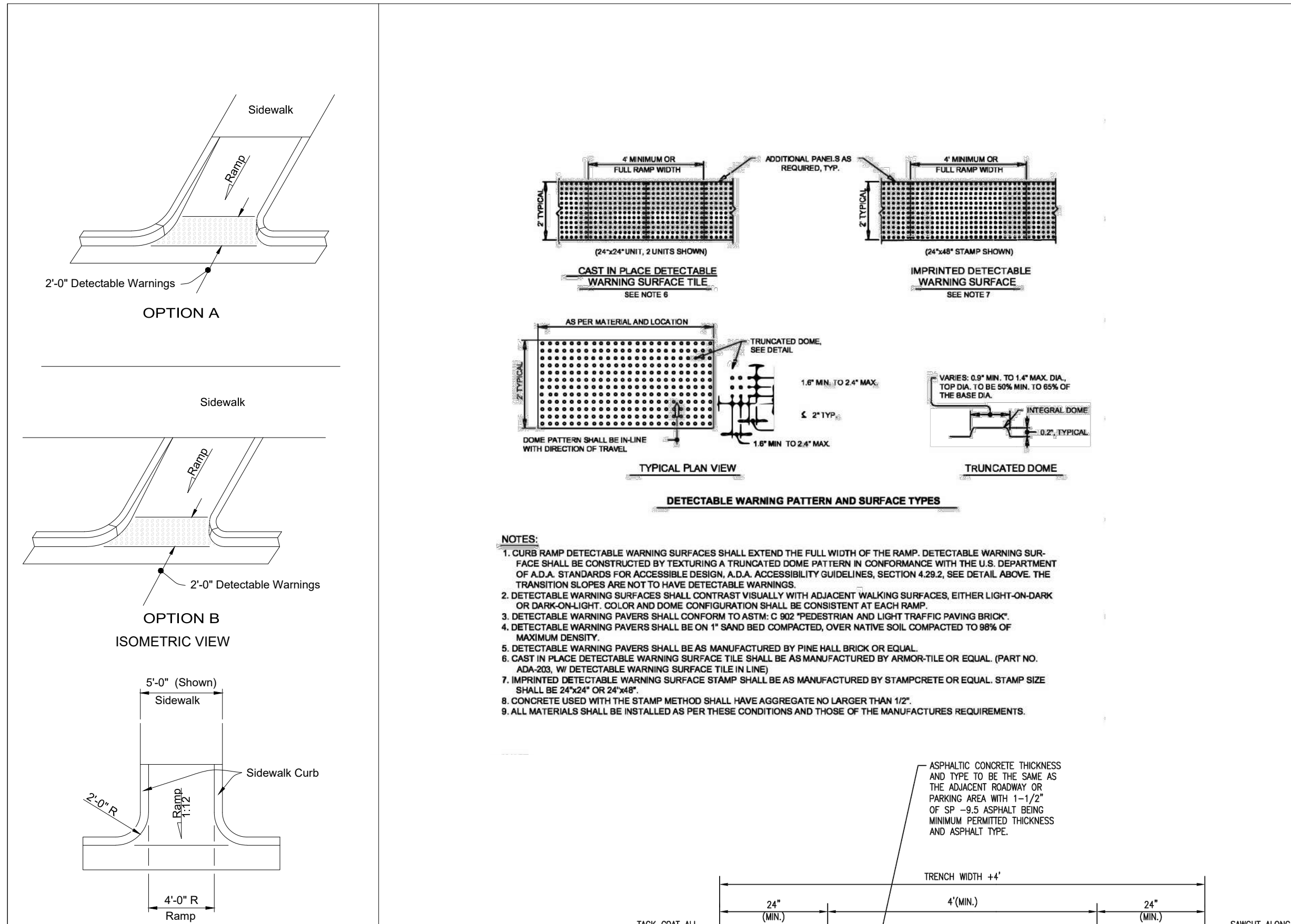
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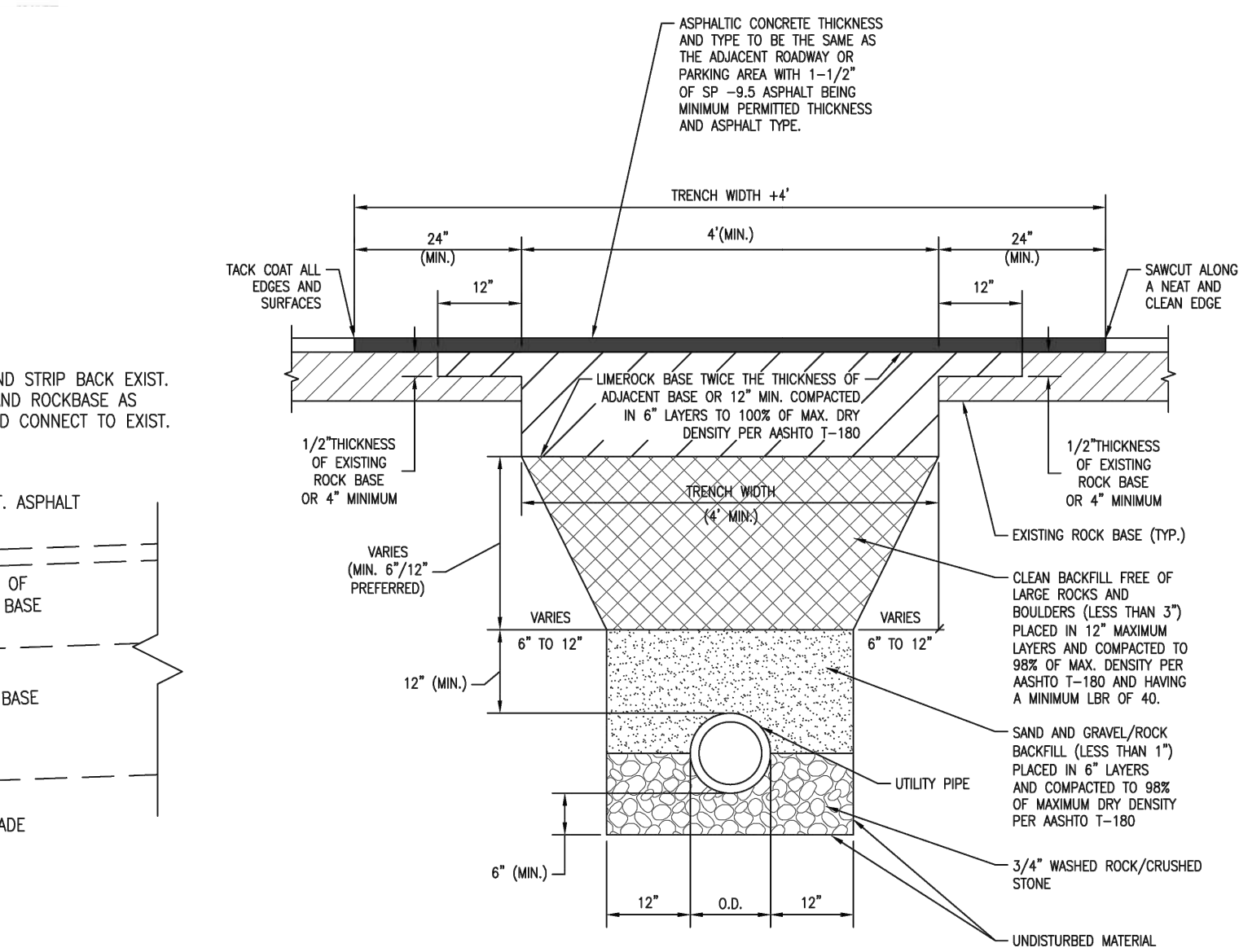
PAVING GRADING AND DRAINAGE DETAILS
(SHEET 1 OF 3)

SCALE: NTS

SHEET No. C-3.2



- NOTES:**
1. CURB RAMP DETECTABLE WARNING SURFACES SHALL EXTEND THE FULL WIDTH OF THE RAMP. DETECTABLE WARNING SURFACE SHALL BE CONSTRUCTED BY TEXTURING A TRUNCATED DOME PATTERN IN CONFORMANCE WITH THE U.S. DEPARTMENT OF A.D.A. STANDARDS FOR ACCESSIBLE DESIGN, A.D.A. ACCESSIBILITY GUIDELINES, SECTION 4.29.2, SEE DETAIL ABOVE. THE TRANSITION SLOPES ARE NOT TO HAVE DETECTABLE WARNINGS.
 2. DETECTABLE WARNING SURFACES SHALL CONTRAST VISUALLY WITH ADJACENT WALKING SURFACES, EITHER LIGHT-ON-DARK OR DARK-ON-LIGHT. COLOR AND DOME CONFIGURATION SHALL BE CONSISTENT AT EACH RAMP.
 3. DETECTABLE WARNING PAVERS SHALL CONFORM TO ASTM C 802 "PEDESTRIAN AND LIGHT TRAFFIC PAVING BRICK".
 4. DETECTABLE WARNING PAVERS SHALL BE ON 1" SAND BED COMPACTED OVER NATIVE SOIL COMPACTED TO 95% OF MAXIMUM DENSITY.
 5. DETECTABLE WARNING PAVERS SHALL BE AS MANUFACTURED BY PINE HILL BRICK OR EQUAL.
 6. CAST IN PLACE DETECTABLE WARNING SURFACE TILE SHALL BE AS MANUFACTURED BY ARMOR-TILE OR EQUAL (PART NO. ADA-203, W/ DETECTABLE WARNING SURFACE TILE IN LINE).
 7. IMPRINTED DETECTABLE WARNING SURFACE STAMP SHALL BE AS MANUFACTURED BY STAMPONET OR EQUAL. STAMP SIZE SHALL BE 24"X24" OR 24"X6".
 8. CONCRETE USED WITH THE STAMP METHOD SHALL HAVE AGGREGATE NO LARGER THAN 1/2".
 9. ALL MATERIALS SHALL BE INSTALLED AS PER THESE CONDITIONS AND THOSE OF THE MANUFACTURER'S REQUIREMENTS.



- NOTES:**
1. PIPES SHALL TERMINATE 2 FEET FROM END OF TRENCH OR CONNECT TO ADDITIONAL CATCH BASINS AS REQUIRED (CAP ENDS OF PIPE).
 2. SIDES, TOP AND BOTTOM OF TRENCH TO BE LINED WITH TRENCH LINER MATERIAL OVERLAP LINER A MINIMUM OF TWO FEET AT TOP OF TRENCH.

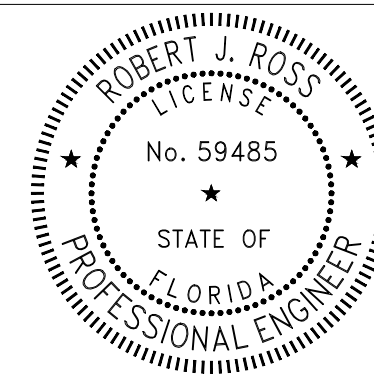
EXISTING EXFILTRATION TRENCH DETAIL

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PAVING GRADING AND DRAINAGE DETAILS (SHEET 2 OF 3)

SCALE: NTS

SHEET No. C-3.3

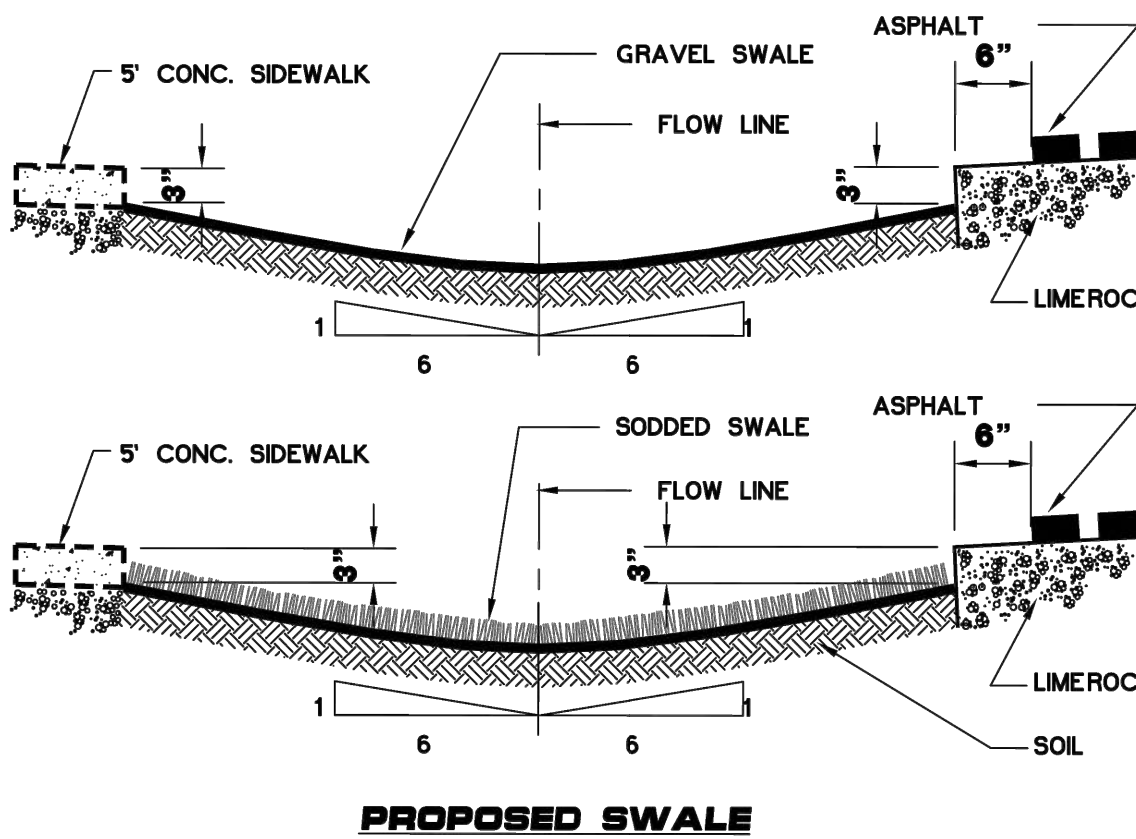
SWALE GRADING SPECIFICATIONS:

GRASS REPLACEMENT TO MATCH LOT WHICH SWALE FRONTS.

SOIL AND GRASS TO BE HAULED OFF TO DUMP SITE.

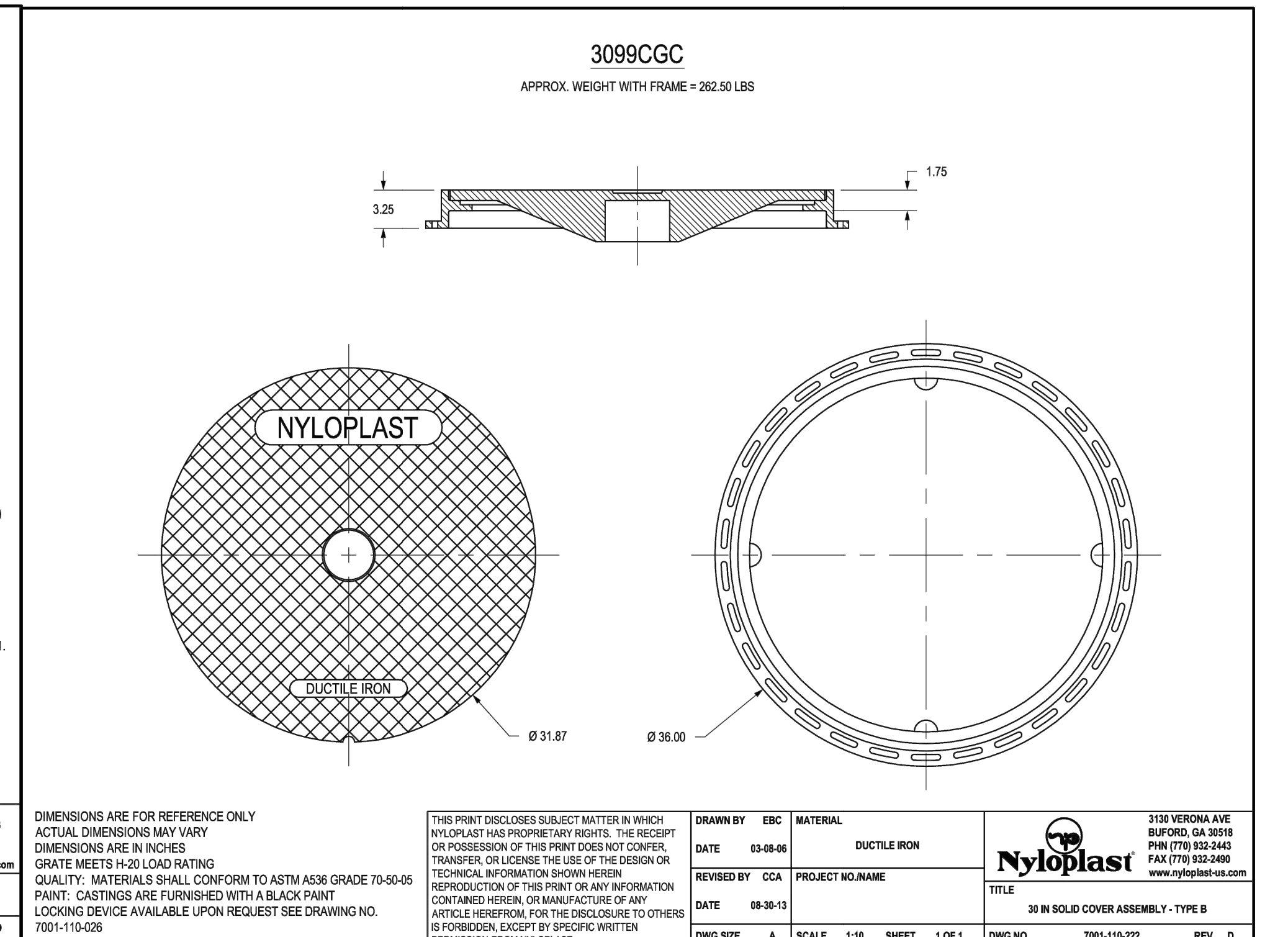
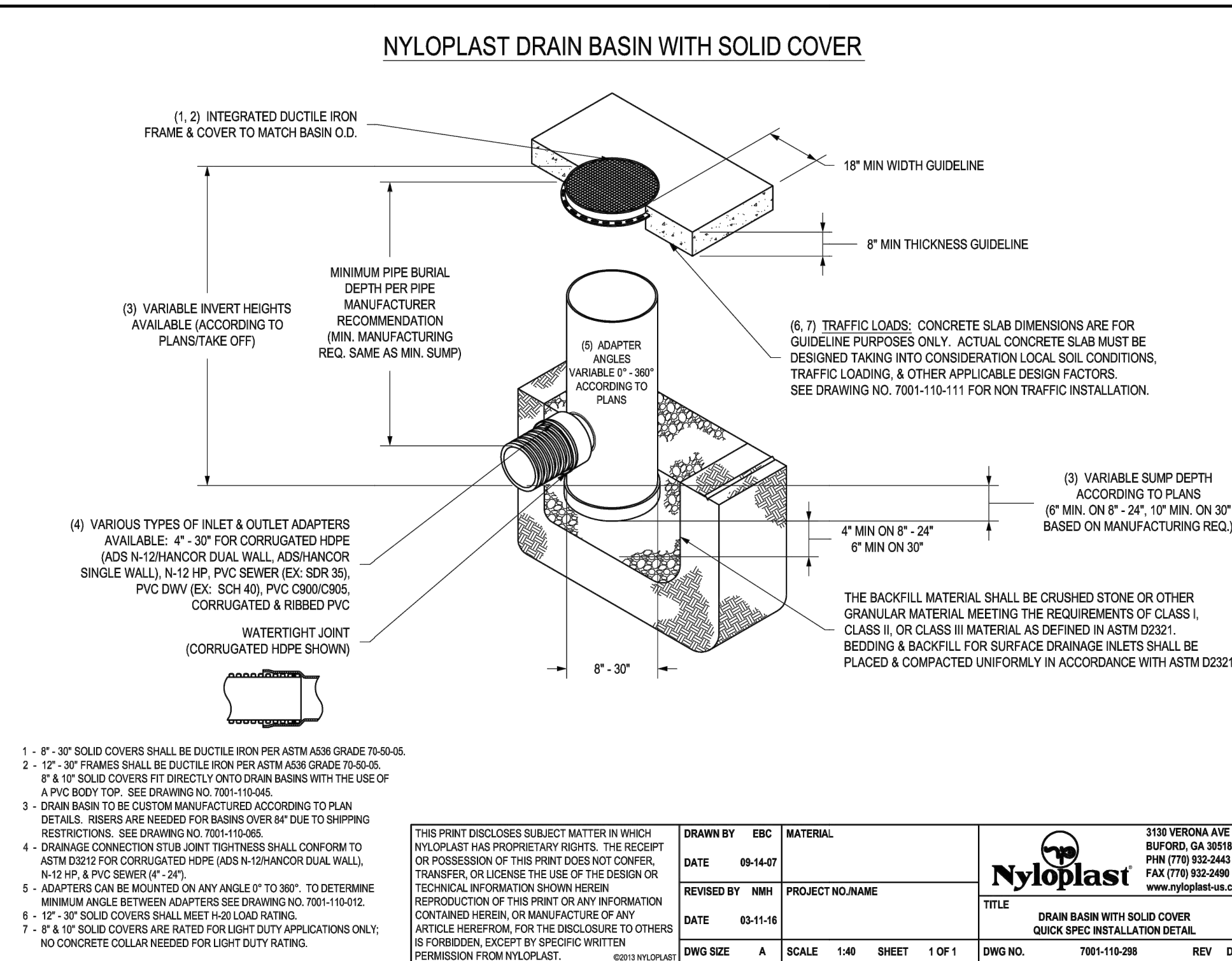
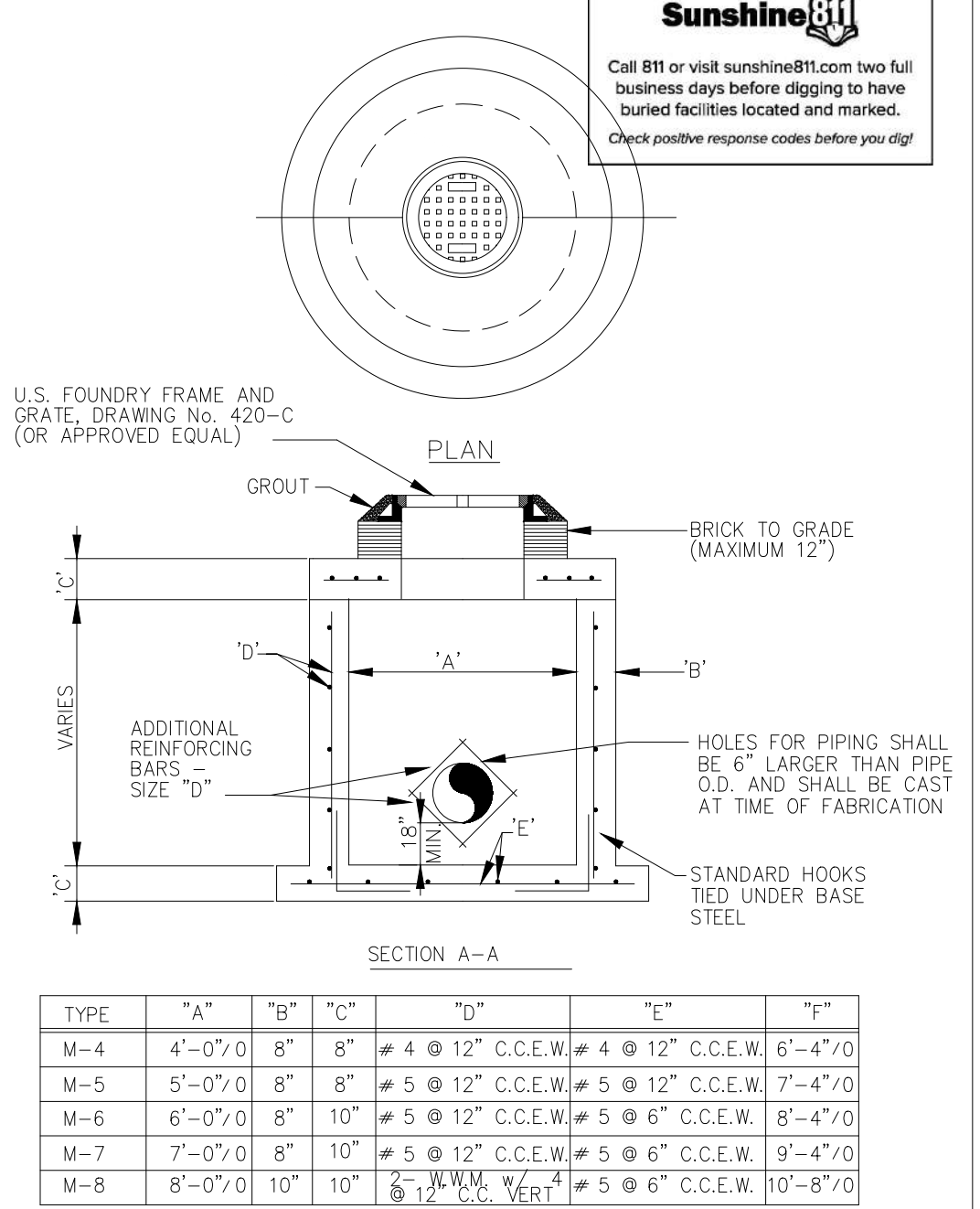
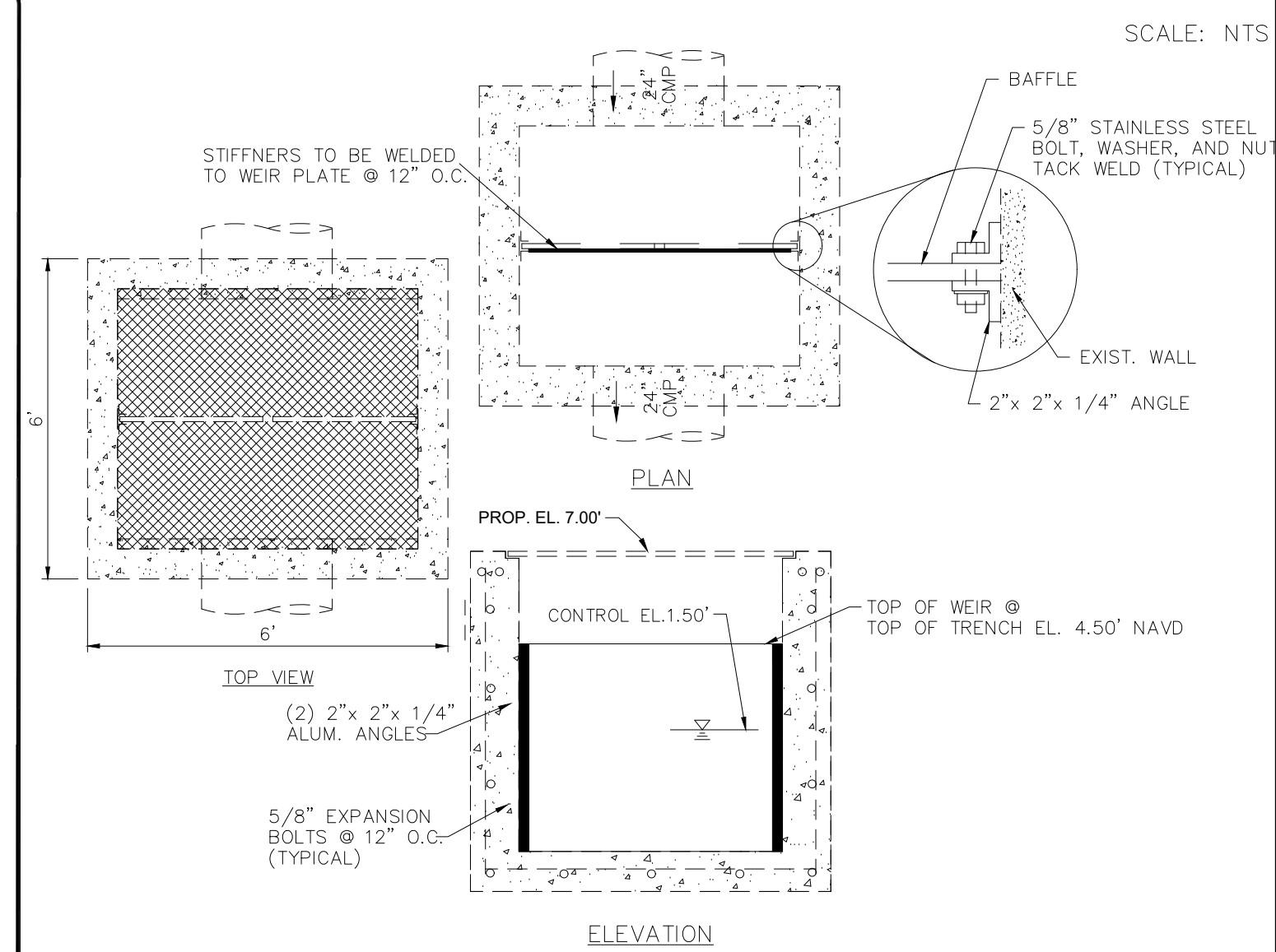
SPRINKLER SYSTEM TO BE REMOVED, LOWERED, AND RECONNECTED WHERE APPLICABLE.

