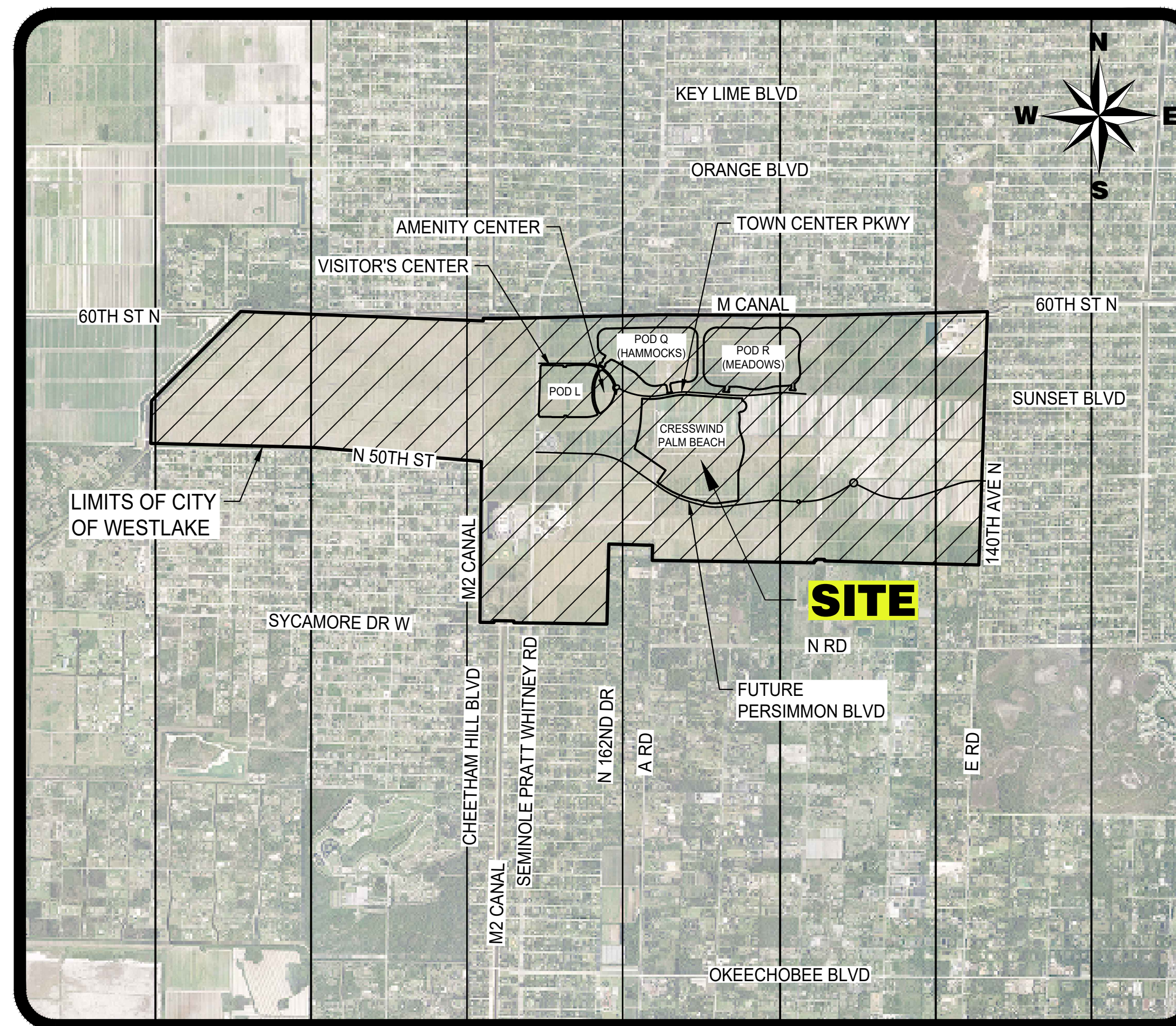