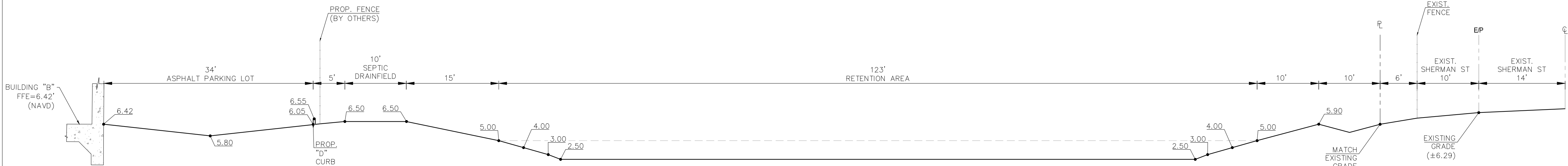
UNDERGROUND LOCATIONS AND ALL OTHER SAFETY FACTORS, ARE THE CONTRACTORS RESPONSIBILITIES.



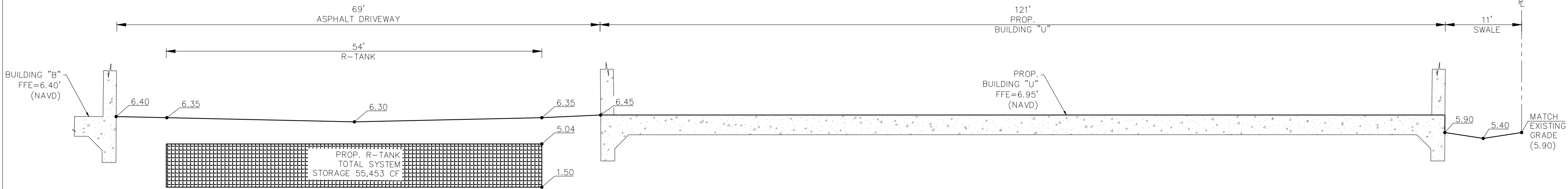
ENGINEERING SUPPORT SERVICES
PUBLIC UTILITIES DEPARTMENT
CITY OF HOLLYWOOD, FLORIDA

SWALE GRADING SPECIFICATIONS

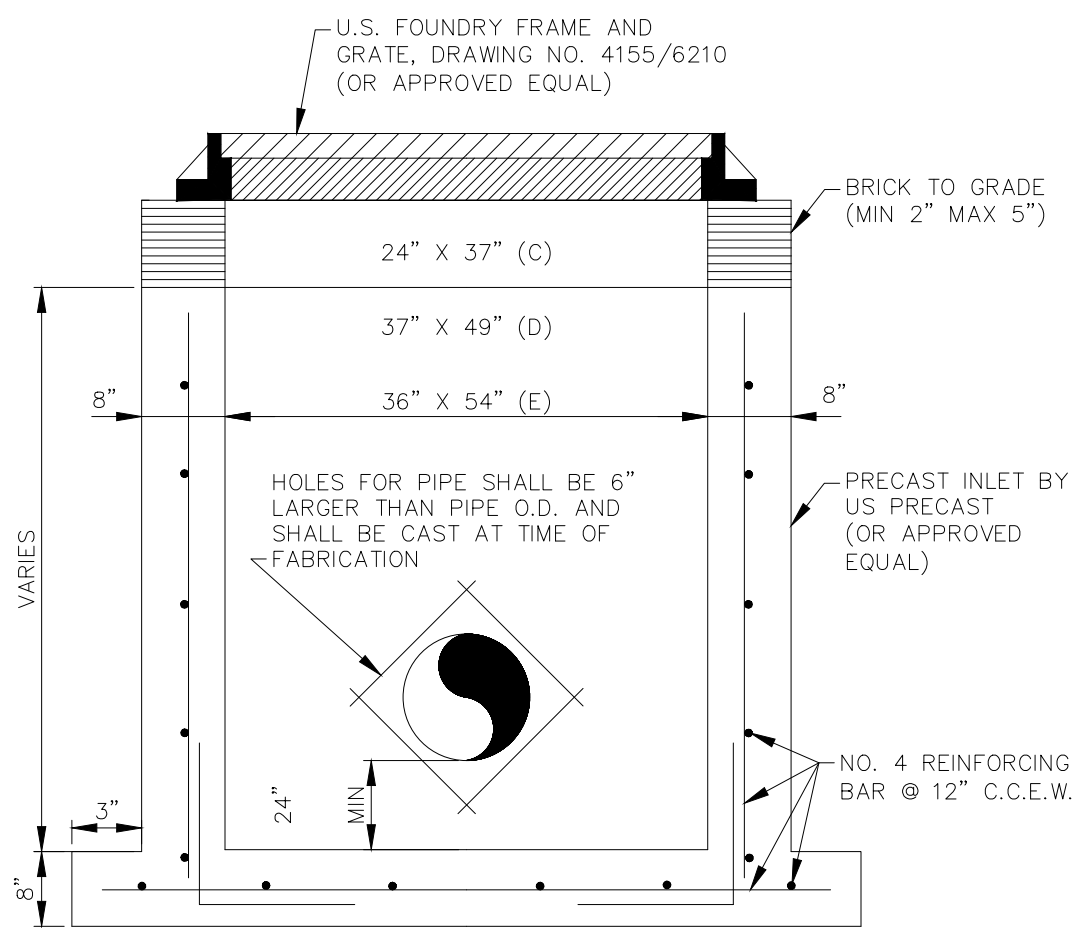




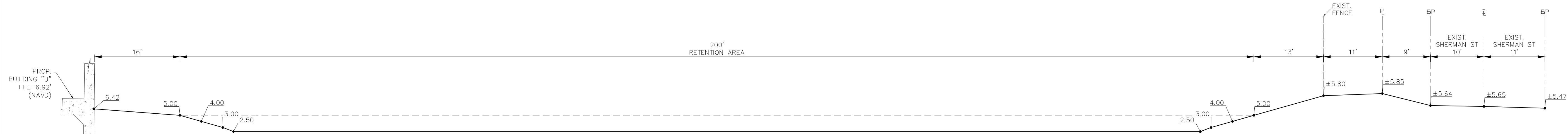
CROSS SECTION A-A
N.T.S.



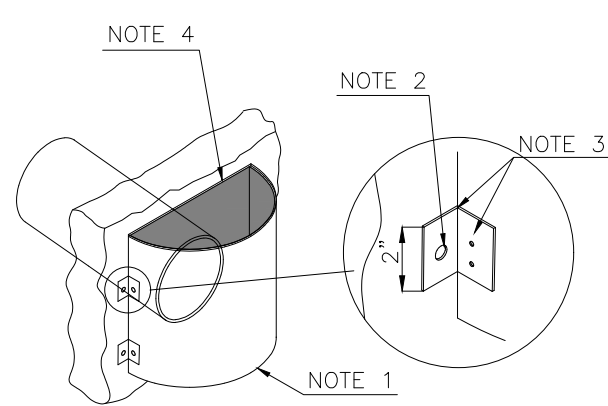
CROSS SECTION B-B
N.T.S.



CATCH BASIN (TYPICAL)
NTS

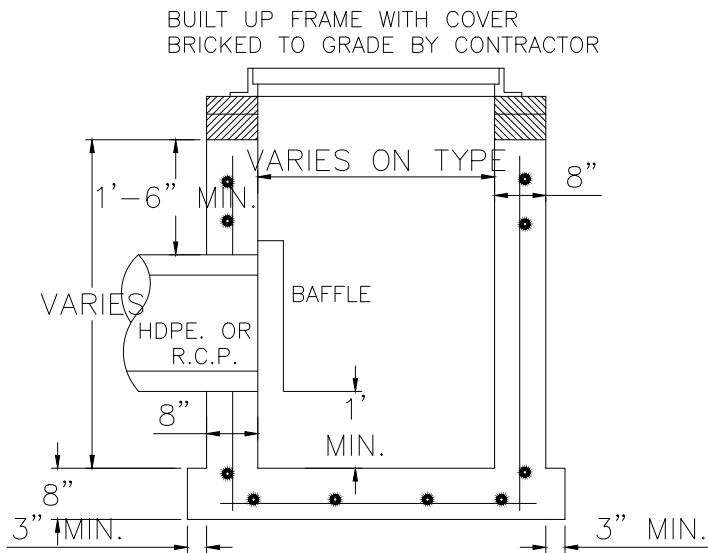


CROSS SECTION C-C
N.T.S.



BAFFLE DETAIL BRACKET DETAIL

- NOTES
- 1) BAFFLE SHALL BE C.M.P. OR C.A.P. SECTION (OUTFALL DIAMETER PLUS 6").
 - 2) 1/2" GALV. WEDGE ANCHORS (ULT. PULLOUT 6000, ULT. SHEAR 5900.)
 - 3) WELD OR 2-3/8" THRU BOLTS
 - 4) BOLTED TO WALL WITH TOP CAPPED. (WATER TIGHT)



CATCH BASIN (USP 3-3.0)

- NOTES
- 1) MINIMAL CONC. STRENGTH FOR ALL CATCH BASINS AND MANHOLE STRUCTURES SHALL BE 4000 PSI.
 - 2) CONTRACTOR IS RESPONSIBLE FOR FINAL ELEVATION AND LOCATION ADJUSTMENTS OF CATCH BASINS, GRATES, MANHOLES DUE TO FIELD CONSTRAINTS.
 - 3) THE 12" WEEP HOLE SHALL NOT BE USED IF THE BOTTOM OF THE INLET OR MANHOLE IS BELOW THE NORMAL WATER TABLE, UNLESS OTHERWISE SHOWN ON PLANS.

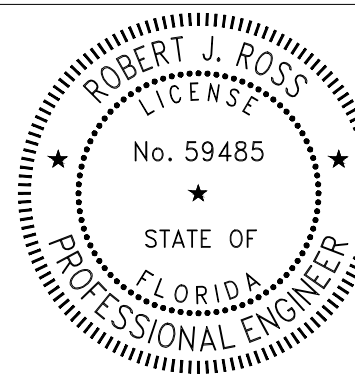
POLLUTION RETARDANT BASIN &
BAFFLE DETAIL FOR NEW STORM SEWER
NTS

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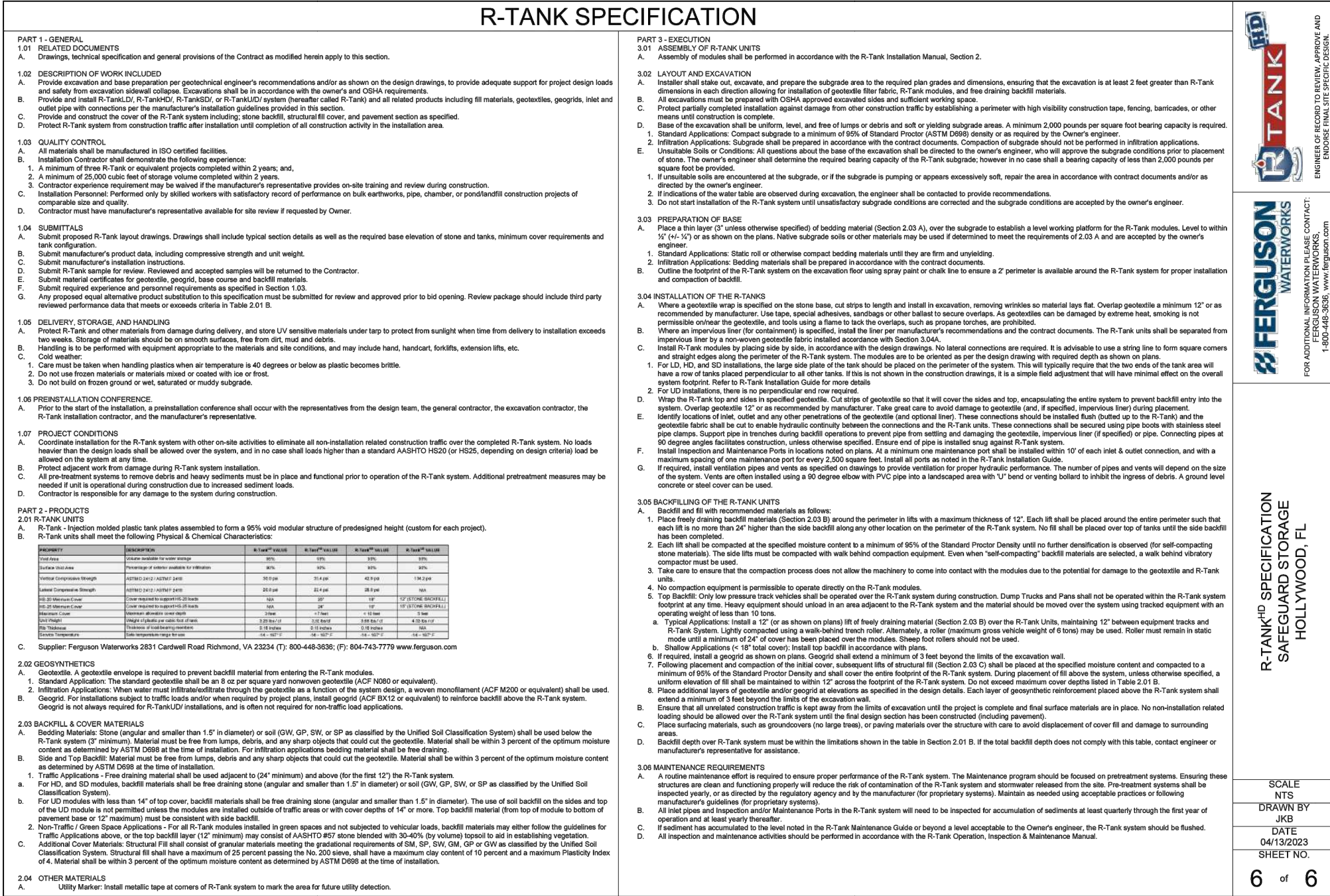
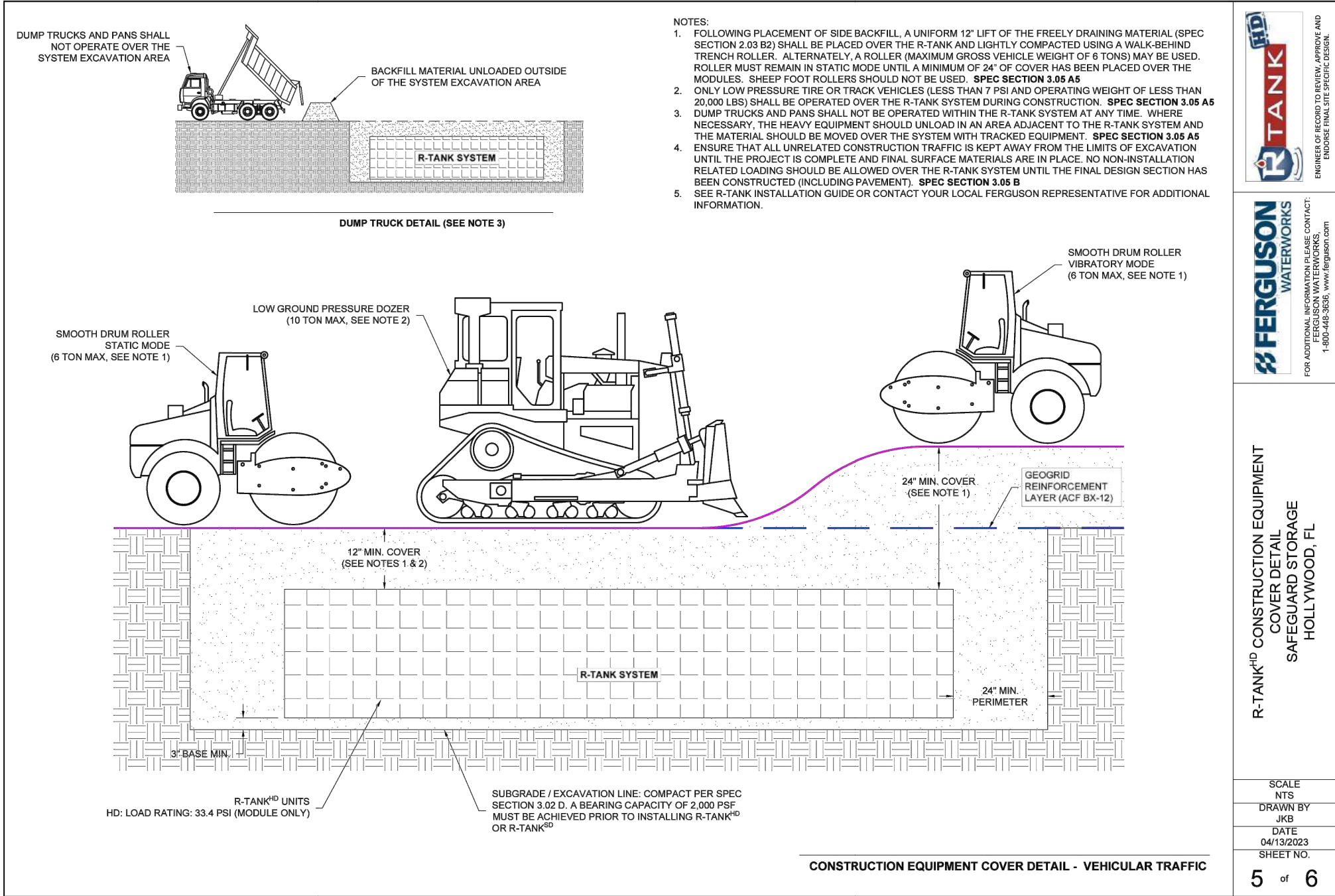
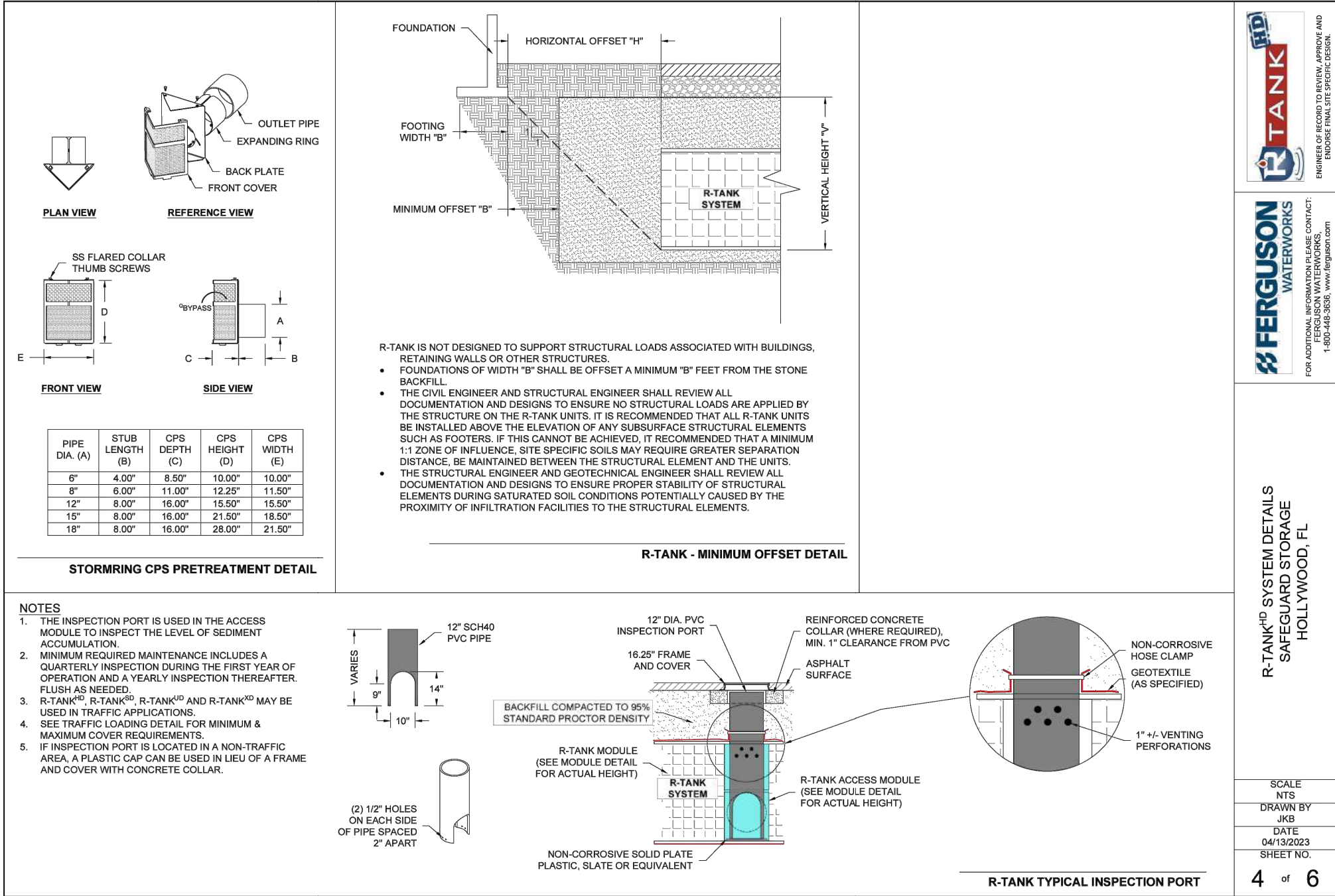
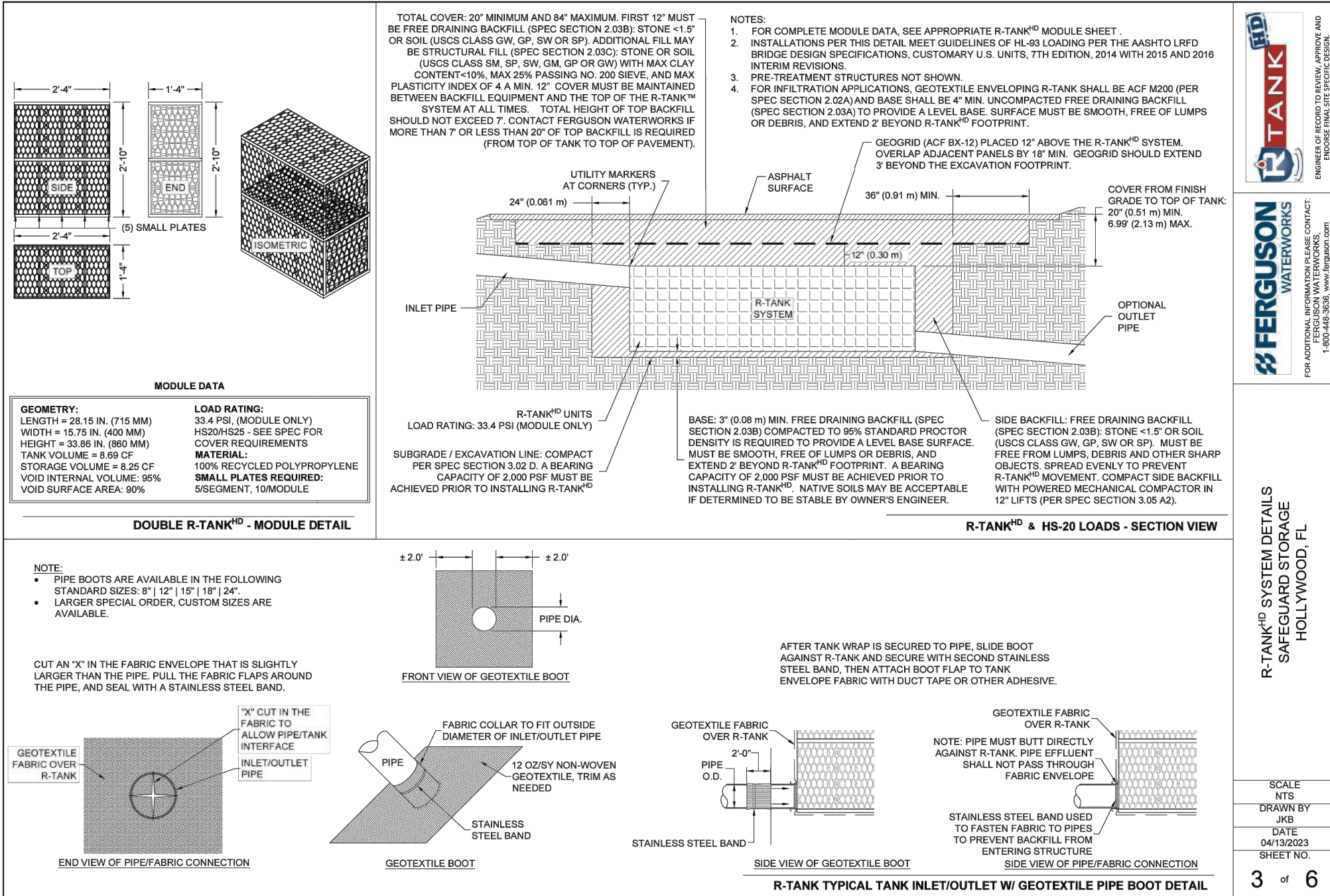
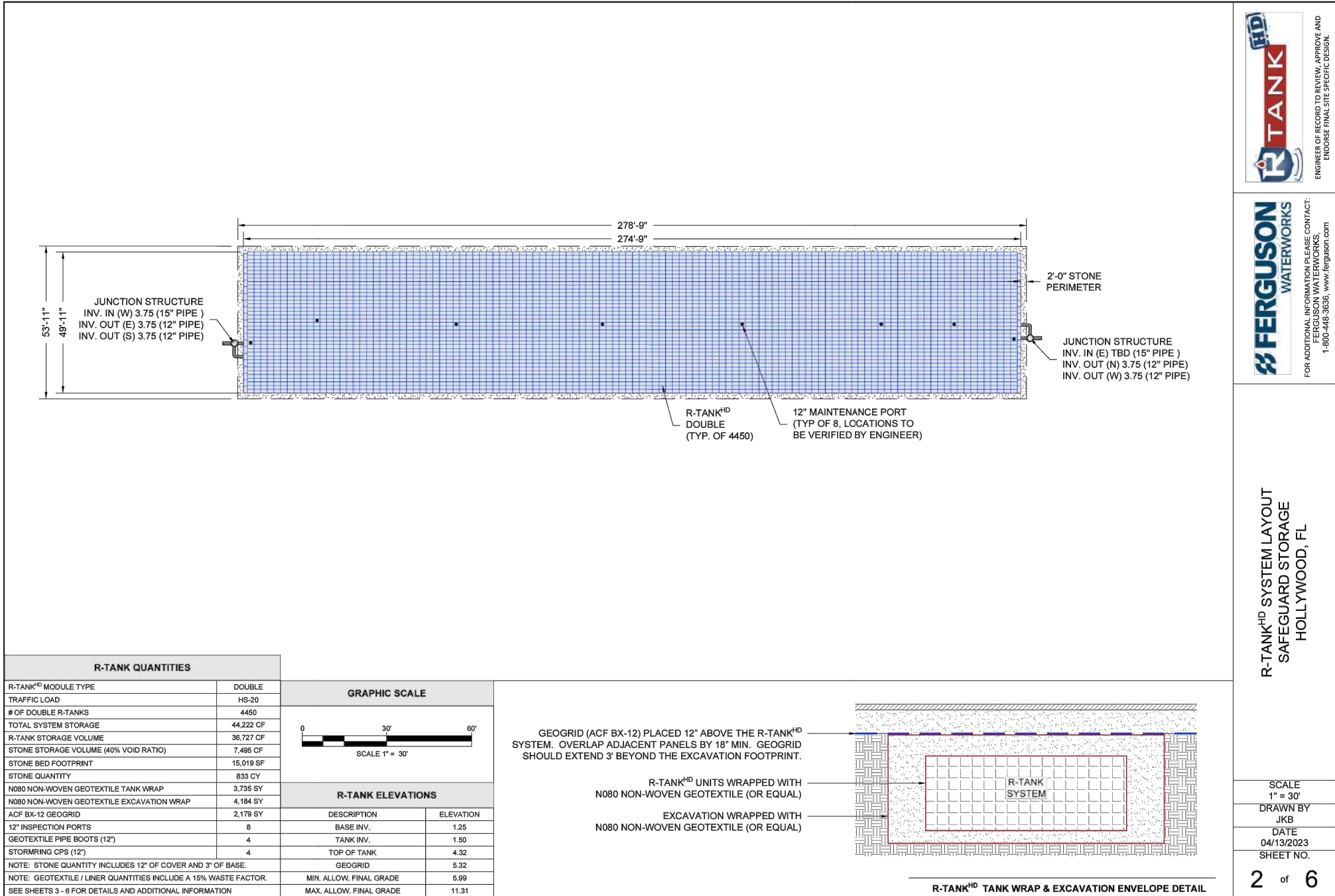
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PAVING GRADING AND DRAINAGE DETAILS
(SHEET 3 OF 3)

SCALE: NTS

SHEET No. C-3.4

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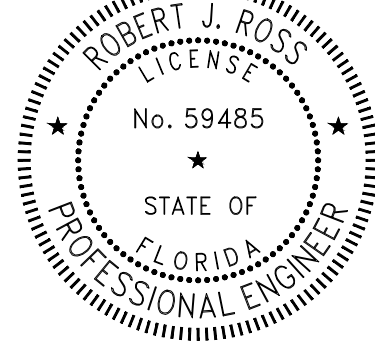
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RAINTANK DETAILS

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SCALE: NTS

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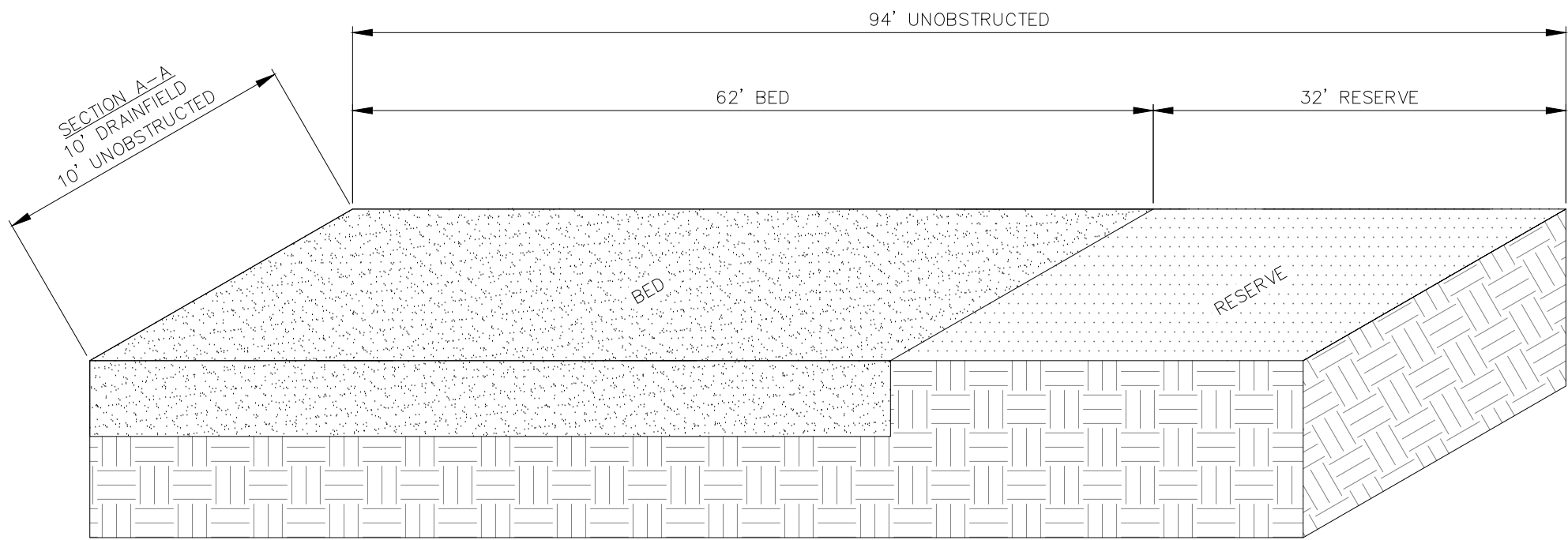
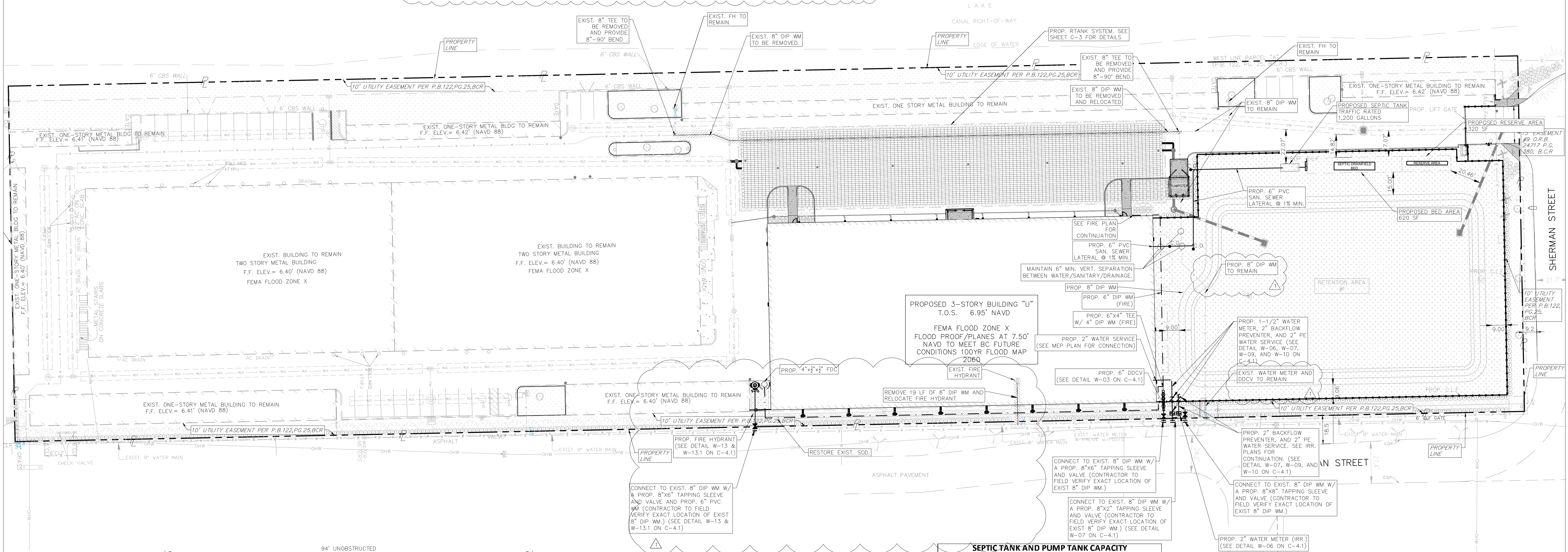
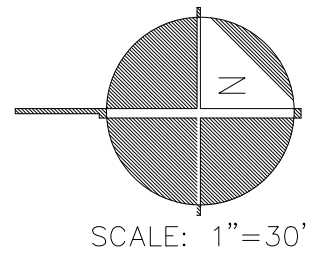
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LEGEND

	PROPERTY LINE		PROPOSED BACKFLOW PREVENTER
	EXISTING BUILDING		PROPOSED WATER METER
	EXISTING OVERHEAD LINE		PROPOSED SANITARY LINE
	EXISTING WATER LINE		PROPOSED CLEAN OUT
	EXISTING SANITARY SEWER LINE		PROPOSED DDCV
	PROPOSED WATER LINE		PROPOSED TAPPING SLEEVE
	PROPOSED SOD & RESTORATION		PROPOSED FDC

NOTES:

- EXISTING UNDERGROUND UTILITIES SHOWN HEREON ARE APPROXIMATE LOCATIONS AND HAVE BEEN PREPARED FROM THE MOST RELIABLE INFORMATION AVAILABLE TO THE ENGINEER. CONTRACTOR SHALL BE RESPONSIBLE TO VERIFY LOCATION AND DEPTH OF ALL UNDERGROUND UTILITIES PRIOR TO COMMENCEMENT OF CONSTRUCTION.
- CONTRACTOR TO FIELD VERIFY ANY CONFLICTS WITH TREES AND/OR UTILITIES AND DRAINAGE. CONTRACTOR TO NOTIFY ENGINEER OF ANY CONFLICTS BEFORE PROCEEDING WITH ANY SOLUTION TO THE CONFLICT.
- CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS TO SAFEGUARD ALL EXISTING STRUCTURES AND UTILITIES. ANY DAMAGE DONE TO EXISTING UTILITIES SHALL BE REPAIRED BY THE CONTRACTOR AT NOT EXPENSE TO THE SUBJECT UTILITY. CALL "SUNSHINE" 48 HOURS BEFORE DIGGING.
- CONTRACTOR IS TO RESTORE ANY CURB, LANDSCAPE, ASPHALT, ETC. (NOT SCHEDULED FOR DEMOLITION) DAMAGED DURING CONSTRUCTION TO A CONDITION EQUAL TO WHAT IS EXISTING.
- ALL PROPOSED FIRE LINES, MAINS, SERVICES, "SIAMESE" CONNECTION LINES ETC. TO BE DESIGNED AND INSTALLED BY STATE LICENSED FIRE LINE CONTRACTOR PER F.S. 633.
- ALL FIRE LINES TO BE INSPECTED BY CERTIFIED FIRE LINE INSPECTORS.
- UPON COMPLETION OF REQUIRED TESTING, THE STATE LICENSED FIRE LINE CONTRACTOR SHALL ISSUE A "LICENSED UNDERGROUND TEST CERTIFICATE" PRIOR TO ACCEPTANCE FOR PLACING FIRE LINE INTO SERVICE.
- ALL UNDERGROUND FIRE MAIN WORK MUST BE COMPLETED BY FIRE PROTECTION CONTRACTOR HOLDING A CLASS I, II, OR V LICENSE PER FS 633.102.
- WATER SUPPLY AND ANY NEW HYDRANTS SHALL BE IN PLACE PRIOR TO ACCUMULATION OF COMBUSTIBLE MATERIALS PER NFPA 1 (2018 ED.) SECTION 16.4.3.1.1.



SECTION A-A
NTS

Commercial: Warehouse		
Add per employee per 8 hour shift	0	0 GPD
Add per loading bay	0	00 GPD
Self-storage, per unit (up to 200 units)	200	200 GPD
Add 1 gallon for each 2 units of fraction thereof, for over 200 units, and shall be in addition to employees, offices or living quarters flow rates	577	289 GPD
Total		489 GPD

SEPTIC TANK AND PUMP TANK CAPACITY			
Average Sewage Flow (GPD)	Septic Tank Min. Effective Capacity (Gallons)	Pump Tank Min. Total Capacity (Gallons)	
		Res.	Com.
0	200	150	225
201	300	225	375
301	400	300	450
401	500	375	600
501	600	450	600
601	700	525	750
701	800	600	900
801	1,000	750	1,050
1,001	1,250	900	1,200
1,251	1,750	1,350	1,900
1,751	2,500	1,650	2,700
2,501	3,000	1,900	3,000
3,001	3,500	2,200	3,000
3,501	4,000	2,700	3,000
4,001	4,500	2,700	3,000
4,501	5,000	3,000	3,000

489 GPD requires a minimum tank size of: 1,200 SF

Bed Calculation				
Min. Absorption Area	(Flow / Load Rate) = 489 GPD / 0.8	=	611 SF	
Min. Reserve Area	(Min. Absorb. Area x 0.5) = 611 SF X 0.5	=	306 SF	
Total Unobstructed Area	(Absorb. Area + Res. Area) =		917 SF	

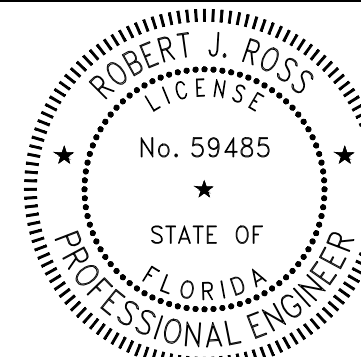
620 SF DRAINFIELD IN BED CONFIGURATION PROVIDED.
320 SF RESERVE AREA PROVIDED.
TOTAL UNOBSTRUCTED AREA PROVIDED 940 SF.

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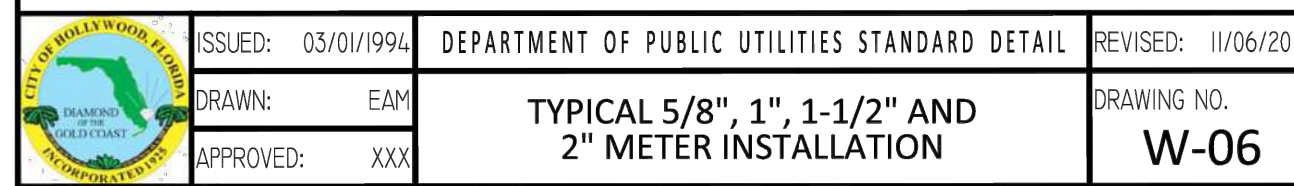
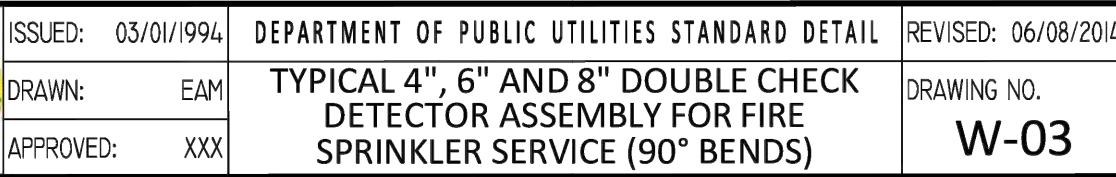
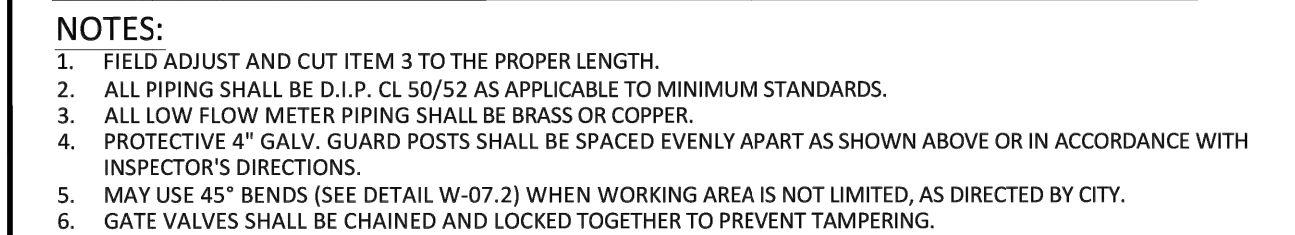
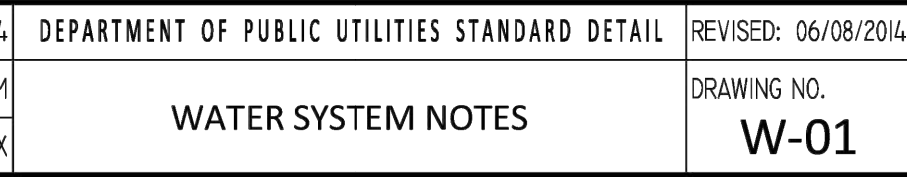
WATER AND SEPTIC PLAN

SCALE: 1"=30'

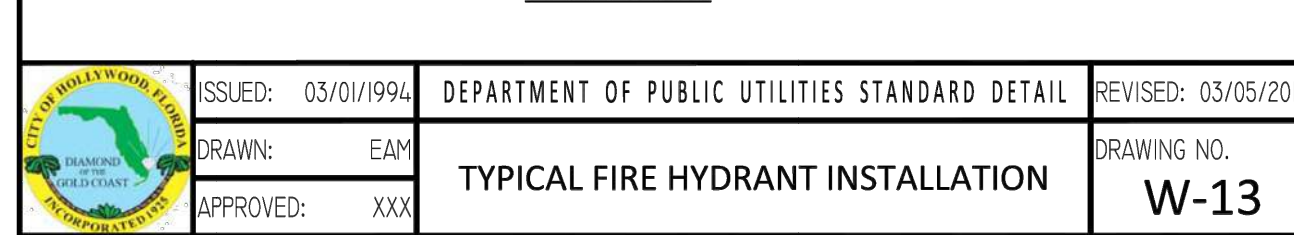
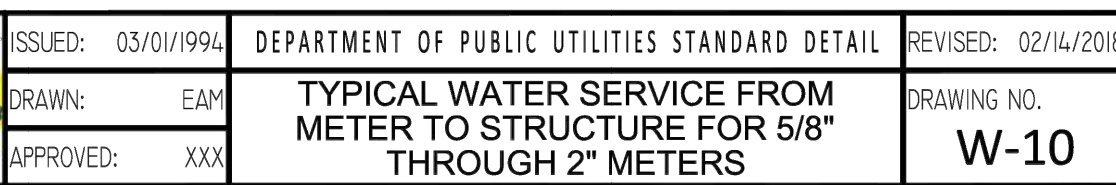
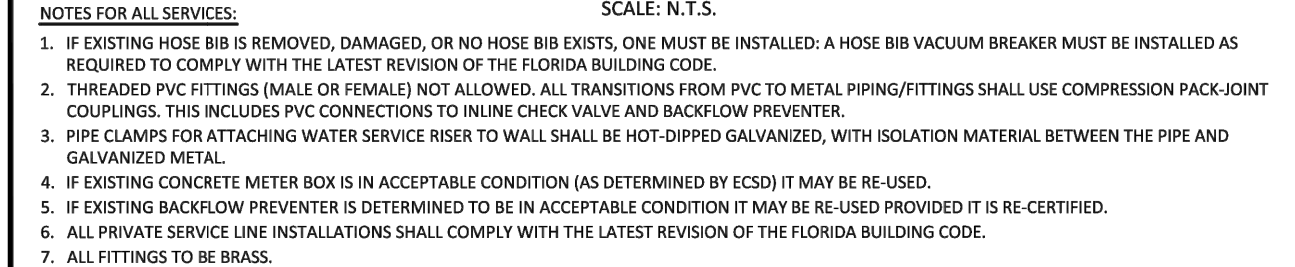
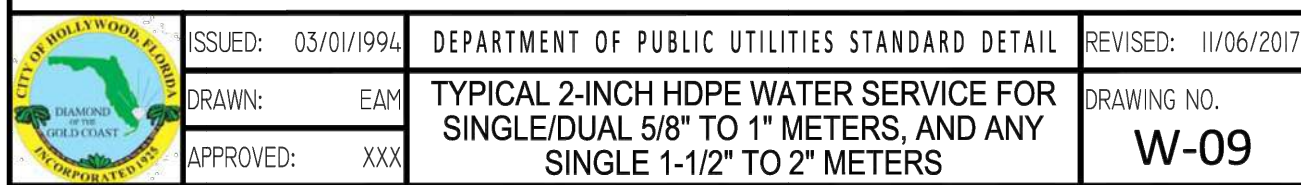
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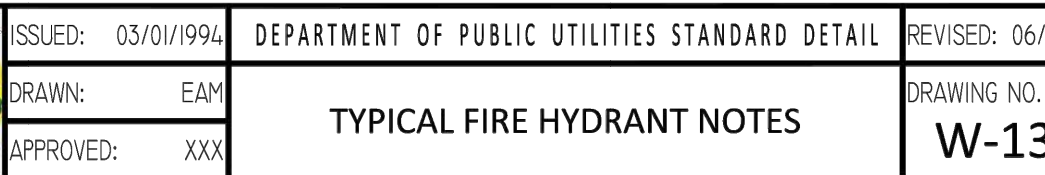
1. NEW OR RELOCATED UNDERGROUND WATER MAINS INCLUDED IN THIS PROJECT THAT WILL CROSS ANY EXISTING OR PROPOSED GRAVITY OR VACUUM-TYPE SANITARY SEWER OR STORM SEWER WILL BE LAID SO THE OUTSIDE OF THE WATER MAIN BE AT LEAST SIX INCHES ABOVE THE OTHER PIPELINE OR AT LEAST 12 INCHES BELOW THE OTHER PIPELINE.
2. NEW OR RELOCATED UNDERGROUND WATER MAINS INCLUDED IN THIS PROJECT THAT WILL CROSS ANY EXISTING OR PROPOSED PRESSURE-TYPE SANITARY SEWER, WASTEWATER OR STORM WATER FORCE MAIN, OR PIPELINE CONVEYING RECLAIMED WATER WILL BE LAID SO THE OUTSIDE OF THE WATER MAIN IS AT LEAST 12 INCHES ABOVE OR BELOW THE OTHER PIPELINE. (FAC 62-555.314(2); EXCEPTIONS ALLOWED UNDER FAC 62-555.314(5)).
3. AT ALL UTILITY CROSSINGS DESCRIBED ABOVE, ONE FULL LENGTH OF WATER MAIN PIPE WILL BE CENTERED ABOVE OR BELOW THE OTHER PIPELINE SO THE WATER MAIN JOINTS WILL BE AS FAR AS POSSIBLE FROM THE OTHER PIPELINE, OR THE PIPES WILL BE ARRANGED SO THAT ALL WATER MAIN JOINTS ARE AT LEAST THREE FEET FROM ALL JOINTS IN VACUUM-TYPE SANITARY SEWERS, STORM SEWERS, STORM WATER FORCE MAINS, OR PIPELINES CONVEYING RECLAIMED WATER REGULATED UNDER PART II OF CHAPTER 62-610, F.A.C., AND AT LEAST SIX FEET FROM ALL JOINTS IN GRAVITY OR PRESSURE-TYPE SANITARY SEWERS, WASTEWATER FORCE MAINS, OR PIPELINES CONVEYING RECLAIMED WATER NOT REGULATED UNDER PART II OF CHAPTER 62-610, F.A.C. (FAC 62-555.314(2); EXCEPTIONS ALLOWED UNDER FAC 62-555.314(5)).
4. NEW UNDERGROUND WATER MAINS INCLUDED IN THIS PROJECT TO BE DUCTILE IRON PIPE (D.I.P.) WHEN CROSSING BELOW SANITARY SEWER MAINS.
5. POLYETHYLENE ENCASEMENT MATERIAL SHALL BE USED TO ENCASE ALL BURIED DUCTILE IRON PIPE, FITTINGS, VALVES, RODS, AND APPURTENANCES IN ACCORDANCE WITH AWWA C105, METHOD A. THE POLYETHYLENE TUBING SHALL BE CUT TWO FEET LONGER THAN THE PIPE SECTION AND SHALL OVERLAP THE ENDS OF THE PIPE BY ONE FOOT. THE POLYETHYLENE TUBING SHALL BE GATHERED AND LAPPED TO PROVIDE A TIGHT FIT AND BE SECURED AT QUARTER POINTS WITH POLYETHYLENE TAPE. EACH END OF THE POLYETHYLENE TUBING SHALL BE SECURED WITH A WRAP OF POLYETHYLENE TAPE.
6. THE POLYETHYLENE TUBING SHALL PREVENT CONTACT BETWEEN THE PIPE AND BEDDING MATERIAL, BUT IS NOT INTENDED TO BE A COMPLETE AIRTIGHT AND WATERTIGHT ENCLOSURE. IF THE DAMAGED POLYETHYLENE TUBING SHALL BE REPAIRED IN A WORKMANLIKE MANNER USING POLYETHYLENE TAPE, OR THE DAMAGED SECTION SHALL BE REPLACED, POLY WRAP WILL NOT BE PAID FOR AS A SEPARATE BID ITEM. IT SHALL BE CONSIDERED TO BE A PART OF THE PRICE BID FOR WATER MAINS.
7. FIRE HYDRANT BARRELS SHALL BE ENCASED IN POLY WRAP UP TO THE GROUND SURFACE AND THE WEEP HOLES SHALL NOT BE COVERED BY THE POLY WRAP.
8. GATE VALVES FOR USE WITH PIPE LESS THAN THREE INCHES (3") IN DIAMETER SHALL BE RATED FOR TWO HUNDRED (200) PSI WORKING PRESSURE, NON-SHOCK, BLOCK PATENT, SCREWED BONNET, NON-RISING STEM, BRASS BODY, AND A SOLID WEDGE. THEY SHALL BE STANDARD THREADED FOR PIPE AND HAVE A MALLEABLE IRON HANDWHEEL. GATE VALVES 3" THROUGH 16" IN DIAMETER SHALL BE RESILIENT SEAT AND DIRECTIONAL FLOW ONLY. VALVES FOR SPECIAL APPLICATIONS WILL REQUIRE CITY UTILITY APPROVAL.
9. VALVE BOXES AND COVERS FOR ALL SIZE VALVES SHALL BE OF CAST IRON CONSTRUCTION AND ADJUSTABLE SCREW-ON TYPE. THE LID SHALL HAVE CAST IN THE METAL THE WORD "WATER" FOR THE WATER LINES. ALL VALVE BOXES SHALL BE SIX INCH (6") NOMINAL DIAMETER AND SHALL BE SUITABLE FOR DEPTHS OF THE PARTICULAR VALVE. THE STEM OF THE BURIED VALVE SHALL BE WITHIN TWENTY-FOUR INCHES (24") OF THE FINISHED GRADE UNLESS OTHERWISE APPROVED BY THE CITY.
10. ALL WATER MAIN INSTALLATIONS SHALL COMPLY WITH THE COLOR CODING REQUIREMENTS OF CHAPTER 62-555.320 F.A.C.



1. SUCCESSIVE TAPS INTO THE WATER MAIN SHALL BE SPACED NOT LESS THAN 18" ON CENTER.
2. P.E. TUBING SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF AWWA STANDARD C901, "PETHYLENE (PE) PRESSURE PIPE AND TUBING, 1/2 IN. (13mm) THROUGH 3 IN. (76 mm), FOR WATER SERVICE".
3. MINIMUM SERVICE PIPE DIAMETER SHALL BE 1" FOR SINGLE OR DUAL 3/8" OR SINGLE 1" DIAMETER METERS.
4. MINIMUM SERVICE PIPE DIAMETER SHALL BE 2" FOR SINGLE OR DUAL 1-1/2" OR SINGLE 2" DIAMETER METERS.
5. FOR METER DIAMETERS LARGER THAN 2", THE MINIMUM SERVICE PIPE DIAMETER SHALL BE THE SAME AS THE METER DIAMETER.
6. APPROVED COPPER TUBING MAY BE USED AT THE CITY'S DISCRETION.
7. FOR NEW METER INSTALLATIONS, ALL SADDLES, VALVES, PIPING, FITTINGS, CURB STOPS, METER VALVES, METER COUPLINGS, METER VAULTS AND COVERS SHALL BE FURNISHED AND INSTALLED BY THE CONTRACTOR. THE WATER METERS WILL BE PROVIDED AND INSTALLED BY THE CITY OF HOLLYWOOD (NEW ACCOUNTS).
8. FOR METER RELOCATIONS, ALL SADDLES, VALVES, PIPING, FITTINGS, CURB STOPS, METER VALVES, METER COUPLINGS, METER VAULTS AND COVERS SHALL BE FURNISHED AND INSTALLED BY THE CONTRACTOR. THE EXISTING WATER METER TO BE RELOCATED AND INSTALLED BY CONTRACTOR.
9. FOR EXISTING METERS ABUTTING THE RIGHT-OF-WAY THAT ARE BEING DISCONNECTED FROM EXISTING MAINS AND RECONNECTED TO NEW MAINS, THE CONTRACTOR SHALL:
 - a. CUT AND PLUG THE EXISTING SERVICE LINE AT THE MAIN AND AT THE METER, AND REMOVE THE EXISTING BALL VALVE CURB STOP.
 - b. FURNISH AND INSTALL SERVICE SADDLE, CORPORATION STOP OR SERVICE VALVE AND VALVE BOX, PIPING AND FITTINGS UP TO AND INCLUDING THE BALL VALVE CURB STOP.
12. THE ELEVATION AT THE TOP OF THE METER BOX SHALL MATCH THE ELEVATION OF THE BACK OF SIDEWALK, WHENEVER PRACTICAL.
13. AS PART OF THE SERVICE INSTALLATION, THE CONTRACTOR SHALL RESTORE THE RIGHT-OF-WAY TO MATCH EXISTING CONDITIONS, INCLUDING ROADWAY PAVEMENT, PAVEMENT MARKINGS AND RPMs, CONCRETE CURBS, SIDEWALKS, RAMPS (INCLUDING DETECTABLE WARNING SURFACE), SODDING, AND ALL OTHER IMPROVEMENTS REMOVED OR DAMAGED DURING THE SERVICE INSTALLATION.
14. FOR UNPAVED AREAS, THE MINIMUM GROUND COVER ACCEPTED BY THE CITY IS SODDING.