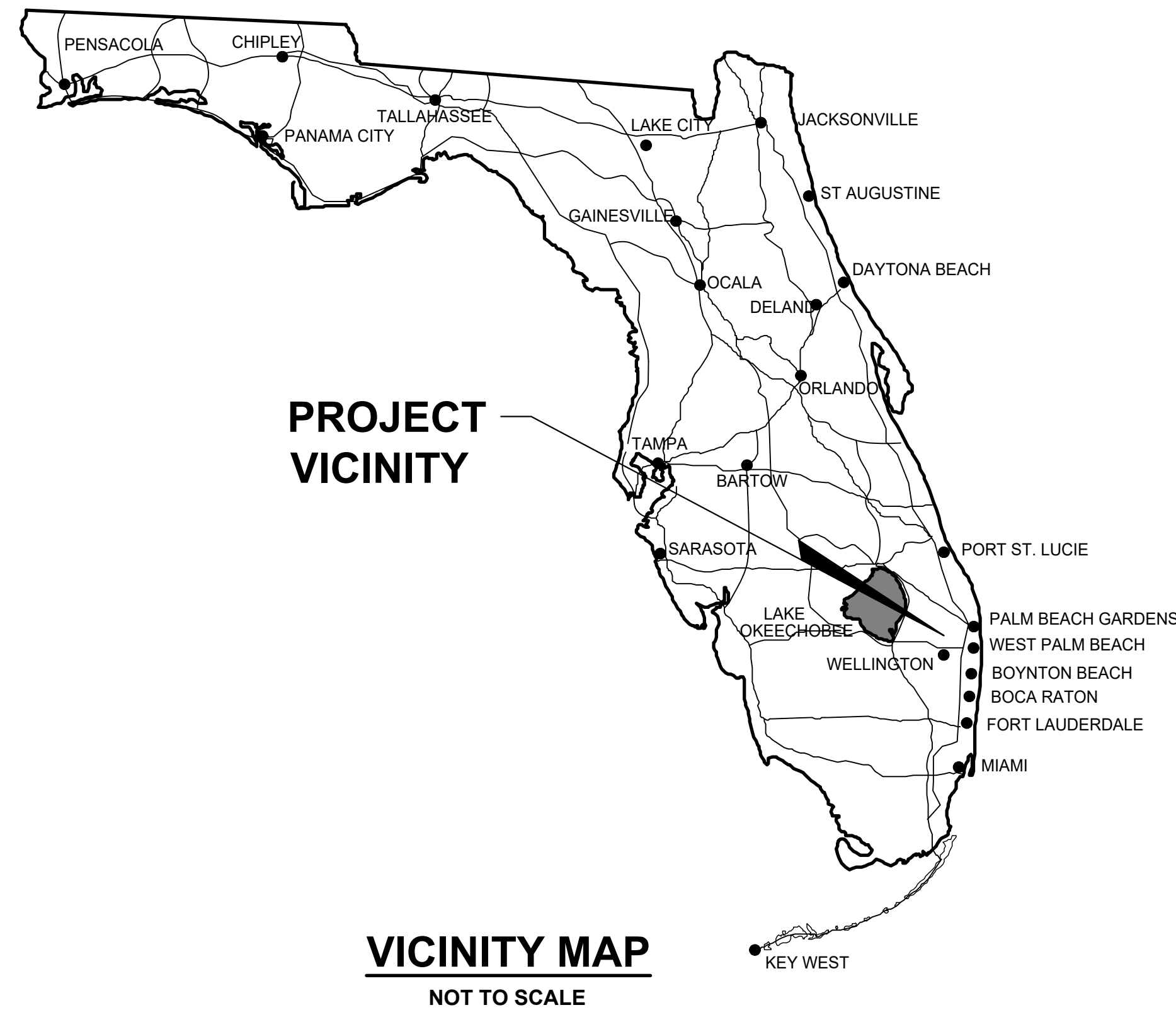