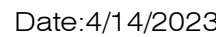
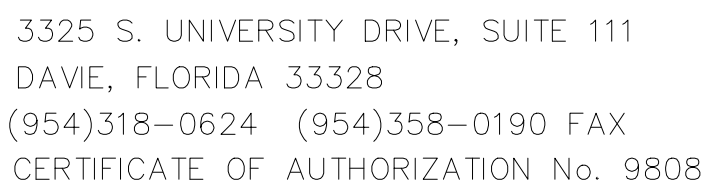


1. IN ALL CASES, PROVIDE 4' UNOBSTRUCTED SIDEWALK CLEAR OF THE FIRE HYDRANT AND BOLLARDS.
2. FIRE HYDRANTS SHALL BE LOCATED BETWEEN 4' AND 7' FROM THE FACE OF CURB.
3. FIRE HYDRANTS SHALL NOT BE LOCATED WITHIN A RADIUS OR WITHIN FDOT CLEAR DRIVING ZONE.
4. GUARD POSTS SHALL BE INSTALLED AS REQUIRED FOR SAFETY OR AS APPROVED BY THE DEPT. OF PUBLIC UTILITIES. IN SIDEWALK, LOCATE GUARD POSTS AT THE FACE OF THE PUMPER AND 2'-6" LEFT/RIGHT OF \varnothing OF THE FIRE HYDRANT. EXTRA POSTS MAY BE REQUIRED IN INDUSTRIAL AND CONGESTED TRAFFIC AREAS. (4 POSTS MAX.)
5. FIRE HYDRANT CONCRETE SLAB AND CONCRETE GUARD POST FOOTINGS SHALL BE DIFFERENT POURS.
6. THE FIRE HYDRANT BONNET, OPERATING NUT, HOLD-DOWN NUT, PUMPER CAP AND HOSE CAPS SHALL BE PAINTED GREEN, AND THE HYDRANT UPPER BARREL SHALL BE PAINTED SILVER IN ACCORDANCE WITH CITY SPECIFICATIONS.



WATER AND SEPTIC PLAN DETAILS (SHEET 1
OF 2)

SAFEGUARD STORAGE
3090 SHERMAN STREET
HOLLYWOOD, FL 33021



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SHEET No. C-4.1

Table 18.4.5.1.2 Minimum Required Fire Flow and Flow Duration for Buildings						
Fire Flow Area (ft²) (< 0.0925 for m²)						
I(400), I(320), I(220)*	I(110), I(210)*	I(200), I(110)*	I(000), I(200)*	I(000)*	Fire Flow gpm† (< 1.785 for L/min)	Flow Duration (hours)
6-22,700	6-12,700	6-8,200	6-5,900	6-3,600	1,500	
22,700-30,200	12,700-17,000	10,000-10,900	5,900-7,900	3,600-4,800	1,750	2
30,200-38,700	17,000-21,800	10,900-12,900	7,900-9,900	4,800-6,200	2,000	
38,700-48,700	21,800-24,200	12,900-17,400	9,900-12,900	6,200-7,700	2,250	
48,700-59,900	24,200-31,200	17,400-21,300	12,900-15,400	7,700-9,400	2,500	
59,900-70,900	31,200-39,700	21,300-25,500	15,400-18,400	9,400-11,300	2,750	3
70,900-83,700	39,700-47,100	25,500-30,100	18,400-21,800	11,300-13,400	3,000	
83,700-97,700	47,100-54,900	30,100-35,200	21,800-25,900	13,400-15,600	3,250	
97,700-112,700	54,900-63,400	35,200-40,600	25,900-29,200	15,600-18,000	3,500	
112,700-128,700	63,400-72,400	40,600-46,400	29,200-33,500	18,000-20,600	3,750	4
128,700-145,900	72,400-82,100	46,400-52,500	33,500-37,900	20,600-23,300	4,000	
145,900-164,200	82,100-92,400	52,500-59,100	37,900-42,700	23,300-26,300	4,250	
164,200-183,400	92,400-103,100	59,100-66,000	42,700-47,700	26,300-29,200	4,500	
183,400-203,700	103,100-114,600	66,000-73,900	47,700-53,000	29,200-32,400	4,750	
203,700-225,200	114,600-126,700	73,900-81,100	53,000-58,600	32,400-36,000	5,000	
225,200-247,700	126,700-139,400	81,100-89,200	58,600-65,400	36,000-39,600	5,250	
247,700-271,200	139,400-152,600	89,200-97,700	65,400-74,600	39,600-43,400	5,500	
271,200-295,900	152,600-166,500	97,700-106,500	74,600-77,000	43,400-47,400	5,750	
Greater than 295,900	Greater than 166,500	106,500-115,600	77,000-80,700	47,400-51,500	6,000	
		115,600-125,500	80,700-90,600	51,500-55,700	6,250	
		125,500-135,500	90,600-97,900	55,700-60,200	6,500	
		135,500-145,900	97,900-106,800	60,200-64,800	6,750	
		145,900-156,700	106,800-113,200	64,800-69,600	7,000	
		156,700-167,500	113,200-121,300	69,600-74,600	7,250	
		167,500-179,400	121,300-129,600	74,600-79,800	7,500	
		179,400-191,400	129,600-138,300	79,800-85,100	7,750	
		Greater than 191,400	Greater than 138,300	Greater than 85,100	8,000	

*Types of construction are based on NFPA 220.
†Measured at 20 psi (135.9 kPa).

Sunshine811

Call 811 or visit sunshine811.com two full business days before digging to have buried facilities located and marked. Check positive response codes before you dig!

BUILDING CONSTRUCTION NOTES

CONSTRUCTION: TYPE II-A (TYPE II 000) OCCUPANCY: S

NOTE: FOR NON-COMBUSTIBLE CONSTRUCTION TYPES, FIRE SPRINKLER PROTECTION IS NOT REQUIRED IN CONCEALED SPACES THAT COMPLY WITH NFPA 13 – 8.15.1.2

EXTERIOR WALL TYPE:MASONRY/CONCRETE BLOCK

PARTITION TYPE: METAL STUD & DRYWALL

STRUCTURAL SUPPORT TYPE: STEEL BEAMS, BAR JOIST & ROOF TRUSS

BUILDING AREA: 30,495 SQ. FT

Hydrant Flow Test Procedure

Procedure For One & Two Flow Hydrant Test:

- Establish hydrants closest to location and associated water main(s).
- Static/Residual hydrant (P) should be located close to location (preferably off same main as to provide future water source).
- Flow hydrant(s) (F) should be located off same main up and down stream from mid-point test (static/residual) hydrant.
- Note static system pressure off P hydrant before opening any other (note any unusual or remarkable anomalies such as high demand sources, construction, etc.)
- Flow F1 hydrant and record GPM and residual off P hydrant.
- Flow F2 hydrant and record GPM and residual off P hydrant.
- Flow F1 & F2 simultaneously and record GPM separately from F1 and F2 and record P hydrant residual.

Legend:

F1 & F2
P

Designation shall represent first and second flowed hydrants respectively
Designation shall represent test hydrant for static and residual distribution system pressures.

Mike Carter Construction

Date: 4/7/22

Time: 2:36pm

Static Pressure - 58psi

Residual/Static Hydrant	Address/Location	Residual Pressures	
P - Hydrant FH002267	3090 Sheridan St	F-1 Only 55psi	F-2 Only 55psi
		F-1 & F-2 50psi	
Flow Hydrants	Address/Location	Flow Rate	
F-1 Hydrant (Individual) FH002266	3090 Sheridan St	GPM 1030	
F-2 Hydrant (Individual) FH002270	3090 Sheridan St	GPM 1060	
F-1 Hydrant (Both Flowing)		GPM 920	
F-2 Hydrant (Both Flowing)		GPM 1030	

FIRE FLOW REQUIREMENT CALCULATIONS

FIRE FLOW GPM PER TABLE 18.4.5.1.2 = 3750 GPM
FOR A TYPE II (000) BUILDING WITH 30,495 SQ. FT

WAREHOUSE STORAGE BUILDING HAS A QUICK RESPONSE FIRE SPRINKLER SYSTEM IN COMPLIANCE WITH NFPA 13 ALLOWING A 75% REDUCTION PER PARAGRAPH 18.4.5.2.2. SEE FIRE SPRINKLER GENERAL DATA FX0.1 FOR FURTHER SPRINKLER DETAILS.

3750 GPM X 75% = 2812.5 GPM

3750 GPM – 2812.5 GPM (FIRE FLOW CREDIT) = 937.5 GPM

937.5 GPM > 600 GPM MINIMUM FOR QUICK RESPONSE SYSTEM

937.5 GPM < FH002266 1030 GPM & FH002270 1060 GPM INDIVIDUAL FLOW

100% CONSTRUCTION DOCUMENTS

ZT	4/14/23		3/27/23	CITY OF HOLLYWOOD – TAC SUBMITTAL COMMENTS				
DESIGNED BY	DATE							
ZT	4/14/23							
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RR	4/14/23							
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RR	4/14/23							
APPROVED BY	DATE	No.	DATE	REVISIONS				

SAFEGUARD STORAGE

3090 SHERMAN STREET

HOLLYWOOD, FL 33021

3325 S. UNIVERSITY DRIVE, SUITE 111
DAVIE, FLORIDA 33328
(954)318-0624 (954)358-0190 FAX
CERTIFICATE OF AUTHORIZATION No. 9808

Date: 4/14/2023

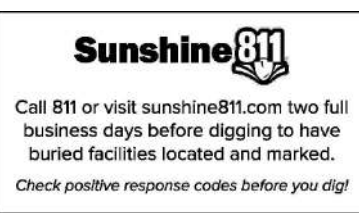
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SCALE:

1 SHEET No. C-4.2

WATER AND SEPTIC PLAN DETAILS

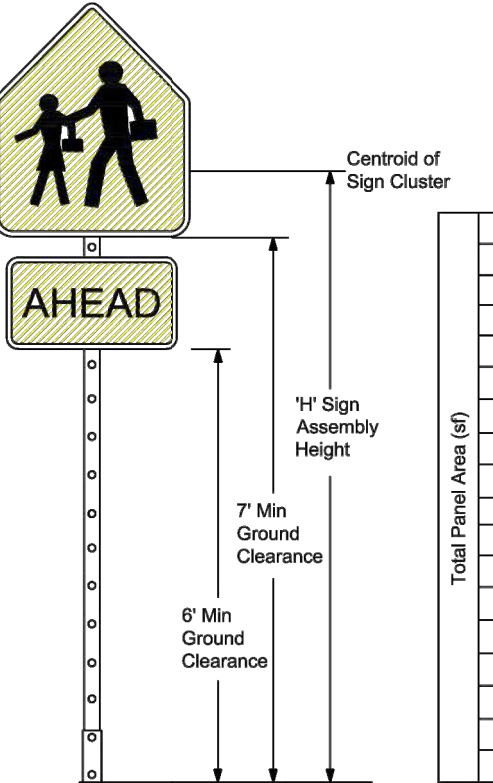
(SHEET 2 OF 2)



PAVEMENT MARKING AND SIGNAGE PLAN

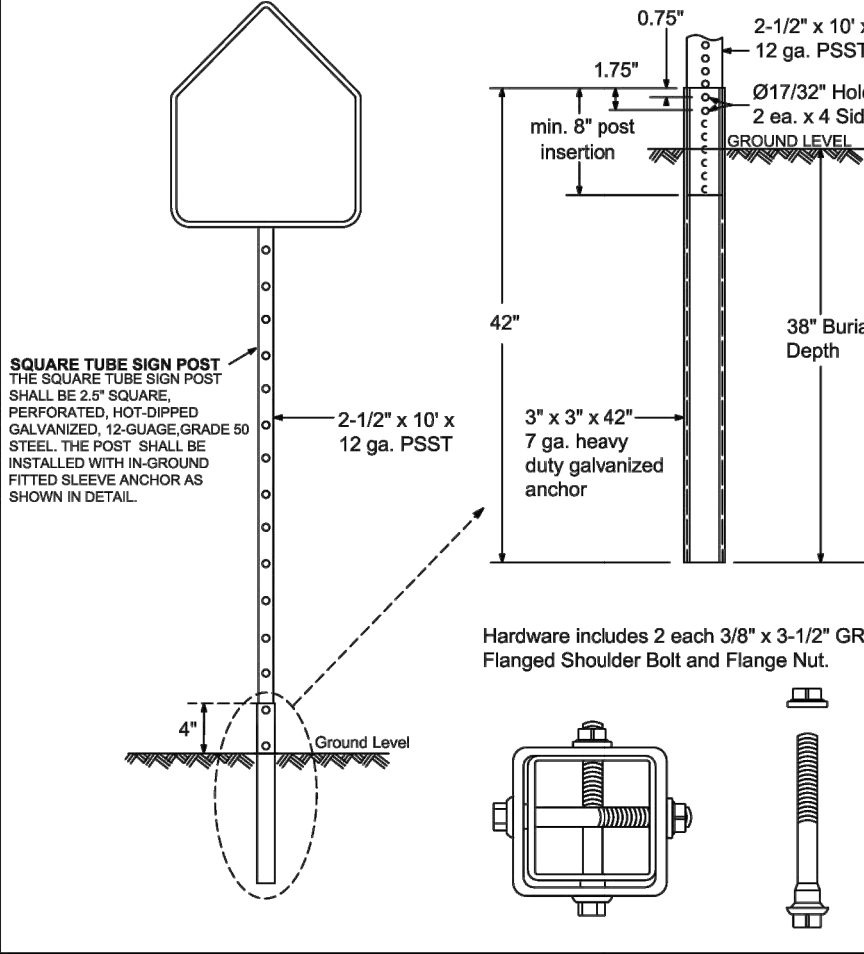
SHEET No. C-5

- GUIDE TO USE THIS STANDARD:**
1. Calculate the Total Panel Area and the centroid "C" for an individual sign or a sign cluster.
 2. Determine the height "H" from the groundline for the individual sign or the cluster.
 3. Consult the Post Size Table and find the intersection point.
 4. Design the post and the foundation according to the required Post Size and Assembly Details.

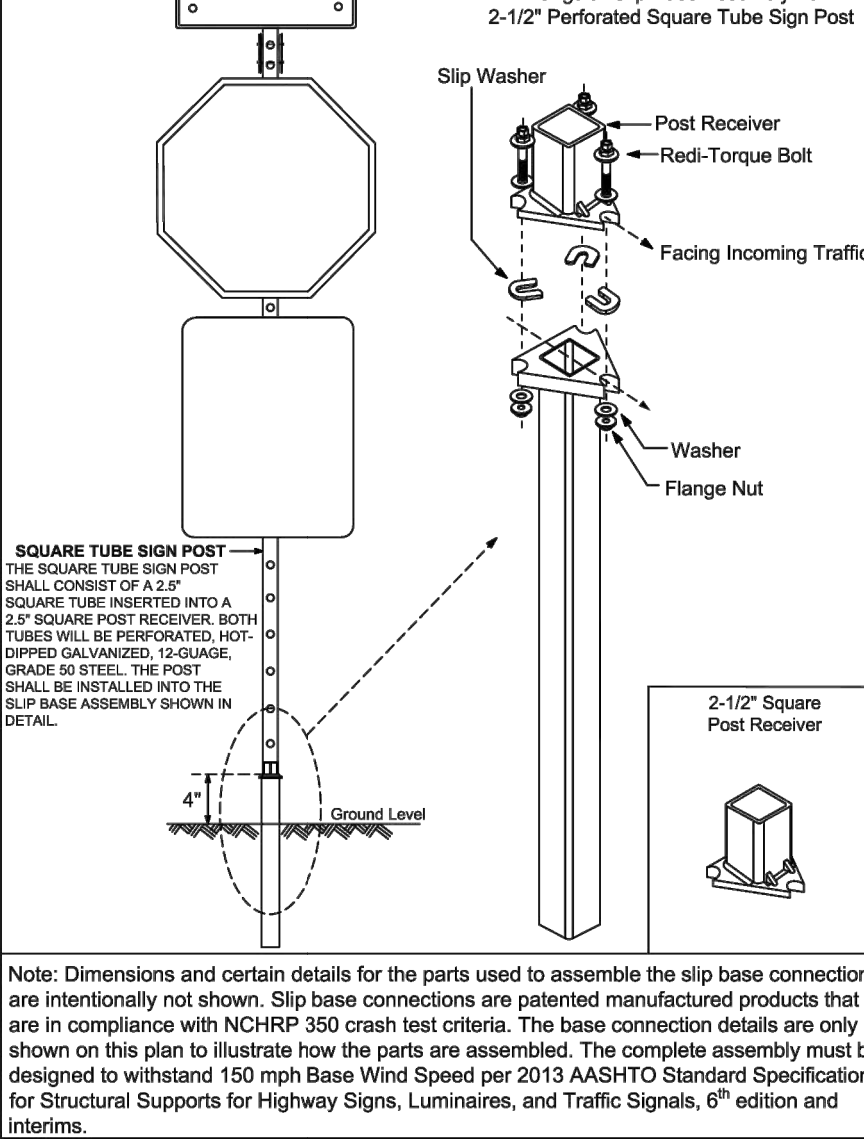


Post Size Table				
H' Sign Assembly Height (ft)	8	8.5	9	9.5
3				
4				
5				
6				
7				
8				
9				
10				
11				
12				
13				
14				
15				
16				
17				
18				
19				
20				

Sign Post with 3" x 7 ga. Square Anchor



Sign Post with Triangular Slip Base



Note: Dimensions and certain details for the parts used to assemble the slip base connections are intentionally not shown. Slip base connections are patented manufactured products that are in compliance with NCHRP 350 crash test criteria. The base connection details are only shown on this plan to illustrate how the parts are assembled. The complete assembly must be designed to withstand 150 mph Base Wind Speed per 2013 AASHTO Standard Specifications for Structural Supports for Highway Signs, Luminaires, and Traffic Signals, 6th edition and interims.

DATE	DESCRIPTION
03-21-2017	UPDATED POST SIZE
11-24-2020	ADDED POST SIZE NOTE
02-05-2021	UPDATED POST BASE HEIGHT

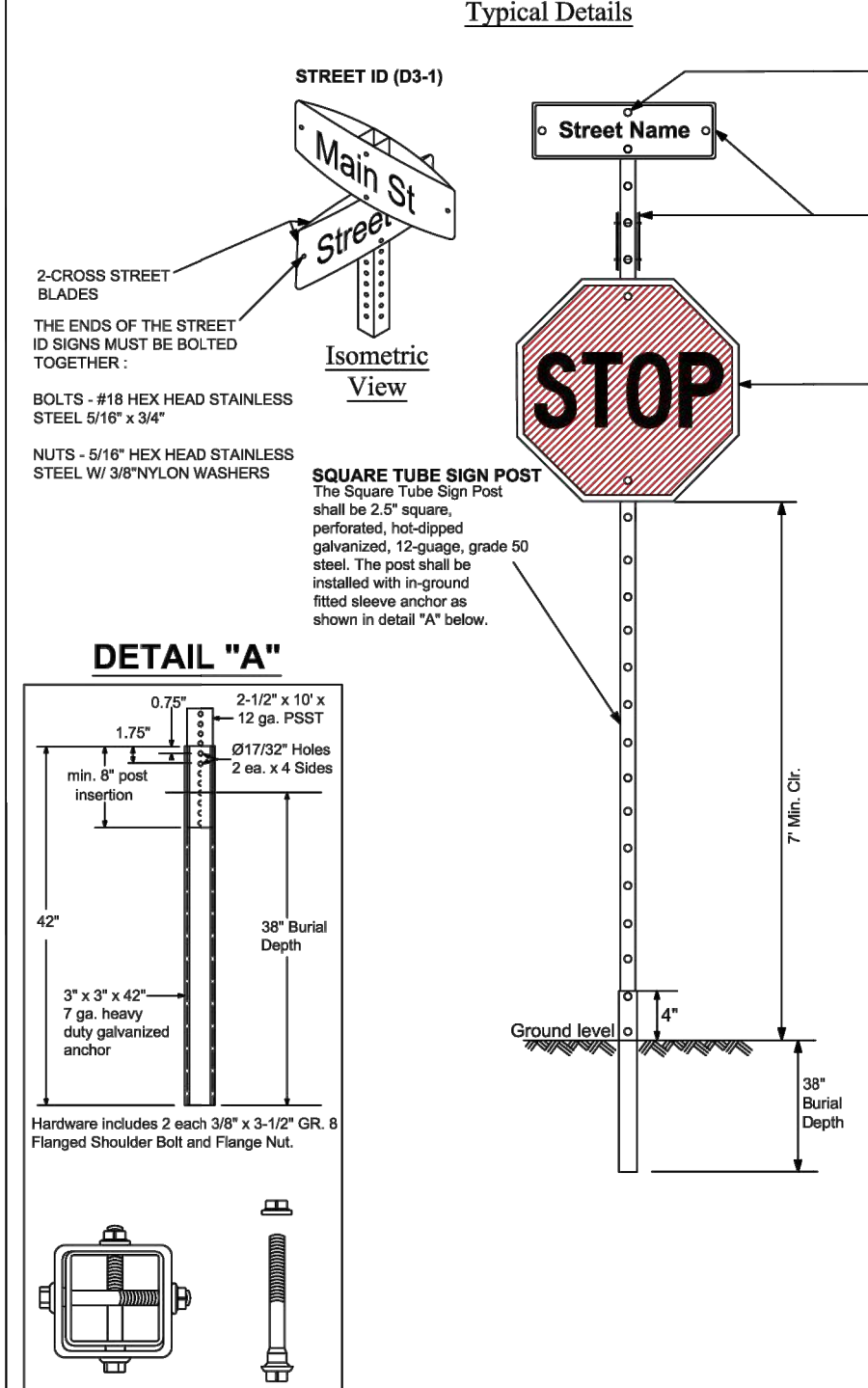


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TRAFFIC ENGINEERING DIVISION
DESIGN BY: YVES D'AMOU, P.E.
DRAWN BY: STEPHON RAMOUTAR
CHECKED BY: ANDREW SEBO, P.E., PTOE

GROUND SIGN ASSEMBLY DETAILS

SHEET NO.
1 OF 1

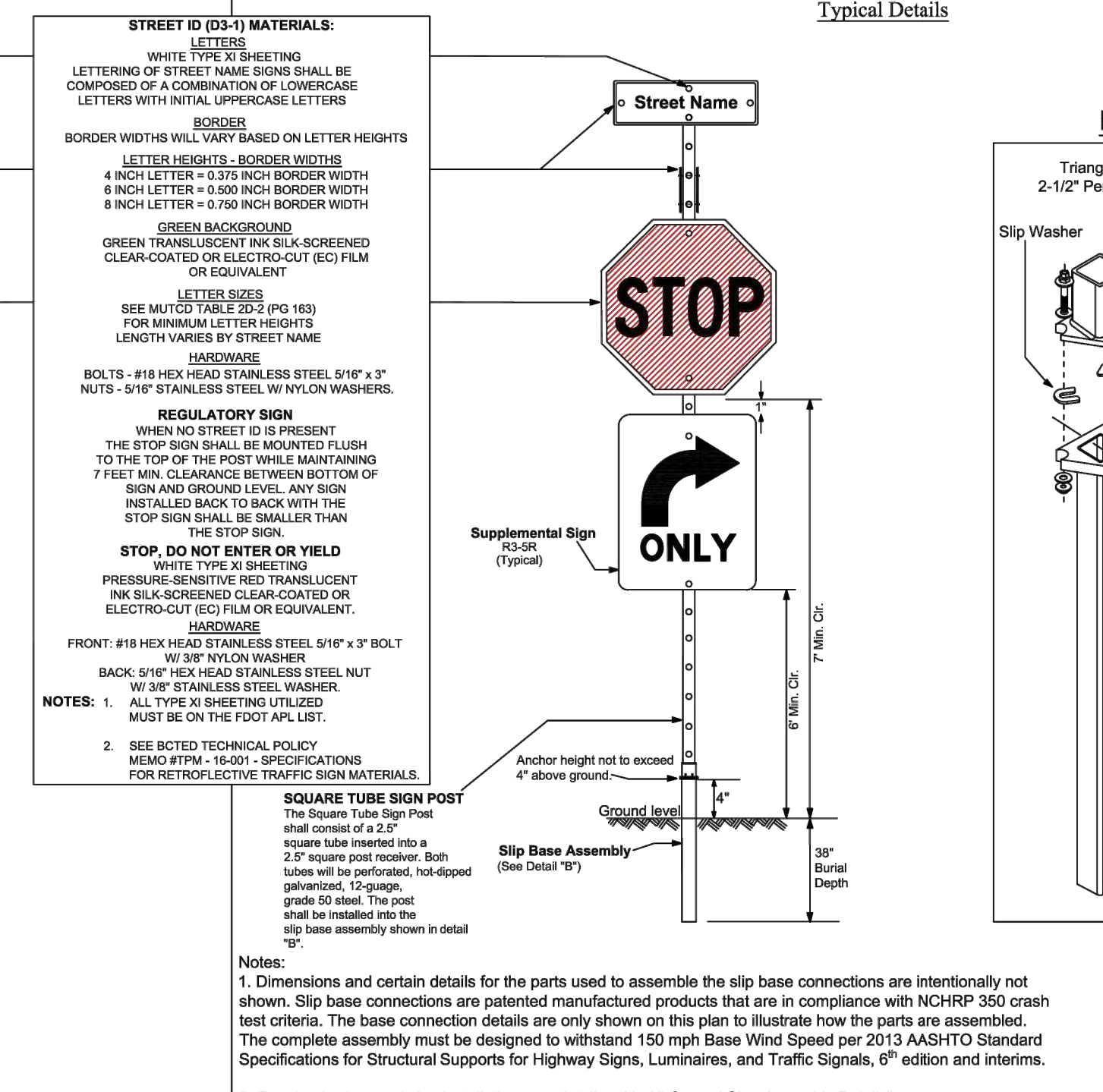
FOR SIGN ASSEMBLIES WITH MAXIMUM 8.75 SQUARE FOOT PANEL AREA



DATE	DESCRIPTION
04-08-2019	UPDATED MATERIAL NOTES
02-28-2020	ADDED ISOMETRIC VIEW
02-05-2021	UPDATED POST BASE HEIGHT

PUBLIC WORKS DEPARTMENT
TRAFFIC ENGINEERING DIVISION
DESIGN BY: CARMELO CARATOZZOLO, P.E.
DRAWN BY: STEPHON RAMOUTAR
CHECKED BY: ANDREW SEBO, P.E., PTOE

FOR SIGN ASSEMBLIES WITH GREATER THAN 8.75 SQUARE FOOT PANEL AREA WITH SUPPLEMENTAL SIGN

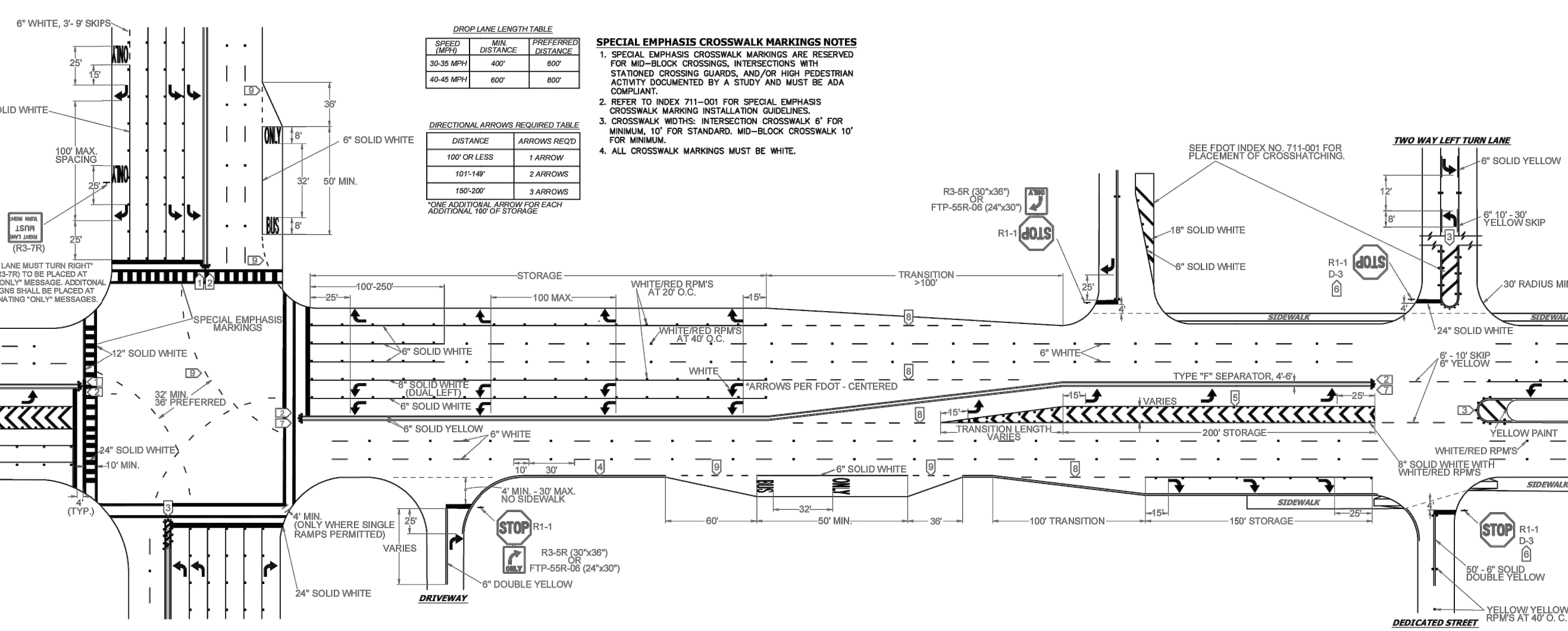


DATE	DESCRIPTION
04-08-2019	UPDATED MATERIAL NOTES
02-28-2020	ADDED ISOMETRIC VIEW
02-05-2021	UPDATED POST BASE HEIGHT

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CHECKED BY: ANDREW SEBO, P.E., PTOE

STOP SIGN AND STREET IDENTIFICATION ASSEMBLY TYPICAL DETAILS

SHEET NO.
1 OF 1



- NOTES:**
1. ALL PAVEMENT MARKINGS SHALL BE ALKYL BASED THERMOPLASTIC AND FULLY RETROREFLECTORIZED.
 2. ALL PAVEMENT MARKINGS ON ROADWAYS SHALL BE IN ACCORDANCE WITH THE "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES", LATEST EDITION, AND THE "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES", LATEST EDITION, AND THE "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES", LATEST EDITION.
 3. ALL PAVEMENT MARKINGS AND SIGNING SHALL BE IN ACCORDANCE WITH THE "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES", LATEST EDITION, AND THE "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES", LATEST EDITION.
 4. SEE FOOT INDEX NO. 711-001 FOR PLACEMENT OF RPM'S (FOR BALLASTS OR RAMP TREATMENT, SEE LEGEND NO. 1).
 5. RPM'S SHALL BE CLASS "1" OR EQUIVALENT, APPLIED WITH SPOT OR STAINLESS ADHESIVE.
 6. FOOT APPROVED SEALER SHALL BE USED WHEN APPLYING MARKINGS ON CONCRETE.
 7. FOR BAY LANE DETAILS SEE FOOT INDEX NO. 711-002.
 8. EXISTING MARKINGS SHALL BE REMOVED BY WATER BLASTING OR SAND BLASTING.
 9. ALL STOP LINES TO BE 4" BEHIND CROSSWALK OR SIDEWALK.
 10. PAVEMENT MARKING REFLECTIVITY SHALL BE UNIFORM ACROSS THE ENTIRE STRIPE AND SHALL HAVE A MINIMUM REFLECTIVITY RATING OF 250 MILICANDLARS FOR WHITE AND 175 MILICANDLARS FOR YELLOW.
 11. ALL PRODUCTS MUST BE ON FOOT'S APPROVED PRODUCTS LIST (APL).
 12. RPM'S SHALL NOT BE INSTALLED ADJACENT TO BAY LINES.
 13. LONGITUDINAL CROSSWALK MARKINGS SHALL BE INSTALLED AT ALL CROSS STREETS ON COUNTY ROADS THAT ARE FOUR LANES OR GREATER.

DATE	DESCRIPTION
11-24-2020	UPDATED NOTES
04-14-2021	UPDATED NOTES
05-06-2022	UPDATED NOTES

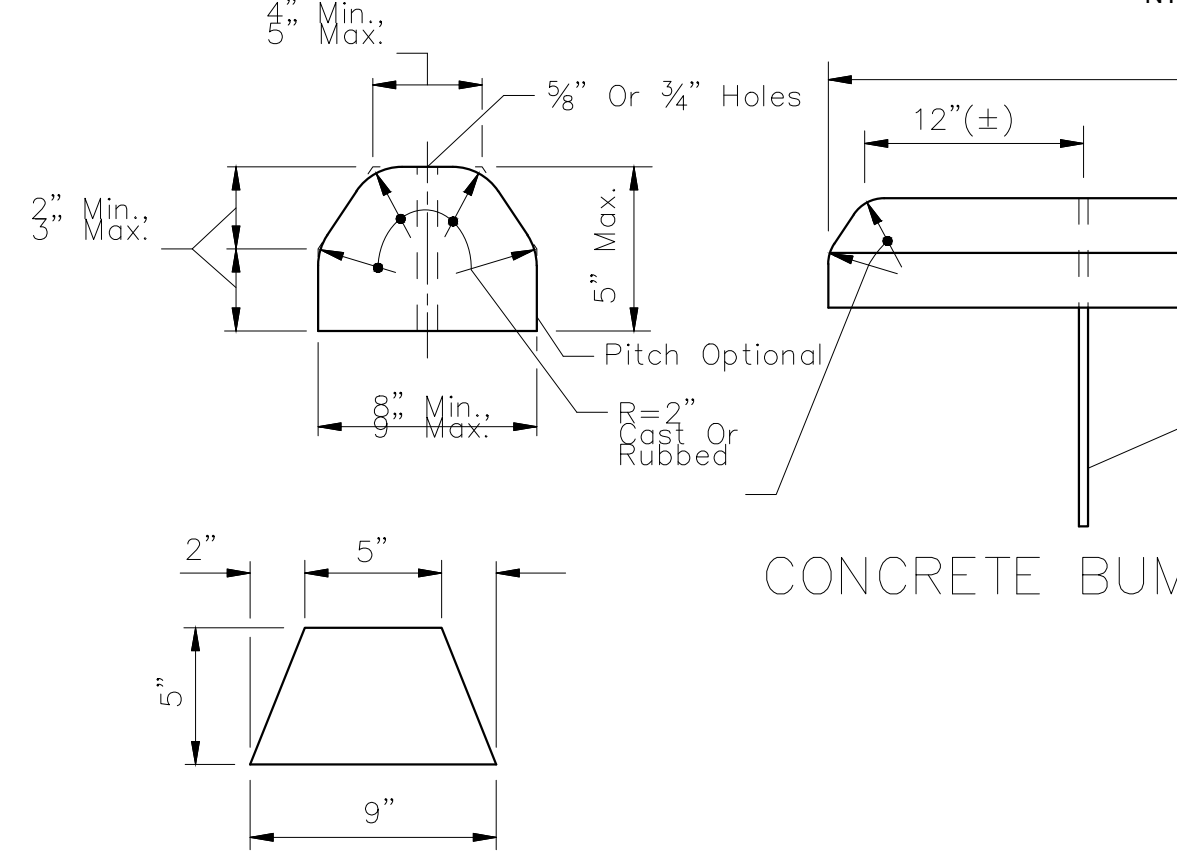


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DRAWN BY: STEPHON RAMOUTAR
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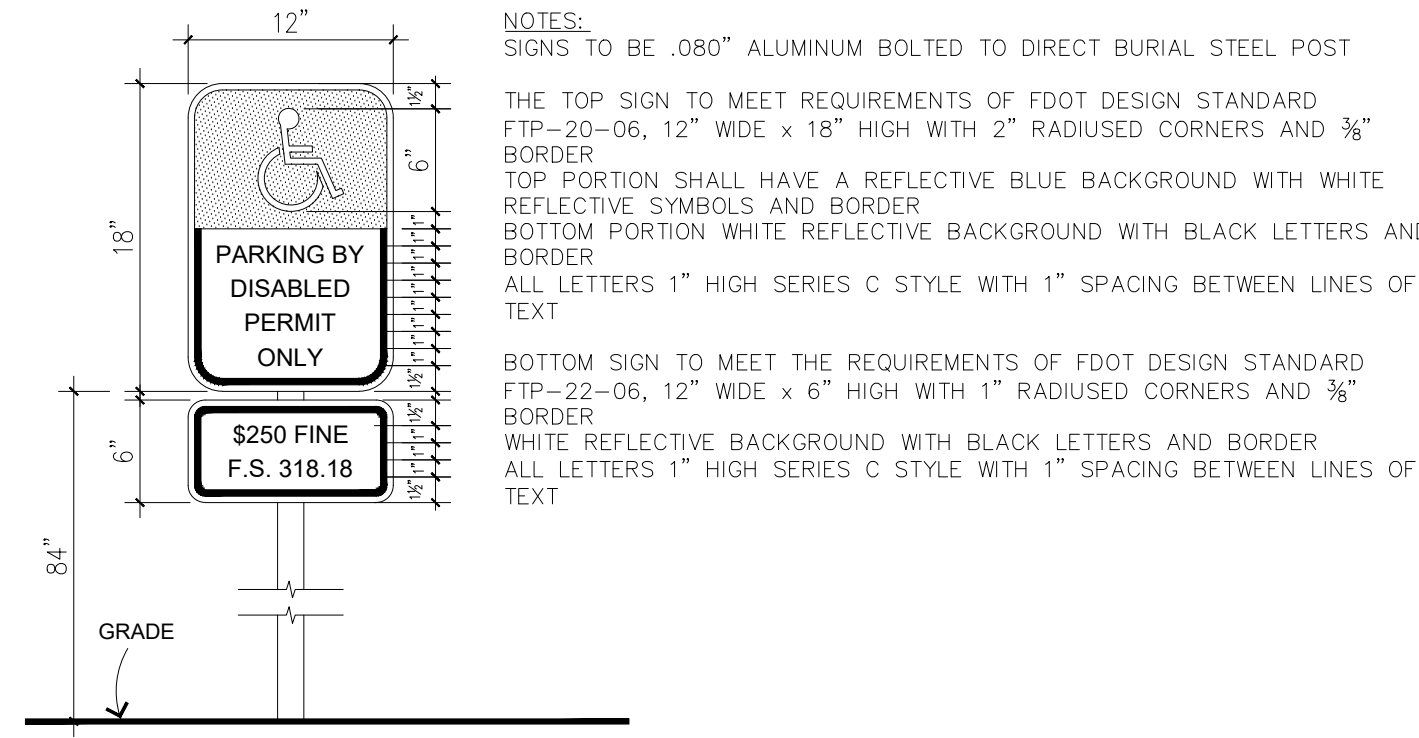
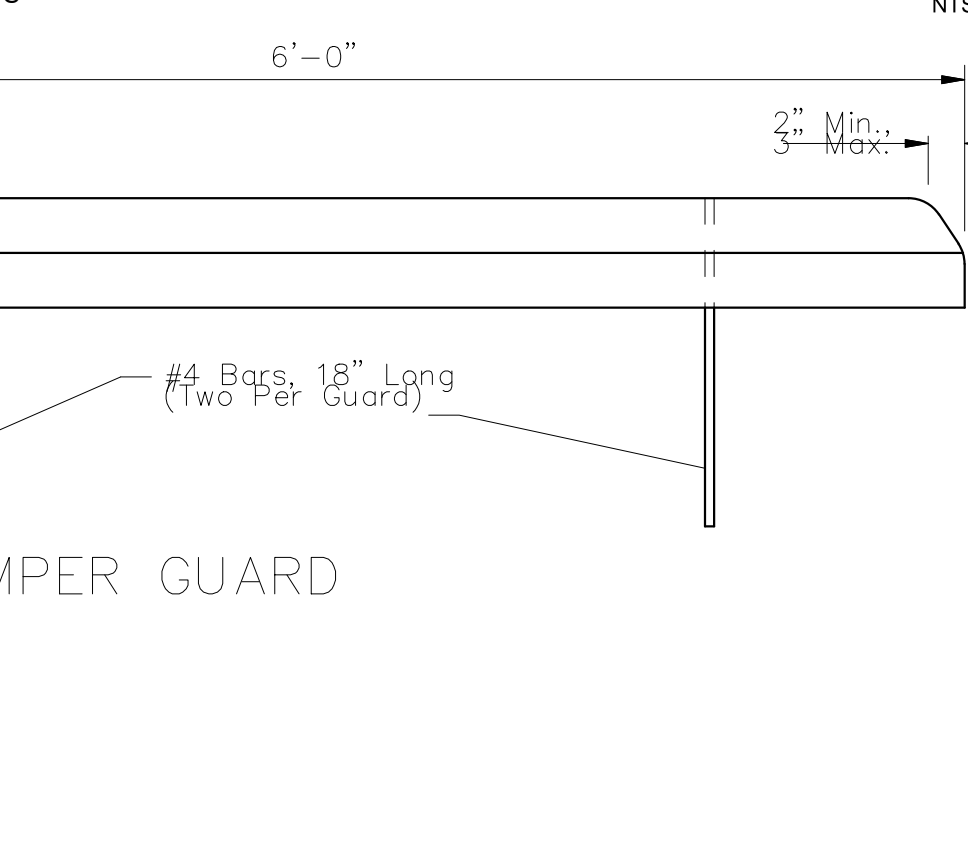
PAVEMENT MARKINGS AND SIGNS DETAILS

SHEET NO.
1 OF 1

UNIVERSAL SYMBOL OF ACCESSIBILITY



HANDICAP PARKING (TYPICAL)



ACCESSIBLE PARKING SIGN

NTS

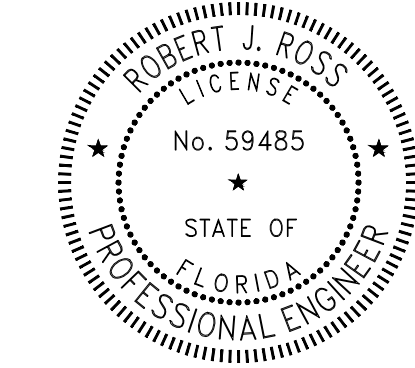
100% CONSTRUCTION DOCUMENTS

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SAFEGUARD STORAGE
3090 SHERMAN STREET
HOLLYWOOD, FL 33021



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DAVIE, FLORIDA 33328
(954)318-0624 (954)358-0190 FAX
CERTIFICATE OF AUTHORIZATION No. 9808

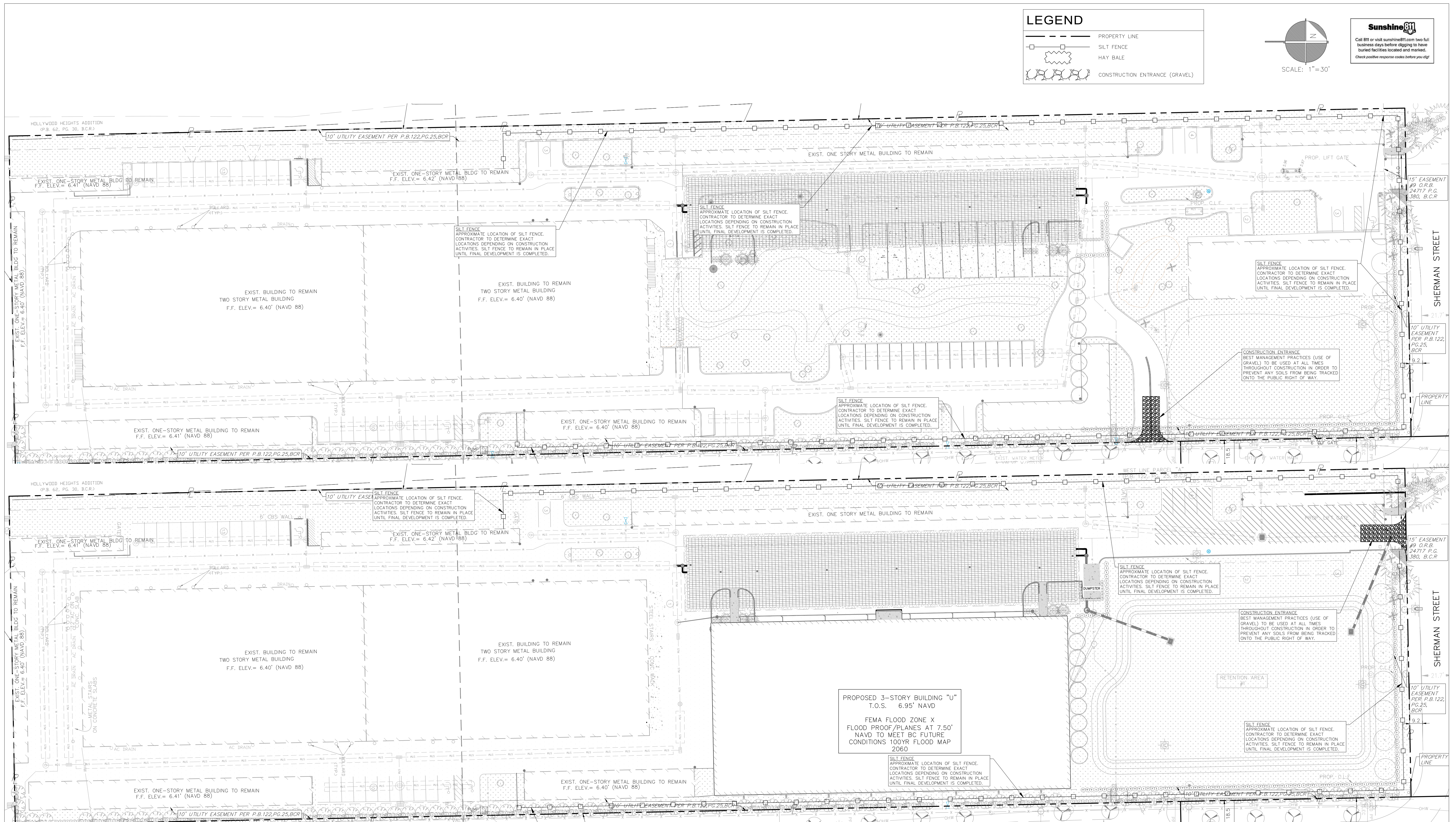



Date: 4/14/2023

PAVEMENT MARKING AND SIGNAGE DETAILS

SCALE:

SHEET No. C-5.1




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RR	4/14/23			
APPROVED BY	DATE	No.	DATE	REVISIONS

STORM WATER POLLUTION PREVENTION PLAN

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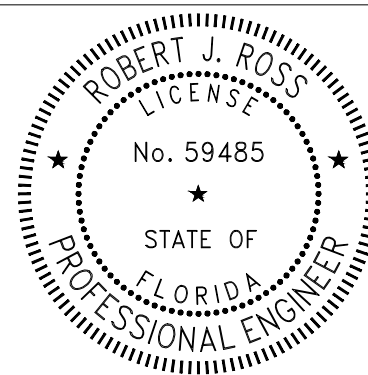
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Check positive response codes before you dig!

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RR	4/14/23			
APPROVED BY	DATE	No.	DATE	REVISIONS

SAFEGUARD STORAGE
3090 SHERMAN STREET
HOLLYWOOD, FL 33021



32030 SNYDERS AVE DRYES LUT 2141
DAVIE, FLORIDA 33018
(954) 368-8324 (954) 392-0099 FAX
CERTIFICATE OF AUTHORIZATION No. 9808

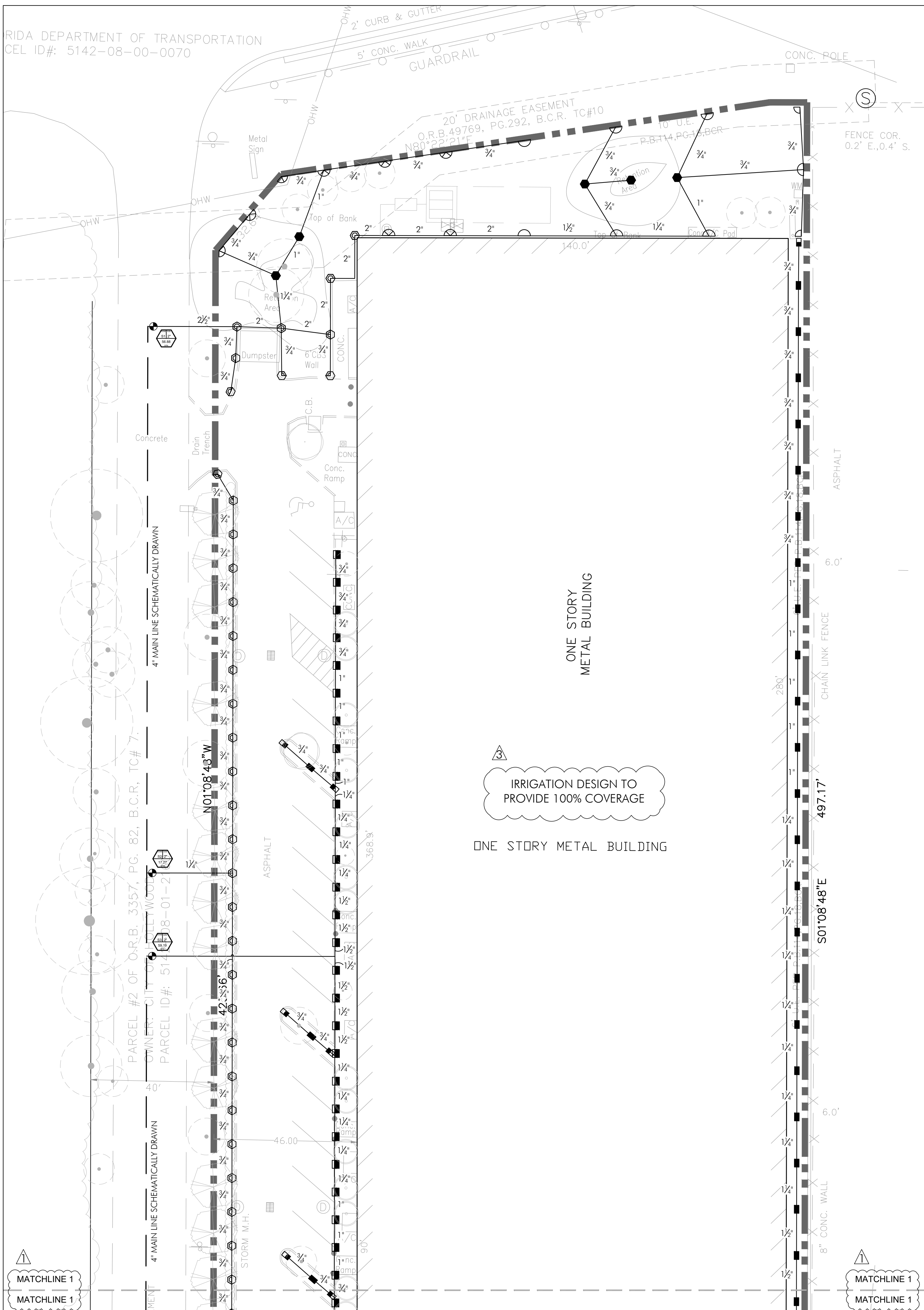


Date:4/14/2023

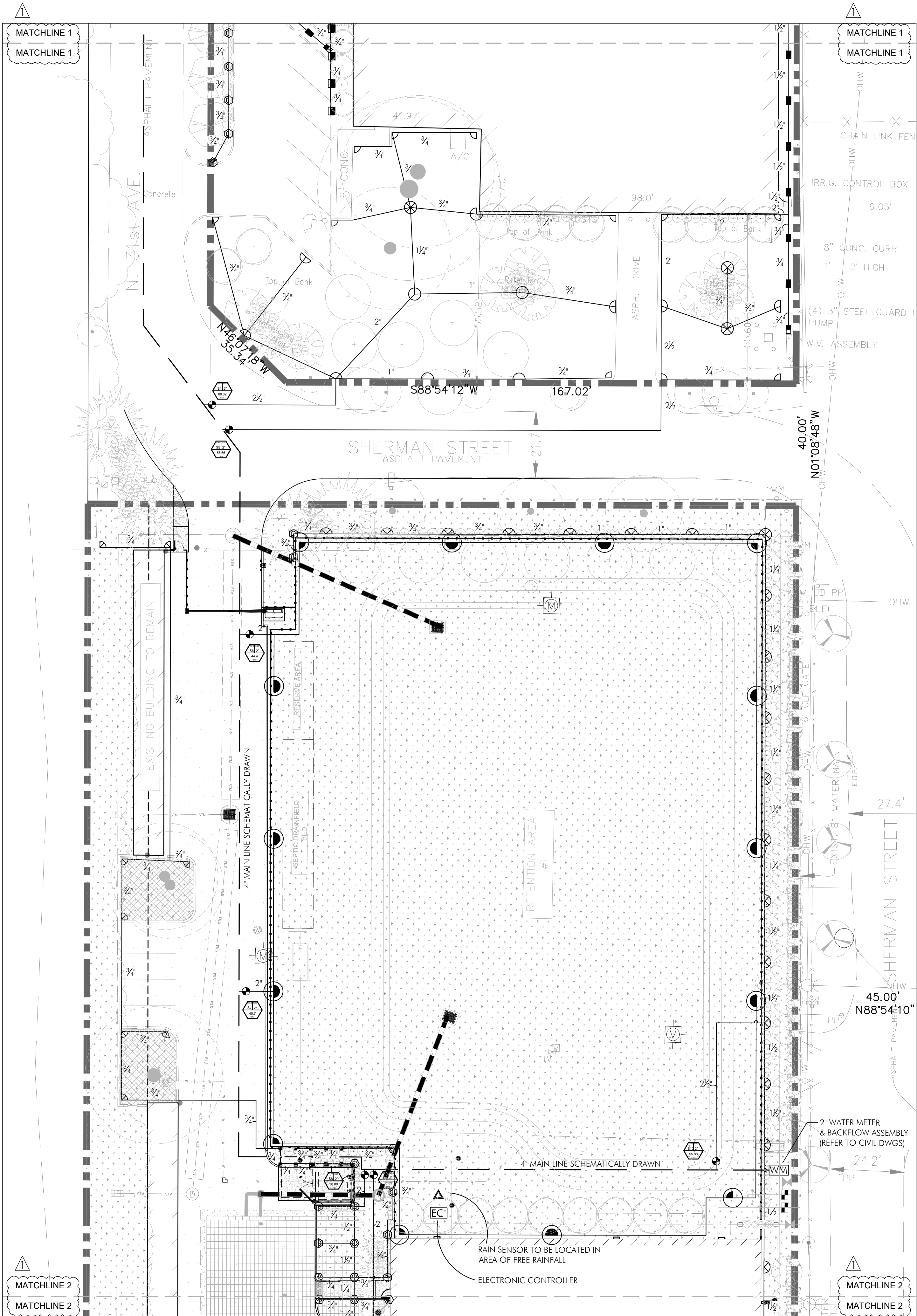
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POLLUTION PREVENTION PLAN DETAILS

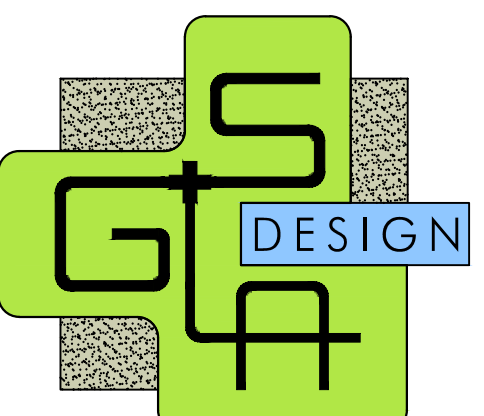
SCALE: 1"=30'		SHEET No. C-6.1
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IRRIGATION PLAN 1
SCALE: 1" = 20'



IRRIGATION PLAN 2
SCALE: 1" = 20'

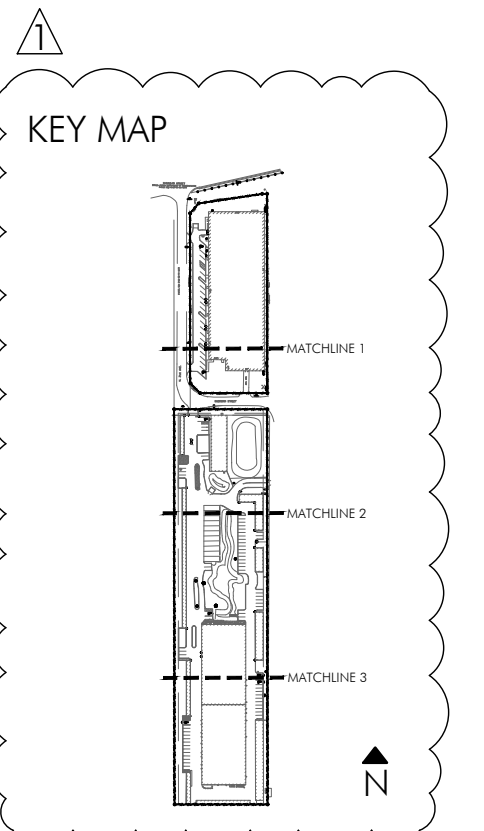


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LANDSCAPE ARCHITECTURE
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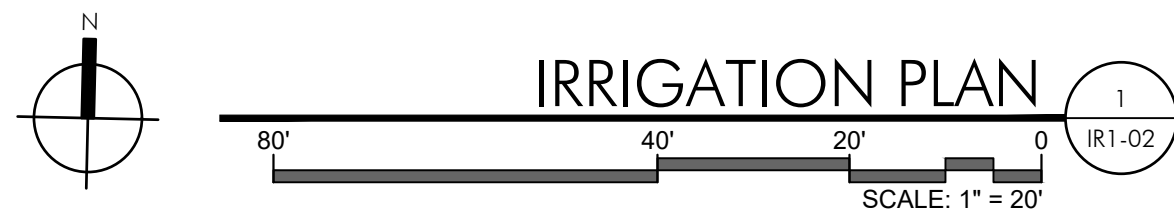
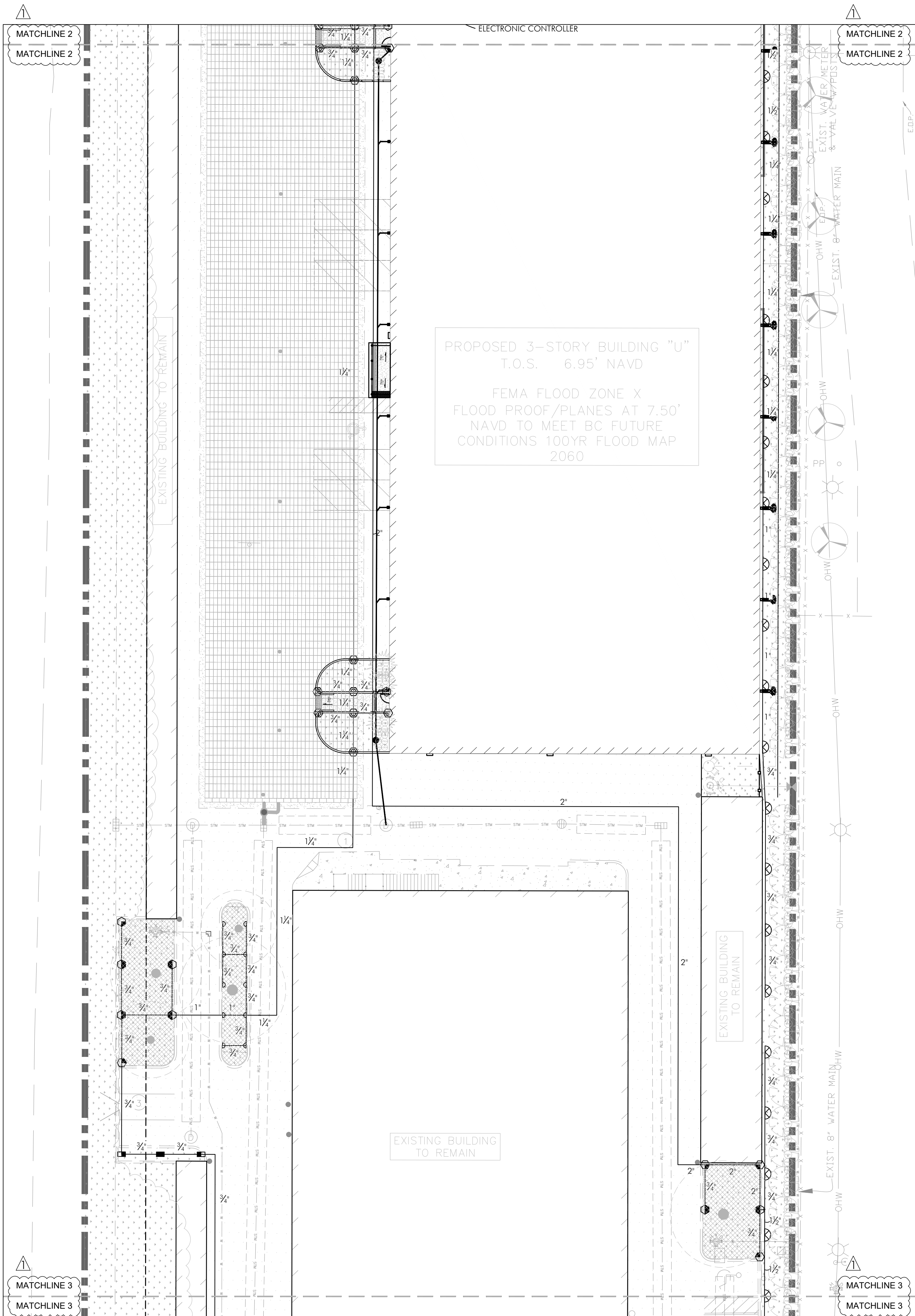
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SHERIDAN STREET STORAGE ADDITION
DESIGN DEVELOPMENT SITE PLAN
3090 SHERMAN STREET, HOLLYWOOD, FL 33021



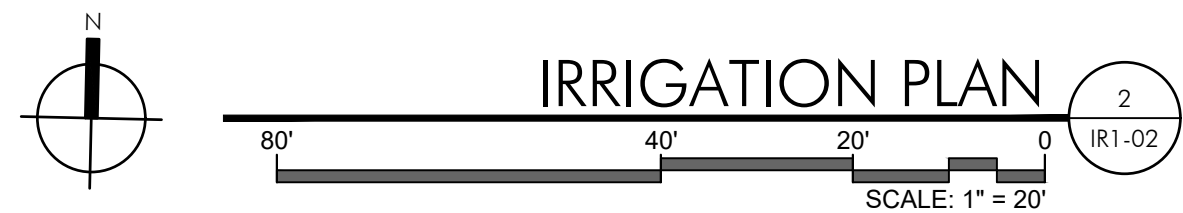
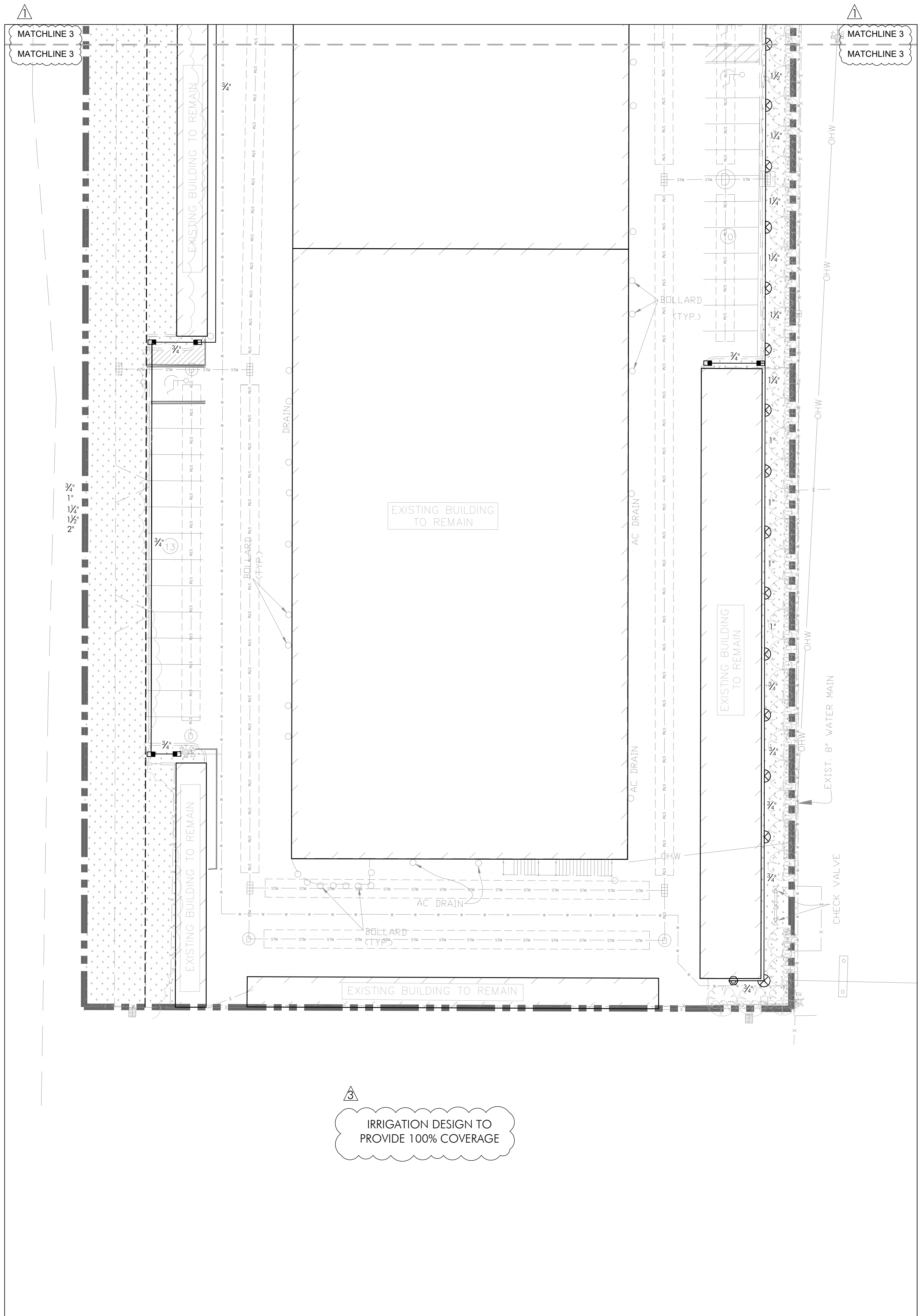
REV.	DATE	REVISIONS
1	3.7.2023	REVIEW COMMENTS
2	11.14.2022	REVIEW COMMENTS
3	11.01.2022	REVIEW COMMENTS

TITLE	IRRIGATION PLAN
DATE	8.17.2022
SCALE	as noted
SHEET	IR1-01



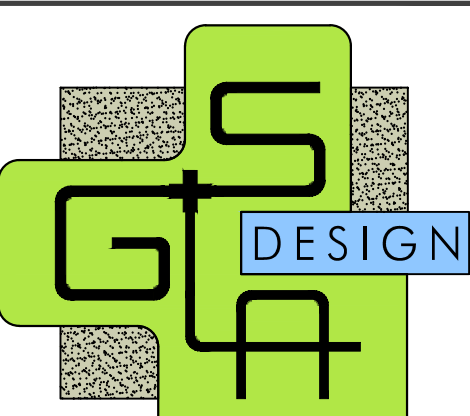
IRRIGATION PLAN

1
IR1-02



IRRIGATION PLAN

2
IR1-02



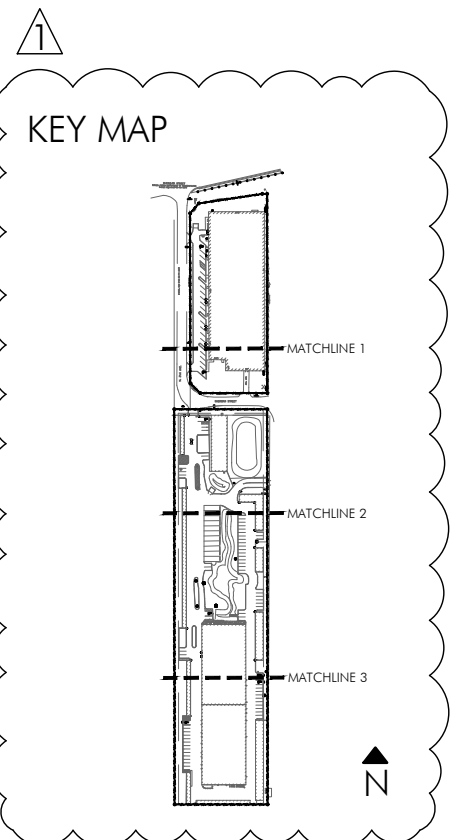
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17670 NW 78th AVE., SUITE 214
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P 305.392.1016 F 305.392.1019
C O R P . I D # 0 0 0 0 2 6 6

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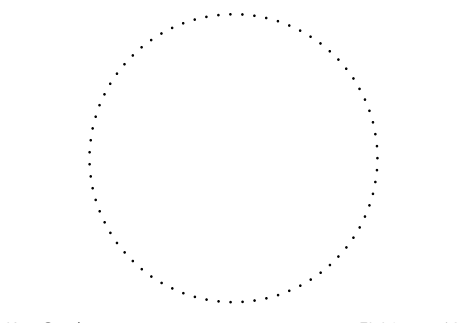
SHERIDAN STREET STORAGE ADDITION
DESIGN DEVELOPMENT SITE PLAN

3090 SHERMAN STREET, HOLLYWOOD, FL 33021



REV.	DATE	REVIEW COMMENTS
1	3.7.2023	REVIEW COMMENTS
2	11.14.2022	REVIEW COMMENTS
3	11.01.2022	REVIEW COMMENTS

TITLE
IRRIGATION PLAN



Ken Gardner Karl Semler	FL LA #1569 FL LA #6667205
DATE	8.17.2022
SCALE	as noted
SHEET	IR1-02

GENERAL NOTES:

1. SCOPE OF WORK: The Contractor shall furnish all labor, machinery, tools, supplies, and equipment as necessary to construct and provide an operating system, as indicated in the Plans. The work shall include, but not be limited to, furnishing materials (pipe, valves, sprinkler heads, fittings, controllers, electrical, wire and fittings, primer, glue, etc.), layout, protection to the public, excavation, assembly, installation, backfilling, compaction, repair of road or pavement surfaces, controller and low voltage feed to the valves, clean-up, maintenance and guarantee, and as-built plans.

2. Contractor shall coordinate with General Contractor or other pertinent Contractors on the job to insure that sleeves are provided and installed under hard surfaces to allow access to all areas to be irrigated. All sleeves shall be constructed of Class 200 PVC. Bury all sleeves a minimum of 18" below the surface. Sleeve to be double the size if the pipe running through it. Sleeve shall extend 24" past the edge of pavement into the area to be irrigated.

3. GUARANTEE: The irrigation system shall be guaranteed for a minimum of one calendar year from the time of final acceptance.

4. REPAIR UTILITIES: The Contractor shall be responsible to verify the location of all utilities by hand excavation or other appropriate measures before performing any work that may result in damage to utilities structures, or property. The Contractor shall take immediate steps to repair, replace, or restore all services to any utilities which are disrupted due to his operations. All costs involved in disruption of service and repairs due to negligence on part of the Contractor shall be his responsibility.

5. AS-BUILT DRAWINGS: Prints of the plans will be supplied to the Contractor for recording "as-built" information. Immediately upon installation of any work which deviates from what is shown on the Plans, the Contractor shall clearly indicate such changes in red pencil on the prints. Such changes shall include, but not be limited to, changes in (1) materials; (2) sizes of material; (3) location; and (4) quantities.

6. The entire installation shall fully comply with all applicable local and state codes and ordinances. The Contractor shall take out all required plumbing and electrical applications and permits, arrange for all necessary inspections and shall pay all fees and expenses in connection with same as part of work under the contract.

7. UNIT PRICES: The successful bidder shall furnish, to the Owner, a unit price breakdown for all materials. The Owner may at his own discretion, add to or delete from the materials, using the unit price breakdown submitted to and accepted by the Owner.

8. MAINTENANCE PERIOD: The irrigation system shall be maintained for a period of 90 days after final acceptance of installation. Maintenance shall include checking of the system 2 times per week. Contractor shall be responsible to replace/repair any broken or malfunctioning parts of the system including those damaged by accidents or vandalism. Repairs shall be made immediately at the time of inspection or when notified by the Landscape Architect.

9. The irrigation system shall provide 100% coverage with a minimum of 90% overlap of water spray.

10. The system is design to provide sprinkler precipitation rates that are nearly equal in each zone. Mixing of sprinklers with widely varying precipitation rates in a zone will not be accepted.

11. Irrigation mainline shall be made of Class 200 PVC and all laterals shall be Class 200 PVC, except flexible PVC (or Toro funny pipe) for flexible swing joint and Schedule 40 PVC risers for spray heads in shrub areas. Schedule 80 galvanized steel pipe is to be used for all above ground fittings. Pipe locations shall be adjusted in the field. When laying out mains and laterals, locate pipe near edges of pavement or against buildings wherever possible, to allow space for plant rootballs. Coordinate pipe locations with plantings. Bury all mains and laterals 18" min. below surface. Depth shall be measured to top of pipe.

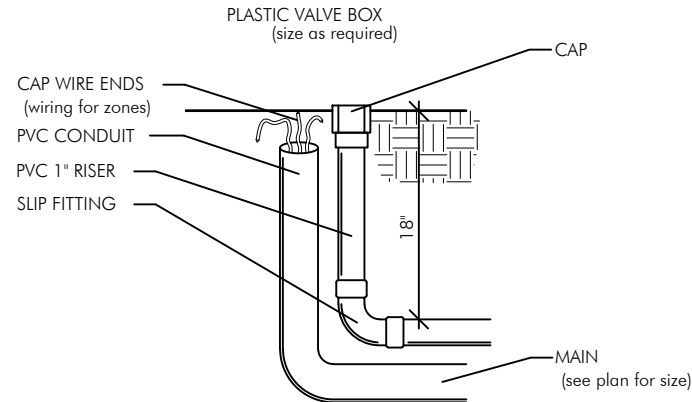
12. Keep pop-up sprinkler heads a minimum of 8" from edges of pavement and curbing, and heads on risers a minimum of 18", or as indicated in the plans.

13. All heads located in shrub or groundcover beds shall be installed on a riser as per details in the plans. All other heads shall be installed on a swing joint as per details in the plans.

14. Place irrigation control wire in conduit in the same trench as mains and under the main. ASI wire shall be #14 or larger solid copper UL approved underground direct burial cable and shall be continuous with no splices from controller to solenoid valve.

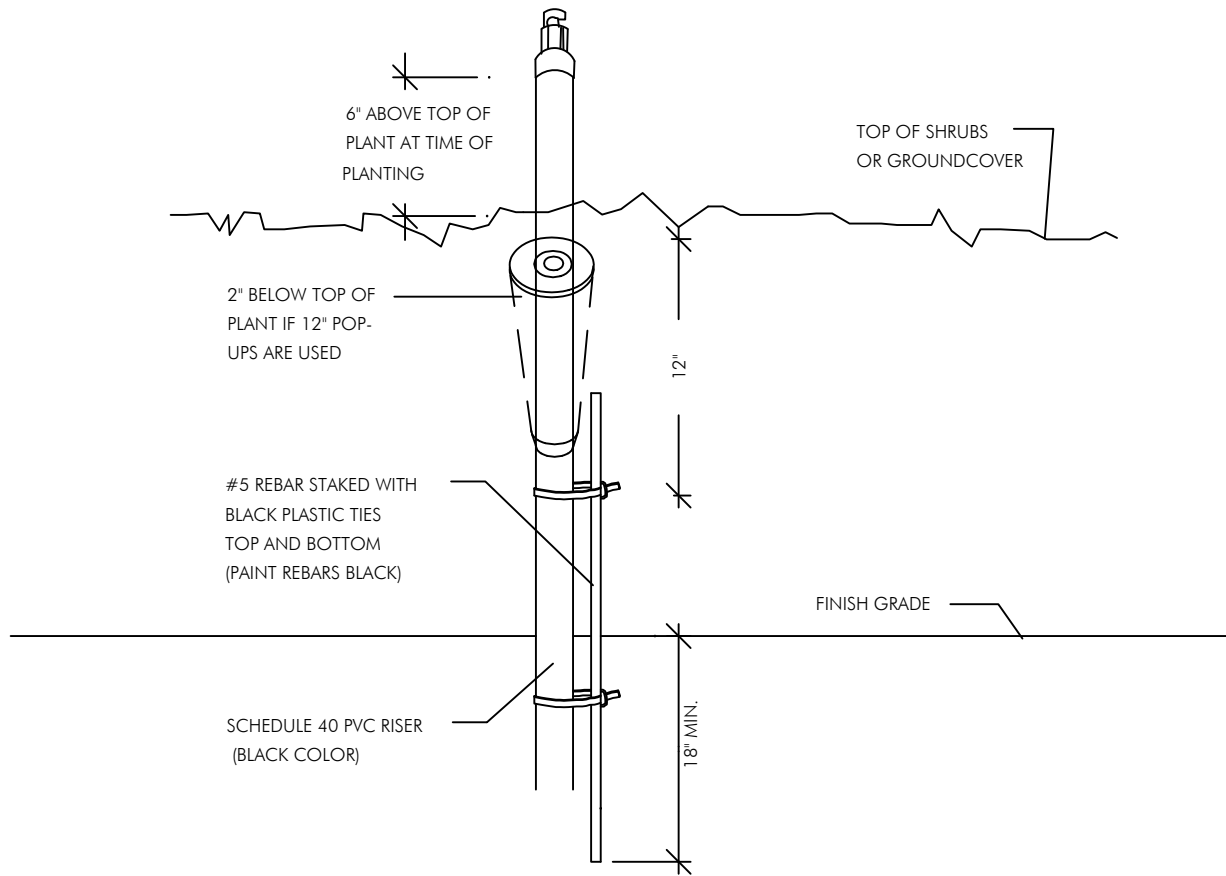
15. Valve locations are schematic and shall be adjusted in the field. Each valve shall be in a separate valve box (10' x 16' min.). When grouping valve boxes in grass or groundcover areas, set boxes a minimum of 12' apart to allow grass or groundcover to grow between them. When possible, hide valve boxes in shrub beds, a minimum of 12' from edge of beds. Set all valve boxes, concrete or plastic, in ground with cover flush with finish grade, and level, with a minimum of 6" of pea gravel at the bottom of the box, with at least 2' of clearance from the bottom of the valve to the top of the gravel.

16. TESTING: Notify the Landscape Architect in writing when testing will be conducted. Conduct test in the presence of the Landscape Architect. After all PVC assembly is completed the lines shall be flushed to insure that no rocks, sand, or other foreign debris remains in the lines. The mains shall be filled with water and all outlets shall be capped and plugged. The main shall be pressurized to 100 PSI for a minimum of one hour. No section of the main will be approved if the pressure drops more than 5 PSI at the end of the one hour period. Leaks shall be repaired immediately and the system shall be re-tested until found satisfactory by the Landscape Architect.



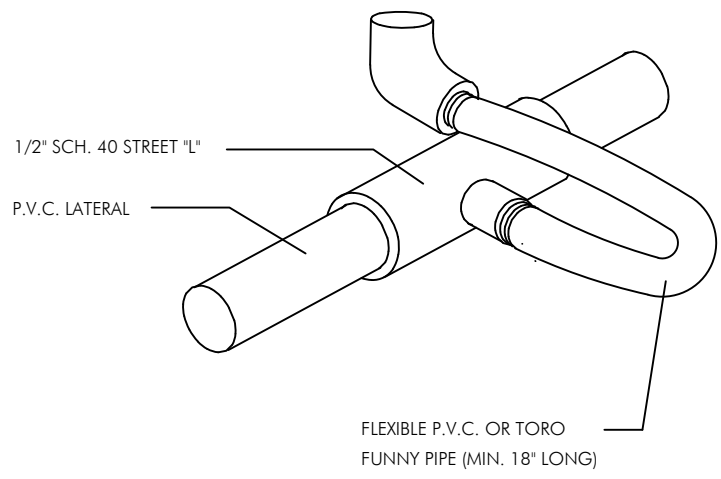
DETAIL OF STUB-OUT FOR FUTURE USE

N.T.S.



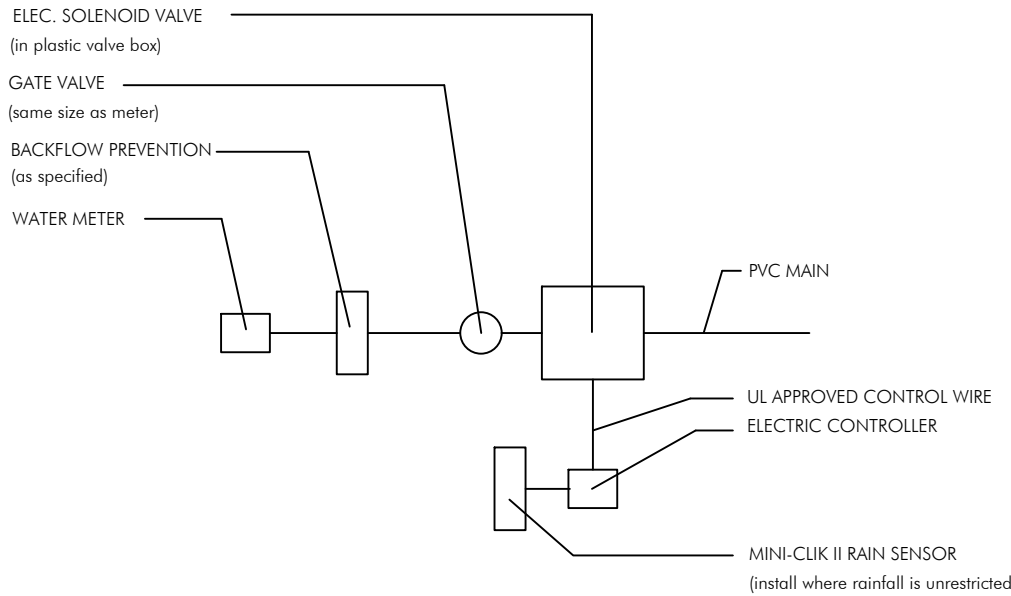
SPRINKLER ON RISER DETAIL FOR SHRUB AREAS

N.T.S.



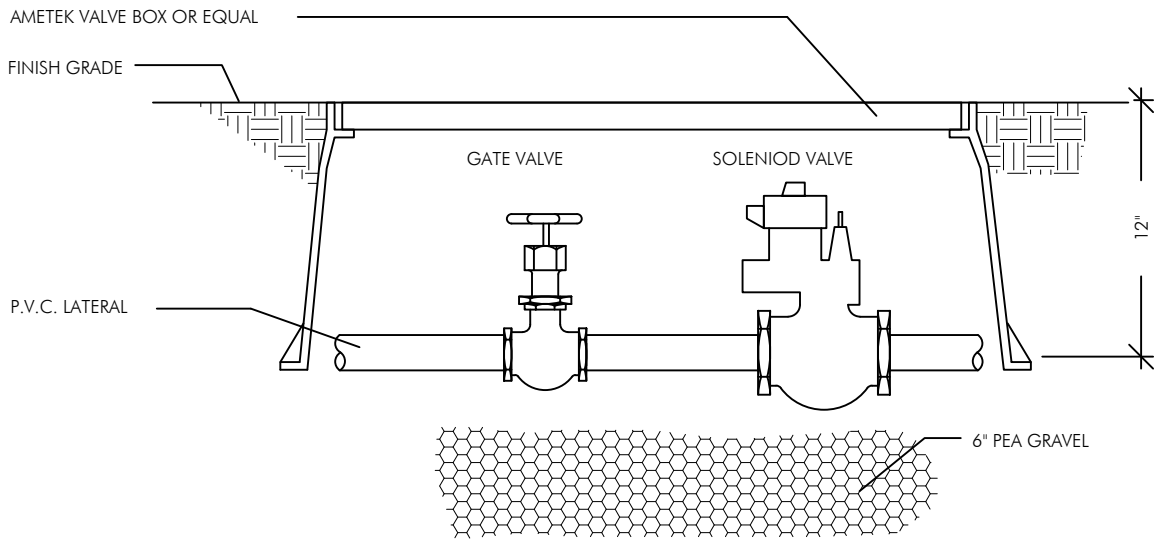
FLEXIBLE SWING JOINT DETAIL

N.T.S.



CONNECTION TO METER DETAIL

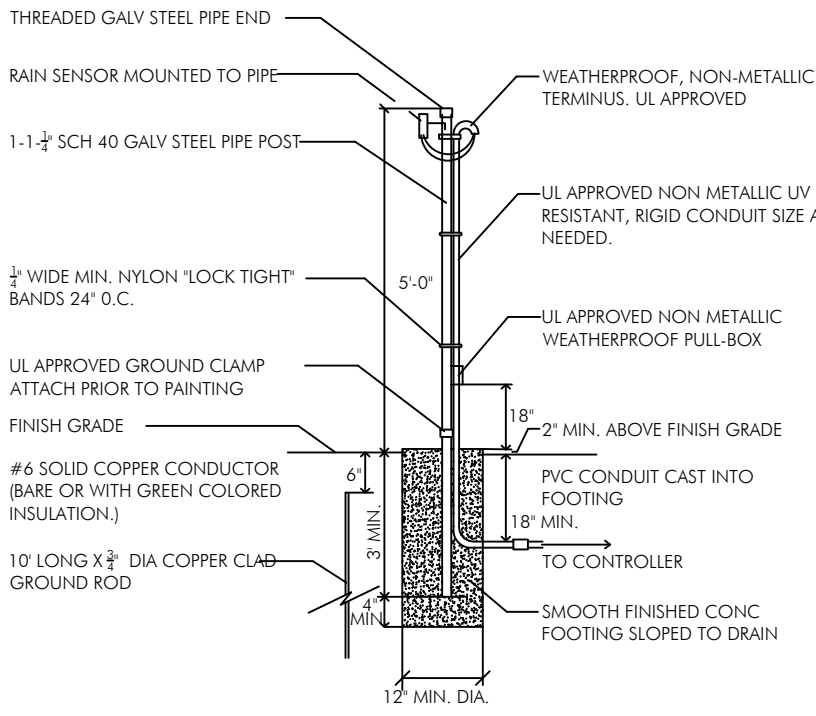
N.T.S.



TYPICAL SOLENOID VALVE ASSEMBLY

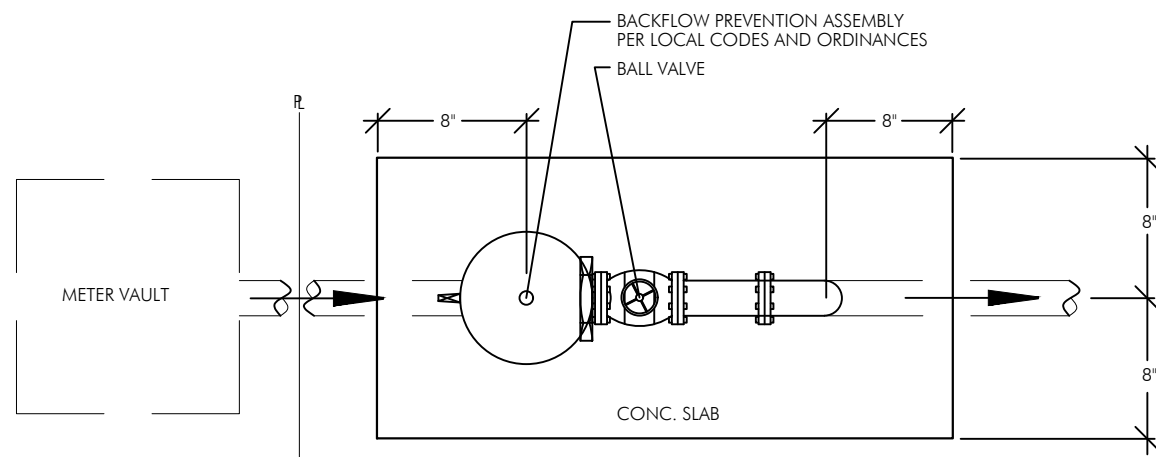
N.T.S.

NOTE:
ALL WIRE CONNECTIONS SHALL BE APPROVED WATERTIGHT CONNECTIONS.
FINISH ENTIRE ASSEMBLY, EXCEPT FOR EQUIPMENT, WITH FLAT BLACK ACRYLIC ENAMEL PAINT.
PRIME METALLIC SURFACES WITH ZINC CHROMATE PRIOR TO FINISHING.



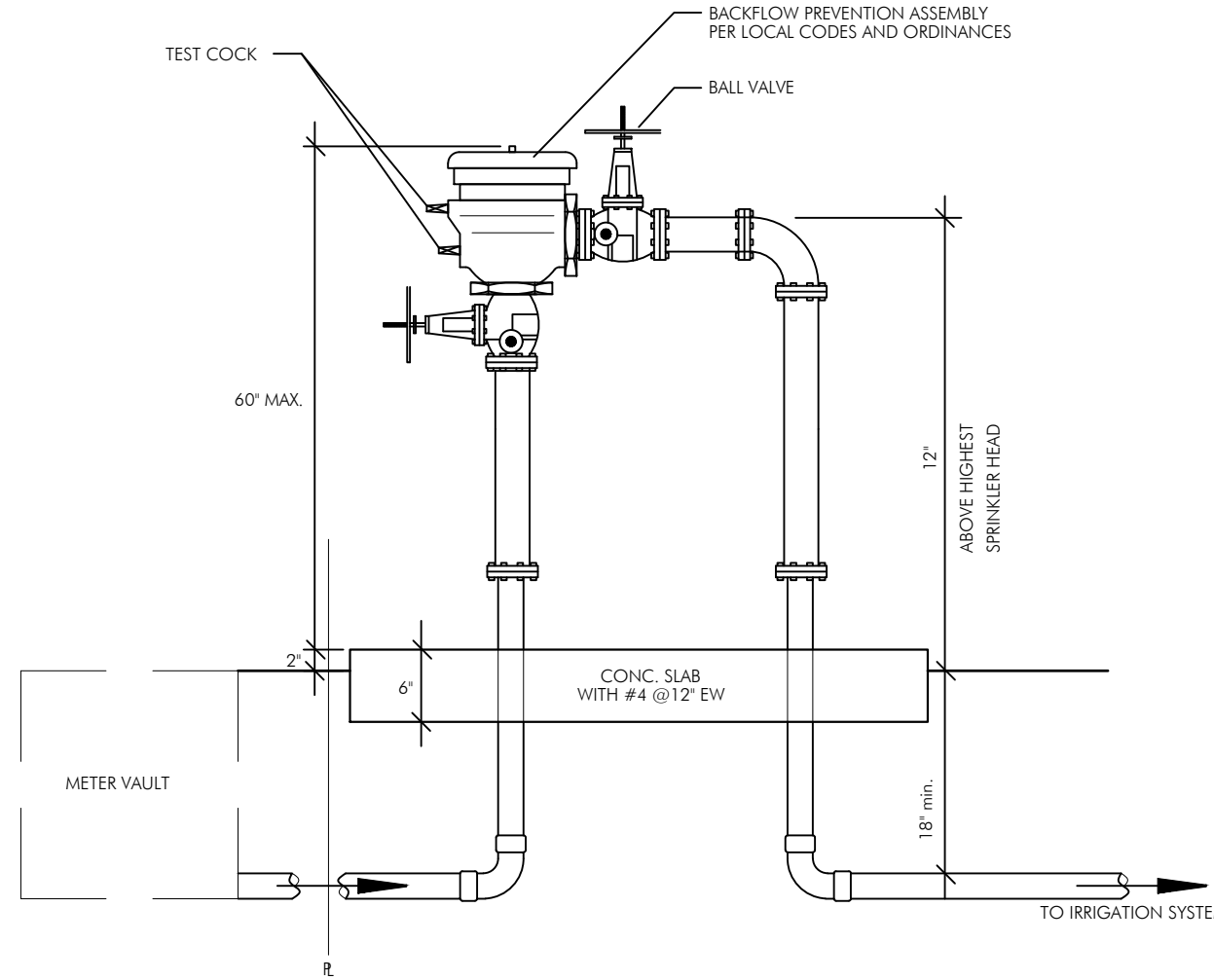
RAIN SENSOR DETAIL

N.T.S.



PLAN VIEW

N.T.S.



ELEVATION VIEW

N.T.S.

BACKFLOW PREVENTION ASSEMBLY DETAIL
IRRIGATION SYSTEM ONLY

N.T.S.

MDC WASA - PRESSURE VACUUM BREAKER DETAIL
IRRIGATION SYSTEM ONLY (WS 4.19)

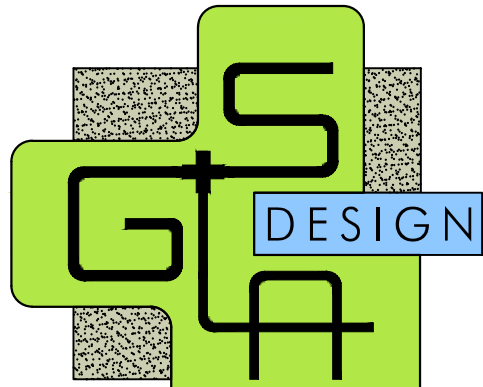
N.T.S.

NOTES:
-MATERIALS: PIPES AND FITTINGS SHALL BE APPROVED BY ASAE STANDARDS APPENDIX F.
-THE ASSEMBLY SHALL BE INSTALLED WITH MINIMUM HORIZONTAL CLEARANCES OF 30 INCHES FREE FROM OBSTRUCTIONS IN ALL DIRECTIONS.
-GUARD POSTS SHALL BE INSTALLED IF THE ASSEMBLY IS EXPOSED TO POSSIBLE DAMAGE FROM VEHICULAR TRAFFIC, AS DETERMINED BY THE DEPARTMENT.
-THE ASSEMBLY SHALL BE INSTALLED IN AN ACCESSIBLE LOCATION, APPROVED BY THE DEPARTMENT.
-PIPING SHALL BE SCHEDULE 40 BRASS OR TYPE K COPPER PIPE WITH THREADED FITTINGS IN ACCORDANCE WITH WASD CONSTRUCTION SPECIFICATIONS FOR DONATION WATER MAINS. PVC PIPING IS NOT ACCEPTED BY WASD.
-THE DEPARTMENT SHALL HAVE UNRESTRICTED AND CONTINUOUS ACCESS TO THE VACUUM BREAKER ASSEMBLY.
-SEE SPECIFICATIONS AND CONTACT DEPARTMENT FOR CURRENTLY APPROVED TYPES OF BACKFLOW PREVENTION ASSEMBLIES AND PRESSURE VACUUM BREAKERS (SEE WS 4.18 SHEET 4 OF 4 OR ON THIS SHEET)

IRRIGATION MATERIALS LIST

KEY	ITEM	QTY.
---	PVC laterals shall be Class 200 PVC (sized as shown on plans)	as required
---	MAIN shall be Class 200 PVC	as required
---	Bubbler Zone Piping	as required
---	PVC sleeves shall be Class 200 PVC (sized double the width of the pipe running through it)	as required
---	Flexible PVC or Polypipe (for swing joints)	as required
W/M	WATER METER (See Civil Plans)	1
EC	Electric Controller RAINBIRD ____ Series Controller	1
Δ	Rainbird RSD Series Rain Sensor (locate in area of free rainfall)	1
☛	RAINBIRD 200-PESB 2" Electromechanical Solenoid Control Valve	11
---	Irrigation Control Wire	as required
---	RAINBIRD Spray Heads 1800 @ 30 PSI Series w/MPR nozzles 6" pop-up in grass areas 12" pop-up on risers in shrub beds	as required
■	15-est (.121 gpm)	
■	9-sst (.61 gpm)	
■	10-F (1.58 gpm)	
■	10-TQ (1.18 gpm)	
■	10-H (.79 gpm)	
■	10-T (.53 gpm)	
■	10-Q (.39 gpm)	
■	5-F (.41 gpm)	
■	5-TQ (.33 gpm)	
■	5-H (.20 gpm)	
■	5-T (.13 gpm)	
■	5-Q (.10 gpm)	
⊗	RAINBIRD Rotary Spray Heads 17'-24' radius R-VAN 24 Series @ 40 PSI 6" pop-up in grass areas 12" pop-up on risers in shrub beds	as required
⊗	24-360 (3.13 gpm)	
⊗	24 (27°) (2.31 gpm)	
⊗	24 (180°) (1.54 gpm)	
⊗	24 (120°) (1.0 gpm)	
⊗	24 (90°) (.77 gpm)	
●	RAINBIRD Rotary Spray Heads 13'-18' radius R-VAN 18 Series @ 40 PSI 6" pop-up in grass areas 12" pop-up on risers in shrub beds	as required
●	18-360 (1.8 gpm)	
●	18 (27°) (1.42 gpm)	
●	18-(180°) (.98 gpm)	
●	18-(120°) (.6 gpm)	
●	18-(90°) (.5 gpm)	
⊗	RAINBIRD Rotary Spray Heads 8'-14' radius R-VAN 14 Series @ 40 PSI 6" pop-up in grass areas 12" pop-up on risers in shrub beds	
⊗	14-360 (1.22 gpm)	
⊗	14 (27°) (.92 gpm)	
⊗	14-(180°) (.61 gpm)	
⊗	14-(120°) (.4 gpm)	
⊗	14-(90°) (.31 gpm)	
⊗	FALCON 6504 w/ Rain-Curtain Nozzle @ 50 PSI	as required
⊗	6.0 nozzle (14.3 gpm)	
⊗	4.0 nozzle (11.0 gpm)	
⊗	3.0 nozzle (7.4 gpm)	
⊗	1.5 nozzle (3.7 gpm)	
⊗	5000/Series Rotor Heads @ 45 PSI 35' RADIUS	
⊗	8.0 nozzle (7.58 gpm)	
⊗	6.0 nozzle (5.73 gpm)	
⊗	4.0 nozzle (3.81 gpm)	
⊗	2.0 nozzle (1.92 gpm)	

LATERAL PIPE SIZING
The Contractor is responsible to properly size all laterals. All laterals shall be sized according to the following schedule. Total gallonage per pipe section shall be calculated be adding the GPM per head for every head downstream of the pipe.



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C O R P . I D # 0 0 0 0 2 6 6

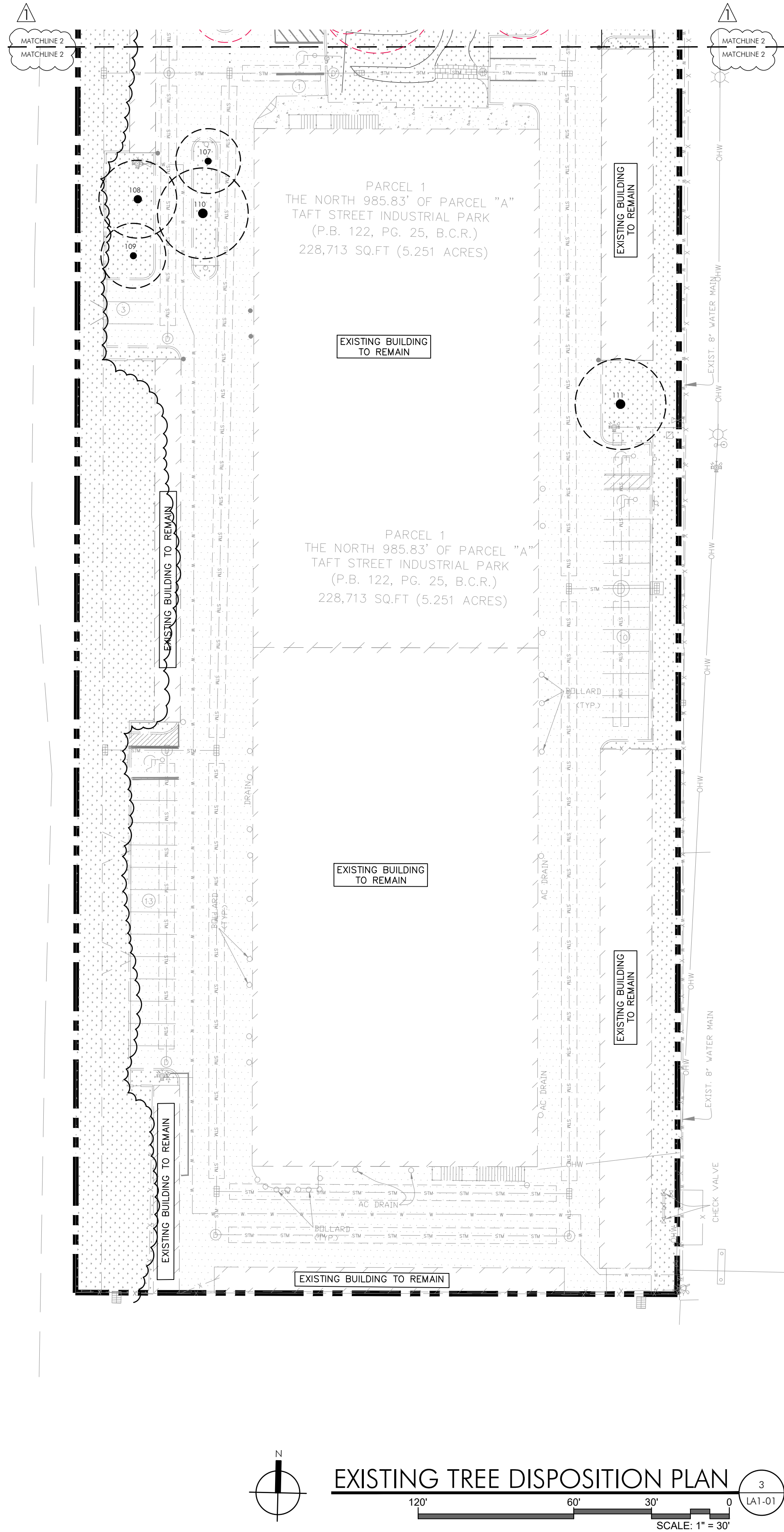
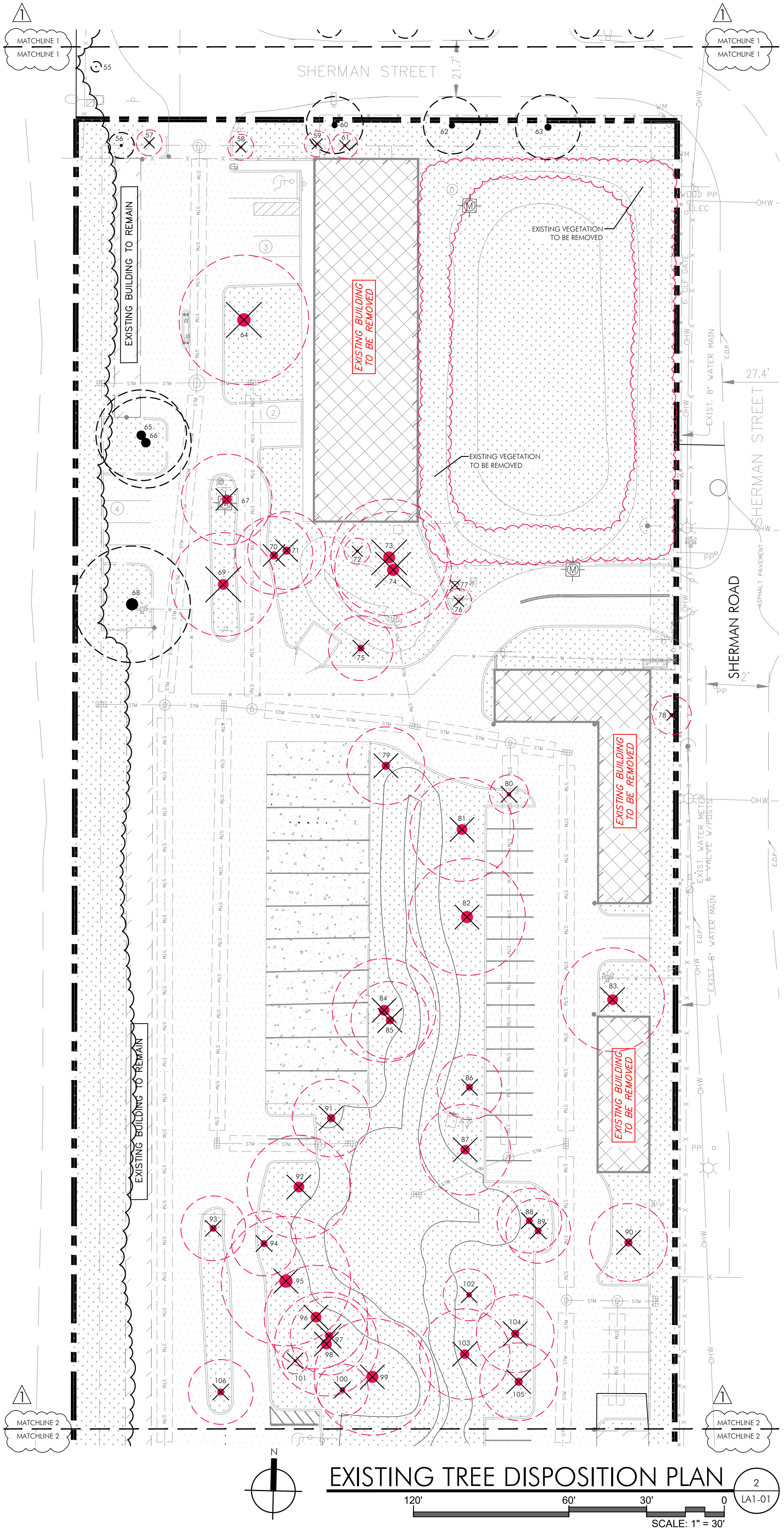
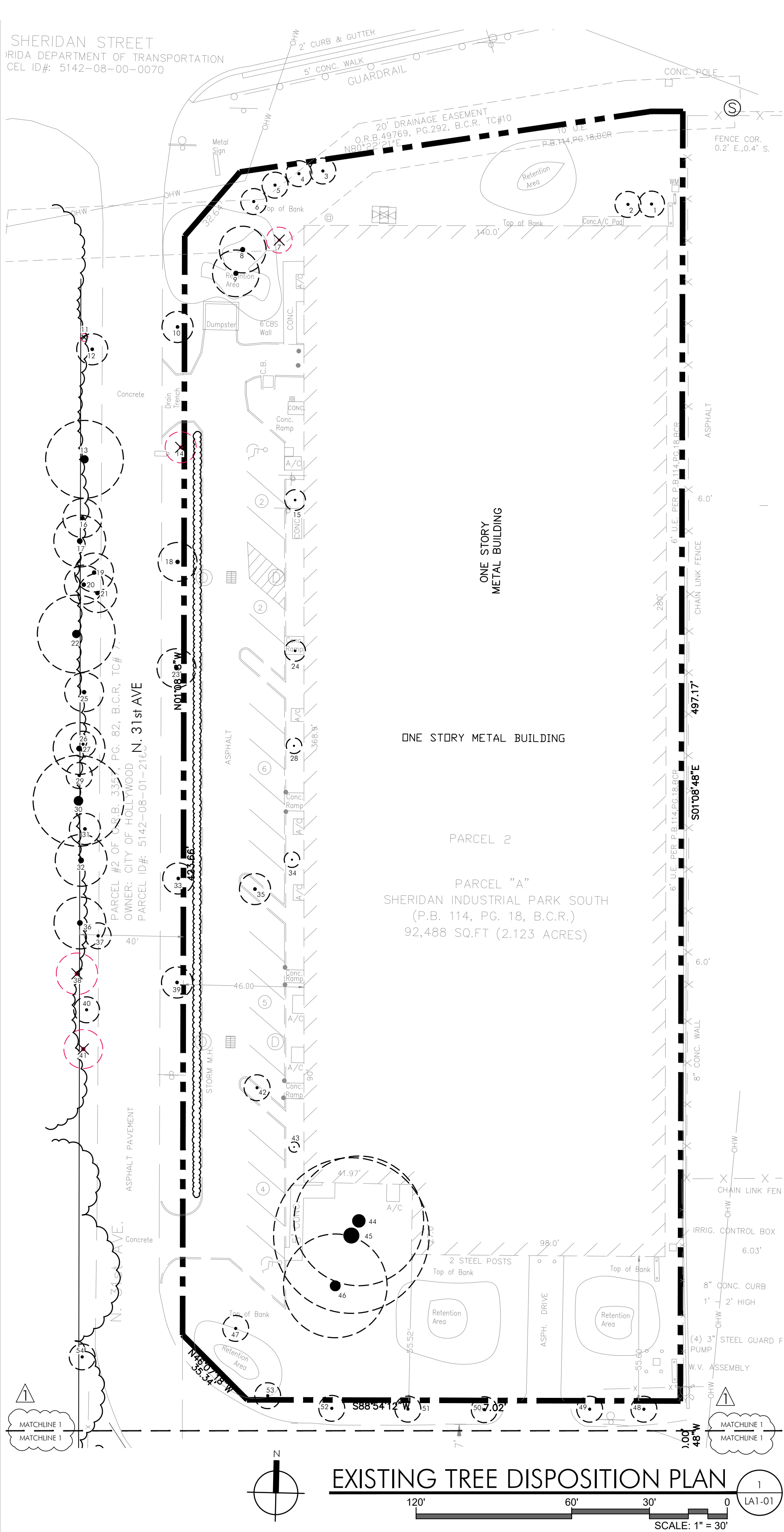
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SHERIDAN STREET STORAGE ADDITION
DESIGN DEVELOPMENT SITE PLAN
3090 SHERMAN STREET, HOLLYWOOD, FL 33021

REV.		
3	3.7.2023	REVIEW COMMENTS
2	11.14.2022	REVIEW COMMENTS
1	11.01.2022	REVIEW COMMENTS

IRRIGATION
SPECIFICATIONS
AND DETAILS

TITLE	IRRIGATION SPECIFICATIONS AND DETAILS
Ken Gardner Karl Semler	FLA #1569 FLA #6667205
DATE	8.17.2022
SCALE	as noted
SHEET	IR5-01



LEGEND

EXISTING TREE TO REMAIN

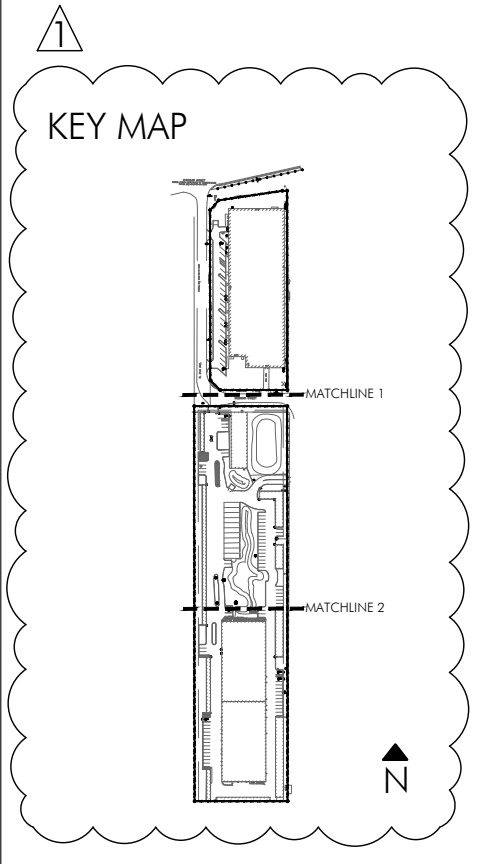
EXISTING TREE TO BE REMOVED

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**SHERIDAN STREET STORAGE ADDITION
DESIGN DEVELOPMENT SITE PLAN**

3090 SHERMAN STREET, HOLLYWOOD, FL 33021



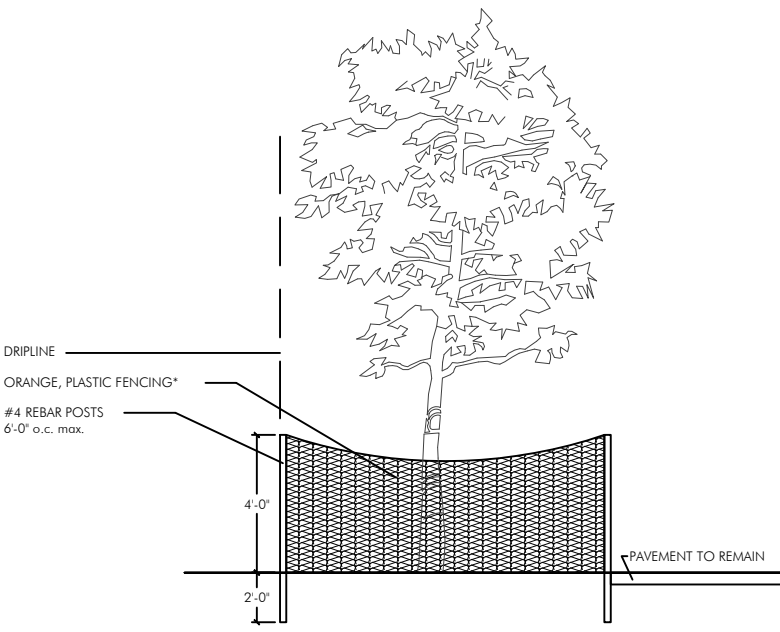
REV.	3.7.2023	REVIEW COMMENTS
	11.14.2022	REVIEW COMMENTS
	11.01.2022	REVIEW COMMENTS

TITLE

EXISTING TREE
DISPOSITION
PLAN

EXISTING TREE DISPOSITION LIST							
KEY	BOTANICAL NAME	COMMON NAME	SIZE			DISPOSITION	NOTES
			HT. (ft.)	SPD. (ft.)	DBH. (in.)		
1	Sabal palmetto	Sabal Palm	18	10	10		
2	Sabal palmetto	Sabal Palm	18	10	10		
3	Sabal palmetto	Sabal Palm	18	10	10		
4	Sabal palmetto	Sabal Palm	18	10	10		
5	Sabal palmetto	Sabal Palm	18	10	10		
6	Sabal palmetto	Sabal Palm	18	10	10		
7	Ficus aurea	Strangler Fig	18	10	10	remove	
8	Conocarpus erectus 'Sericeus'	Silver Buttonwood	15	18	10+5		
9	Conocarpus erectus 'Sericeus'	Silver Buttonwood	12	18	10+6		
10	Tabebuia caribba	Yellow Trumpet Tree	16	12	12		
11	Dead Trunk					remove	n/a
12	Sabal palmetto	Sabal Palm	15	10	10		
13	Ficus aurea	Strangler Fig	30	30	4" wide		
14	Dead					remove	n/a
15	Ilex cassine	Dahoon Holly	12	8	8		
16	Sabal palmetto	Sabal Palm	15	10	10		
17	Ficus aurea	Strangler Fig	25	20	5		
18	Tabebuia caribba	Yellow Trumpet Tree	15	15	12		
19	Sabal palmetto	Sabal Palm	12	10	10		
20	Sabal palmetto	Sabal Palm	20	10	10		
21	Sabal palmetto	Sabal Palm	8	10	10		
22	Ficus aurea	Strangler Fig	25	30	6" wide		
23	Conocarpus erectus	Green Buttonwood	18	15	10		
24	Ilex cassine	Dahoon Holly	15	8	7		
25	Ficus aurea	Strangler Fig	20	15	12		
26	Sabal palmetto	Sabal Palm	8	10	too low		
27	Ficus aurea	Strangler Fig	20	20	10		
28	Ilex cassine	Dahoon Holly	12	6	6		
29	Sabal palmetto	Sabal Palm	15	10	10		
30	Ficus aurea	Strangler Fig	30	35	8" wide		
31	Sabal palmetto	Sabal Palm	20	10	10		
32	Ficus aurea	Strangler Fig	18	20	14		
33	Conocarpus erectus	Green Buttonwood	20	12	10		
34	Ilex cassine	Dahoon Holly	12	6	4		
35	Conocarpus erectus 'Sericeus'	Silver Buttonwood	12	12	5		
36	Ficus aurea	Strangler Fig	18	20	10+8		
37	Sabal palmetto	Sabal Palm	16	10	10		
38	Dead / Hacked off					remove	n/a
39	Tabebuia caribba	Yellow Trumpet Tree	18	12	10		
40	Sabal palmetto	Sabal Palm	15	10	10		
41	Dead					remove	n/a
42	Conocarpus erectus 'Sericeus'	Silver Buttonwood	12	10	6		
43	Ilex cassine	Dahoon Holly	12	4	3		
44	Quercus virginiana	Live Oak	40	50	21		
45	Quercus virginiana	Live Oak	40	50	48		
46	Quercus virginiana	Live Oak	30	40	26		
47	Sabal palmetto	Sabal Palm	18	10	10		
48	Sabal palmetto	Sabal Palm	18	10	10		
49	Sabal palmetto	Sabal Palm	18	10	10		
50	Sabal palmetto	Sabal Palm	18	10	10		
51	Sabal palmetto	Sabal Palm	18	10	10		
52	Sabal palmetto	Sabal Palm	18	10	10		
53	Sabal palmetto	Sabal Palm	18	10	10		
54	Sabal palmetto	Sabal Palm	20	10	10		
55	Ficus aurea	Strangler Fig	12	4	2+3		
56	Sabal palmetto	Sabal Palm	16	10	10		
57	Sabal palmetto	Sabal Palm	18	10	10		
58	Sabal palmetto	Sabal Palm	18	10	10	remove	1 palm
59	Sabal palmetto	Sabal Palm	18	10	10	remove	1 palm
60	Quercus virginiana	Live Oak	25	22	12		
61	Sabal palmetto	Sabal Palm	18	10	10	remove	1 palm
62	Quercus virginiana	Live Oak	25	22	10		
63	Quercus virginiana	Live Oak	28	25	14		
64	Quercus virginiana	Live Oak	50	50	40	remove	40
65	Quercus virginiana	Live Oak	35	35	19		
66	Quercus virginiana	Live Oak	35	35	22+24		
67	Pinus elliotii	Slash Pine	50	25	20	remove	20
68	Quercus virginiana	Live Oak	45	45	26		
69	Quercus virginiana	Live Oak	45	40	32	remove	32
70	Quercus virginiana	Live Oak	40	30	15	remove	15
71	Quercus virginiana	Live Oak	40	30	15	remove	15
72	Sabal palmetto	Sabal Palm	22	10	10	remove	1 palm
73	Quercus virginiana	Live Oak	45	45	28	remove	28
74	Quercus virginiana	Live Oak	45	45	21	remove	21
75	Quercus virginiana	Live Oak	20	25	12	remove	12
76	Sabal palmetto	Sabal Palm	20	10	10	remove	1 palm
77	Dead					remove	n/a
78	Ilex cassine	Dahoon Holly	12	12	multi 2	remove	12
79	Quercus virginiana	Live Oak	30	30	10	remove	10
80	Quercus virginiana	Live Oak	20	15	6+6+6	remove	18
81	Quercus virginiana	Live Oak	40	40	34	remove	34
82	Quercus virginiana	Live Oak	45	45	54	remove	54
83	Quercus virginiana	Live Oak	40	40	45	remove	45
84	Quercus virginiana	Live Oak	45	40	30	remove	30
85	Quercus virginiana	Live Oak	40	30	24	remove	24
86	Conocarpus erectus	Green Buttonwood	25	25	10+10	remove	20
87	Quercus virginiana	Live Oak	40	35	25	remove	25
88	Quercus virginiana	Live Oak	35	25	25+20	remove	45
89	Quercus virginiana	Live Oak	35	25	28+20	remove	48
90	Quercus virginiana	Live Oak	30	30	32	remove	32
91	Quercus virginiana	Live Oak	30	30	12	remove	12
92	Quercus virginiana	Live Oak	40	40	30	remove	30
93	Quercus virginiana	Live Oak	40	25	15	remove	15
94	Pinus elliotii	Slash Pine	50	25	16	remove	16
95	Quercus virginiana	Live Oak	45	50	25	remove	25
96	Quercus virginiana	Live Oak	40	40	28	remove	28
97	Quercus virginiana	Live Oak	30	30	12	remove	12
98	Quercus virginiana	Live Oak	40	40	12	remove	12
99	Quercus virginiana	Live Oak	45	45	43	remove	43
100	Pinus elliotii	Slash Pine	35	20	10	remove	10
101	Quercus virginiana	Live Oak	20	10	10	remove	10
102	Quercus virginiana	Live Oak	25	20	14	remove	14
103	Quercus virginiana	Live Oak	40	35	18	remove	18
104	Quercus virginiana	Live Oak	30	30	15	remove	15
105	Quercus virginiana	Live Oak	30	30	14	remove	14
106	Quercus virginiana	Live Oak	28	25	12	remove	12
107	Quercus virginiana	Live Oak	25	25	10		
108	Quercus virginiana	Live Oak	35	30	12		
109	Quercus virginiana	Live Oak	35	25	20		
110	Quercus virginiana	Live Oak	40	35	30		
111	Quercus virginiana	Live Oak	30	35	30		

TOTAL DBH INCHES TO BE REMOVED			876
TOTAL PALMS TO BE REMOVED			5
TOTAL DBH INCHES MITIGATION REQUIRED			876" = (438) 2" DBH Trees + 5 palms at 1:1
TOTAL DBH INCHES MITIGATION PROVIDED			85 trees = 170"
Note: (438) 2" dbh trees required for mitigation.			
(5) required mitigation palms provided by (5) Coconut Palms with minimum height of 8' clear trunk.			
140 site trees required as per city code.			
- 45 existing trees to remain and count towards site tree requirements.			
= 95 required site trees.			
180 trees proposed.			
- 95 required site trees.			
= 85 tree surplus to count toward mitigation.			
438 required mitigation trees - 85 surplus trees = 353 required mitigation trees. Mitigation trees shall be installed at a minimum size of 2" DBH / 12' height.			
There is a mitigation shortfall of 353 - 2" dbh trees. There isn't sufficient room on site to plant these trees, therefore a donation to the City Trust Fund must be made in the amount of \$123,550 (\$350 per 2" dbh tree)			



*LIMITS OF TREE PROTECTION ARE TO BE ESTABLISHED BASED ON AVOID AVOID ROOT MANAGEMENT STANDARDS. AS A GENERAL RULE THE TREE PROTECTION ZONE MUST EXTEND TO PER 1" OF TREE DBH. EXCEED CHANGED PLASTIC FENCING BY TISSUE OR OTHER APPROVED TOTAL AND AVOID INDIVIDUAL TREES AND TREE CLUMPS TO REMAIN ON SITE BY ANY MEANS WITHIN THE LIMITS OF CONSTRUCTION. BARRER SHALL BE MAINTAINED IN AN UPRIGHT POSITION AT ALL TIMES.

TREE PROTECTION DETAIL

N.T.S.



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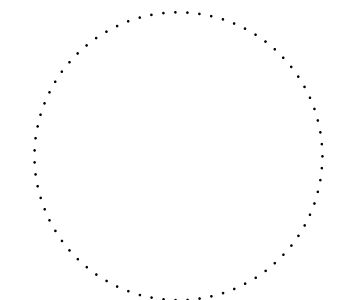
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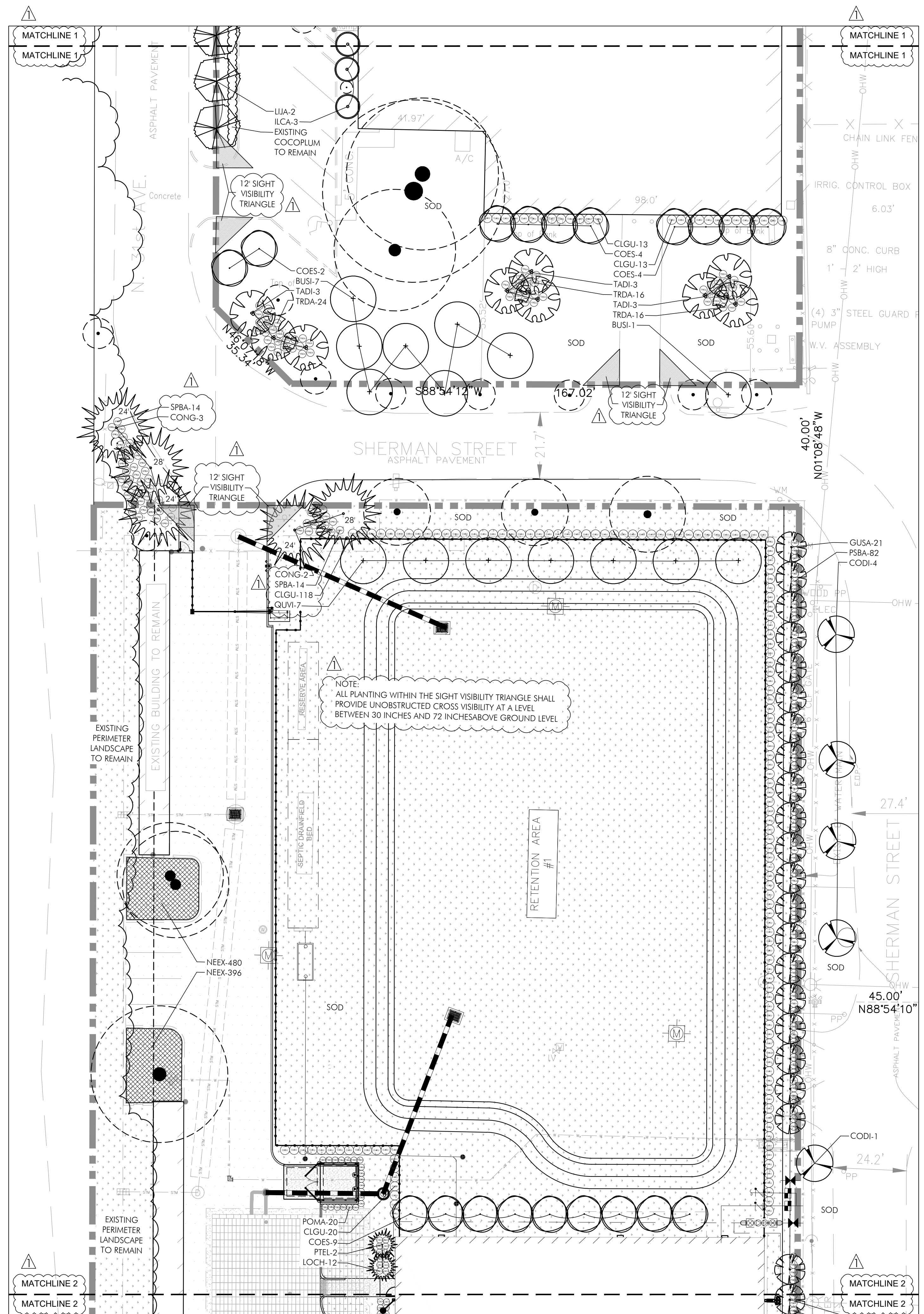
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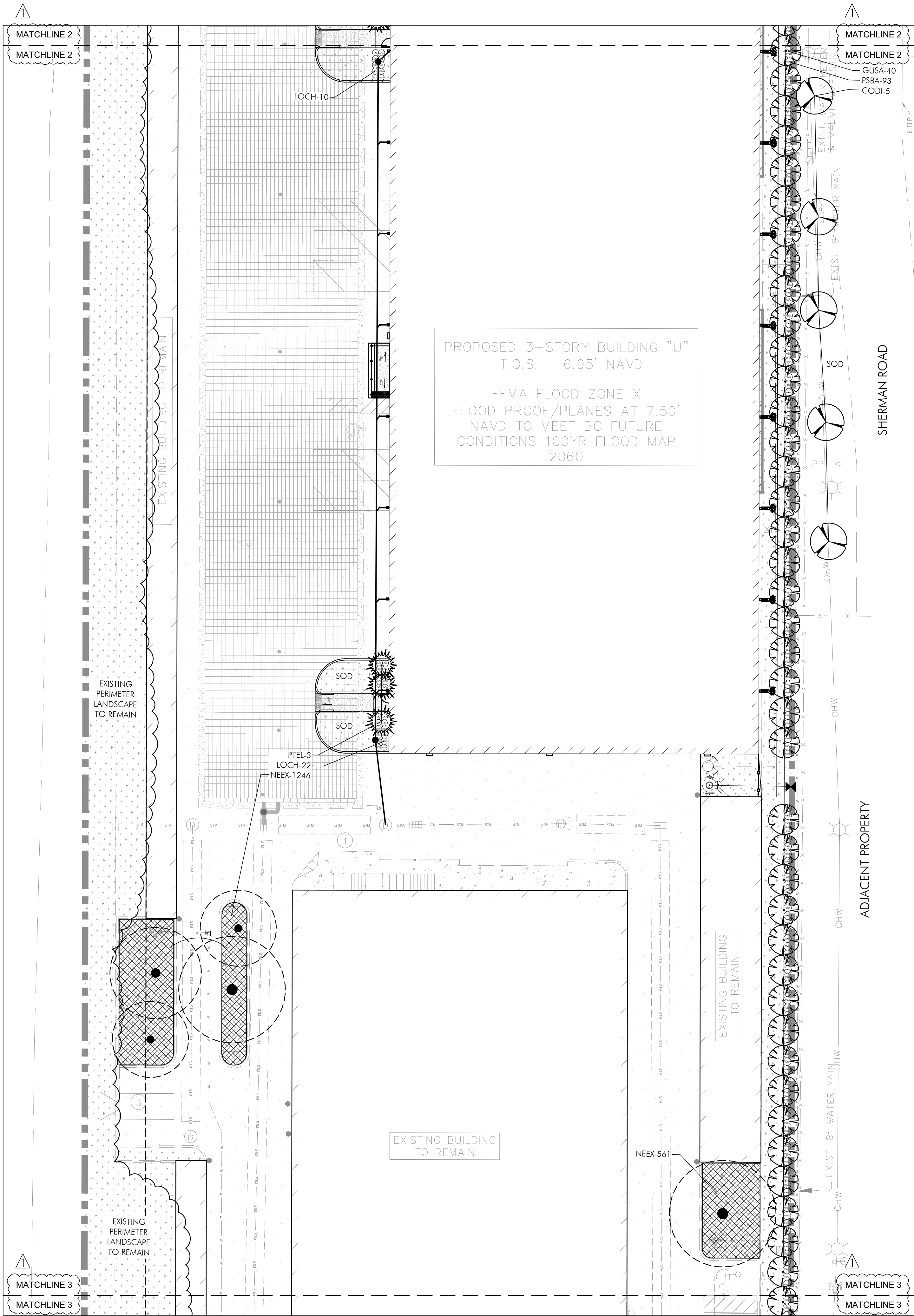
SHERIDAN STREET STORAGE ADDITION DESIGN DEVELOPMENT SITE PLAN

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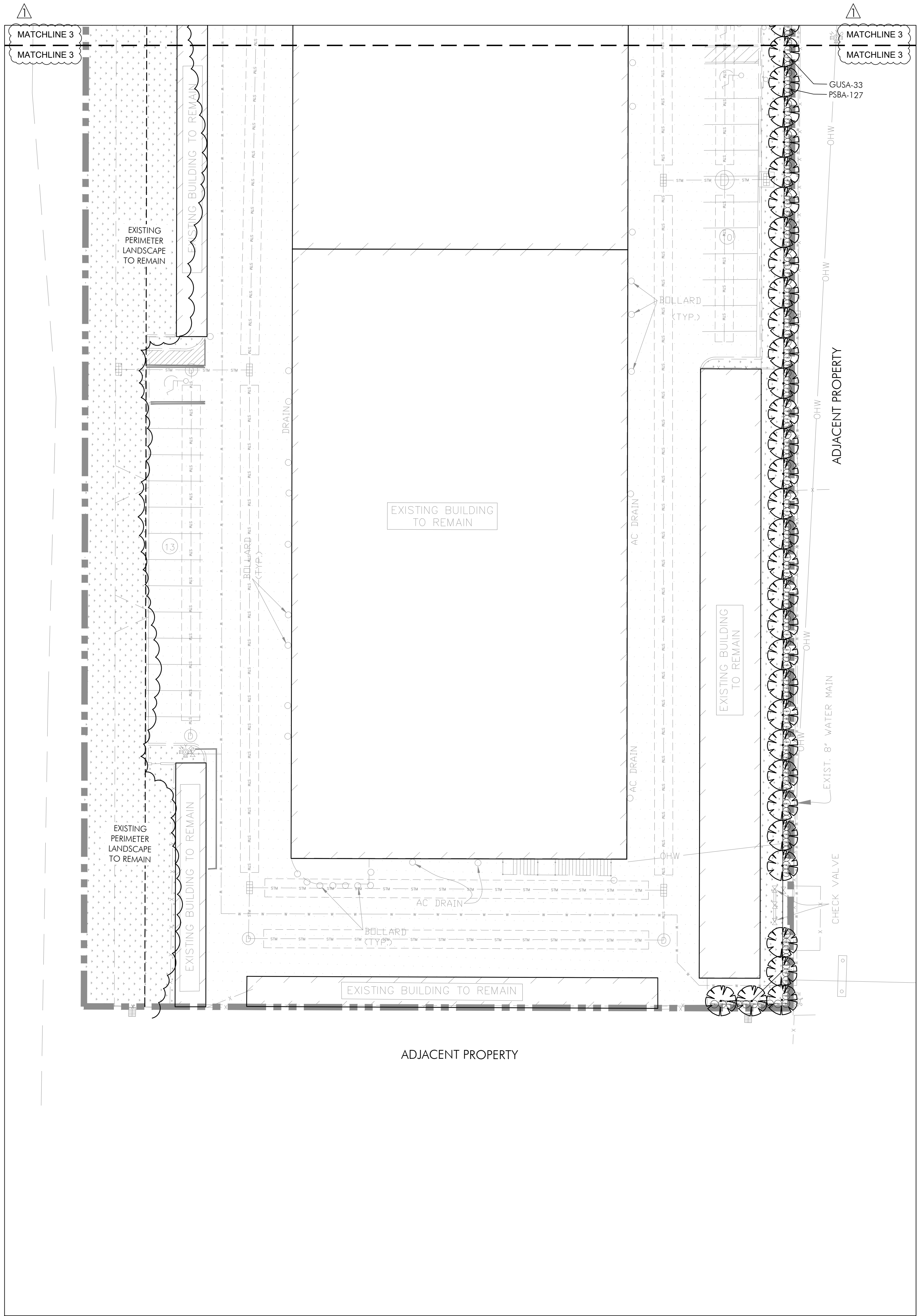
3	3.7.2023	REVIEW COMMENTS
2	11.14.2022	REVIEW COMMENTS
1	11.01.2022	REVIEW COMMENTS
REV.		

TITLE	
EXISTING TREE DISPOSITION LIST	
	
Ken Gardner Kehl Semler	FLA #1569 FLA #6667205
DATE	8.17.2022
SCALE	as noted
SHEET	LA1-02

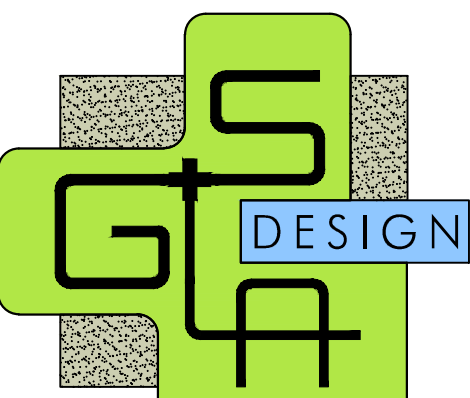




PLANTING PLAN 1 LA2-02
SCALE: 1" = 20'



PLANTING PLAN 2 LA2-02
SCALE: 1" = 20'

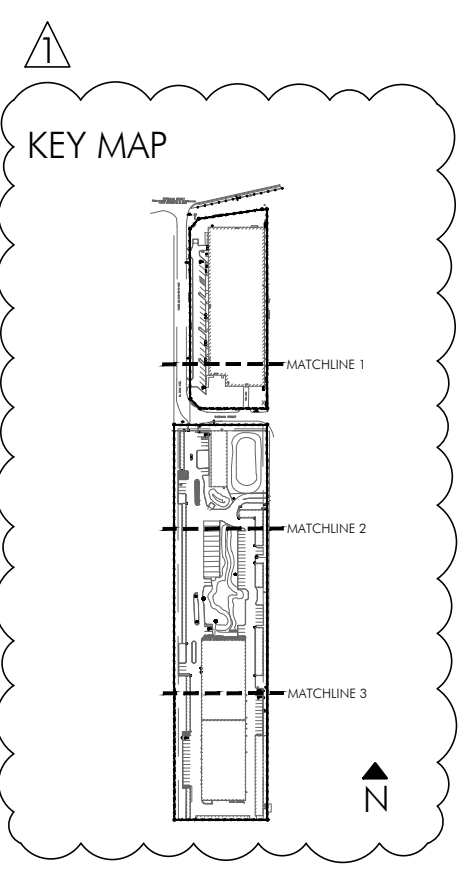


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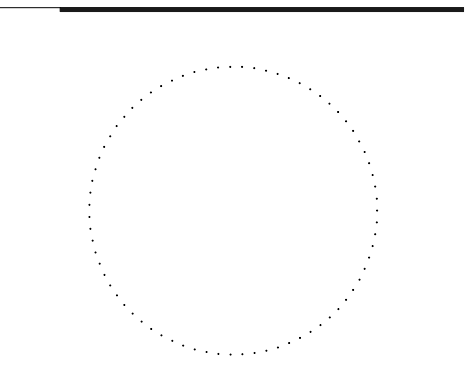
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SHERIDAN STREET STORAGE ADDITION
DESIGN DEVELOPMENT SITE PLAN
3090 SHERMAN STREET, HOLLYWOOD, FL 33021



REV.	DATE	REVIEW COMMENTS
1	3.7.2023	REVIEW COMMENTS
2	11.14.2022	REVIEW COMMENTS
3	11.01.2022	REVIEW COMMENTS

TITLE
PLANTING PLAN



Ken Gardner
Karl Semler
DATE 8.17.2022
SCALE as noted
SHEET LA2-02

PLANT LIST				
TREES - All proposed trees shall be Florida # 1 Grade with a min. ht. of 12 feet				
KEY	PLANT NAME	QTY.	UT.	SIZE
BUSI	Bursera simaruba ...Gumbo Limbo	8	ea.	14' tall x 6' spread, 2" DBH
CODI	Coccoloba diversifolia ...Pigeon Plum	10	ea.	12' tall x 5' spread, 2" DBH
COES	Conocarpus erectus var. "Sericeus" ...Silver Buttonwood	21	ea.	12' tall x 5' spread, 2" DBH; single trunk
GUSA	Gualiacum sanctum ...Lignum Vitae	95	ea.	12' tall x 5' spread, 2" DBH
ILCA	Ilex cassine ...Dahoon Holly	15	ea.	12' tall x 5' spread, 2" DBH
UJJA	Ligustrum japonicum ...Japanese Privet	15	ea.	12' tall x 5' spread, 2" DBH;
TADI	Taxodium distichum ...Bald Cypress	9	ea.	14' tall x 6' spread, 2" DBH
QUVI	Quercus virginiana ...Live Oak	7	ea.	14' tall x 6' spread, 2" DBH
PALMS				
KEY	PLANT NAME	QTY.	UT.	SIZE
PTEL	Ptychosperma elegans ...Solitaire Palm	5	ea.	20'-22' tall OA
CONG	Cocos nucifera ...Maypan Coconut Palm	5	ea.	3 @ 24' tall OA (8' CT); 2 @ 28' tall OA (12' CT); heavily leaning. Mitigation Palms.
SHRUBS - 24" minimum shrub height at time of planting as per city code				
KEY	PLANT NAME	QTY.	UT.	SIZE
CLGU	Clusia guittifera ...Clusia	164	ea.	30" x 30"
LOCH	Loropetalum chinense ...Chinese Fringe Flower	44	ea.	24" x 24"
POMA	Podocarpus macrophyllus ...Podocarpus	20	ea.	24" x 24"
PSBA	Psychotria bahamensis ...Bahamas Wild Coffee	366	ea.	24" x 24"
SPBA	Spartina bakerii ...Sand Cordgrass	57	ea.	24" x 24"
TRDA	Tripsacum dactyloides ...Fakahatchee Grass	56	ea.	24" x 24"
GROUNDCOVERS				
KEY	PLANT NAME	QTY.	UT.	SIZE
NEEX	Nephrolepis exaltata ...Boston Fern	2683	ea.	12" x 12"
MISCELLANEOUS				
sod	St. Augustine "CitraBlue"	as req.	s.f.	solid sod
	Planting Soil	as req.	c.y.	
	70% Silica Sand			
	20% Everglades Muck			
	10% Shredded Pinebark			
	Shredded Melaleuca Mulch	as req.	c.y.	3" layer in all shrub beds

LANDSCAPE LEGEND			
Zoning District		IM-1	
Total Site Area		7.37	
		Required	Provided
Pervious Area (40%)		128,480	101,958
Code Section	Description	Required	Provided
9.5 A	Perimeter Landscape Setback	5'	5'
9.5 B	Terminal Islands 1 at end of all rows of parking spaces	10	10
9.5 C1	Landscaping of Paved VUA (25% of VUA) VUA = 77,327 s.f. * .25 = 19,331	19,331	19,331
9.5 D	Remove EPPC's invasive pest plants	yes	yes
9.5 E	Native Requirement 60% of trees 50% of shrubs	111 399	165 643
9.5 F	Required Trees 1/190 s.f. terminal islands 1/1000 s.f. of pervious area of property	10 102	10 142
9.5 G	Required Hedges or Perimeter Screening 1/10 l.f. abutting adjacent property 1/5 l.f. abutting adjacent ROW	52 265	52 265
Required Street Trees 1/50 l.f.)			
Sheridan St = 172 l.f. = 4 trees		4	4
N. 31st Ave = 456 l.f. = 10 trees		10	10
Sherman Rd. = 700 l.f. = 14 trees		14	14
TOTALS			
TREES		140	180
SHRUBS		317	707
MINIMUM TREE SPECIES		6	8
50% MAXIMUM OF PALMS (3.3)		6 Palms	10 Palms
NOTE: (438) 2" dbh trees required for mitigation. (5) required mitigation palms provided by (5) coconut palms with minimum height of 8' clear trunk. 140 site trees required as per city code. - 45 existing trees to remain and count towards site tree requirements =95 required site trees 180 trees proposed - 95 required site trees =85 tree surplus to count toward mitigation 438 required mitigation trees - 85 surplus trees = 353 required mitigation trees. Mitigation trees shall be installed at a minimum size of 2" DBH / 12' height There is a mitigation shortfall of 353 - 2" dbh trees. There isn't sufficient room on site to plant these trees, therefore a donation to the City Trust Fund must be made in the amount of \$123,550. (\$350 per 2" dbh tree)			





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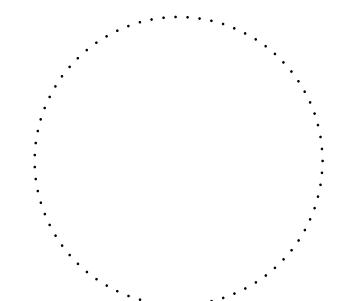
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TITLE

PLANT LIST



Ken Gardner
Keith Semler

FLA #1569
FLA #6667205

DATE8.17.2022

SCALEas noted

SHEETLA2-03