WATER AND WASTEWATER PLANS FOR CRESSWIND PALM BEACH CLUBHOUSE

**SECTION 01 & 12, TOWNSHIP 43S., RANGE 40E.
SECTION 06 & 07, TOWNSHIP 43S., RANGE 41E.
CITY OF WESTLAKE, FLORIDA**



INDEX OF SHEETS

SHEET NO.:	DESCRIPTION:
1	TITLE SHEET
2	MASTER PLAN
3	WATER AND WASTEWATER PLANS
4	SANITARY SEWER PROFILES
5-9	WATER AND WASTEWATER DETAILS

6/16/2020

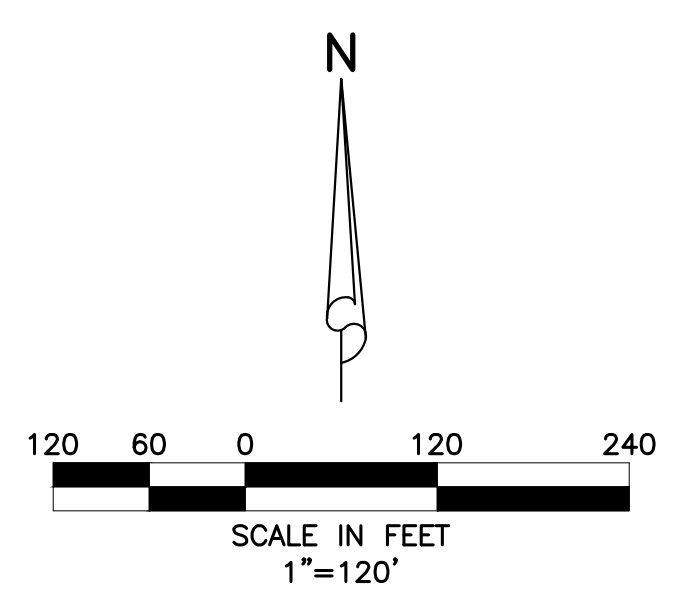
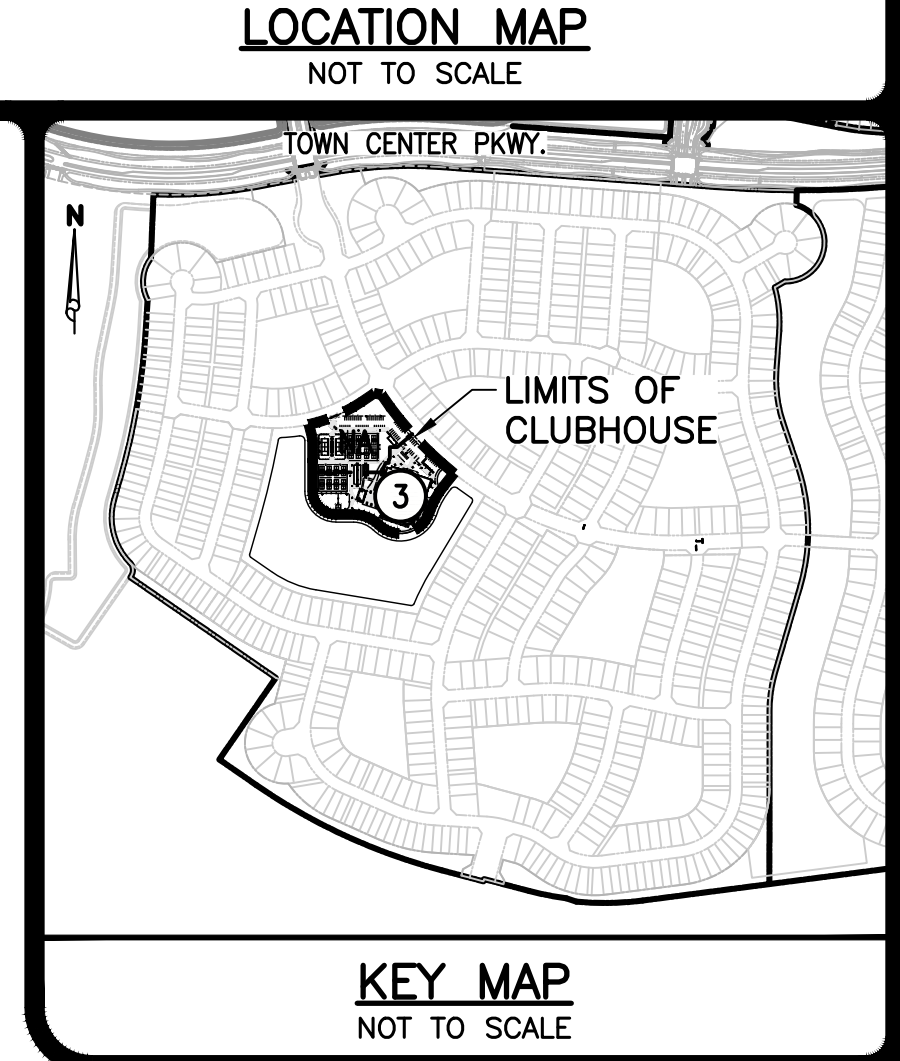
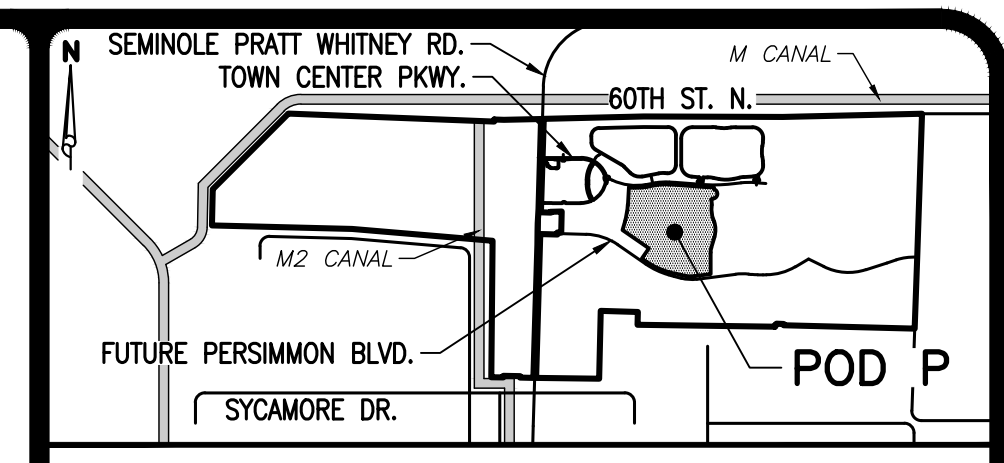
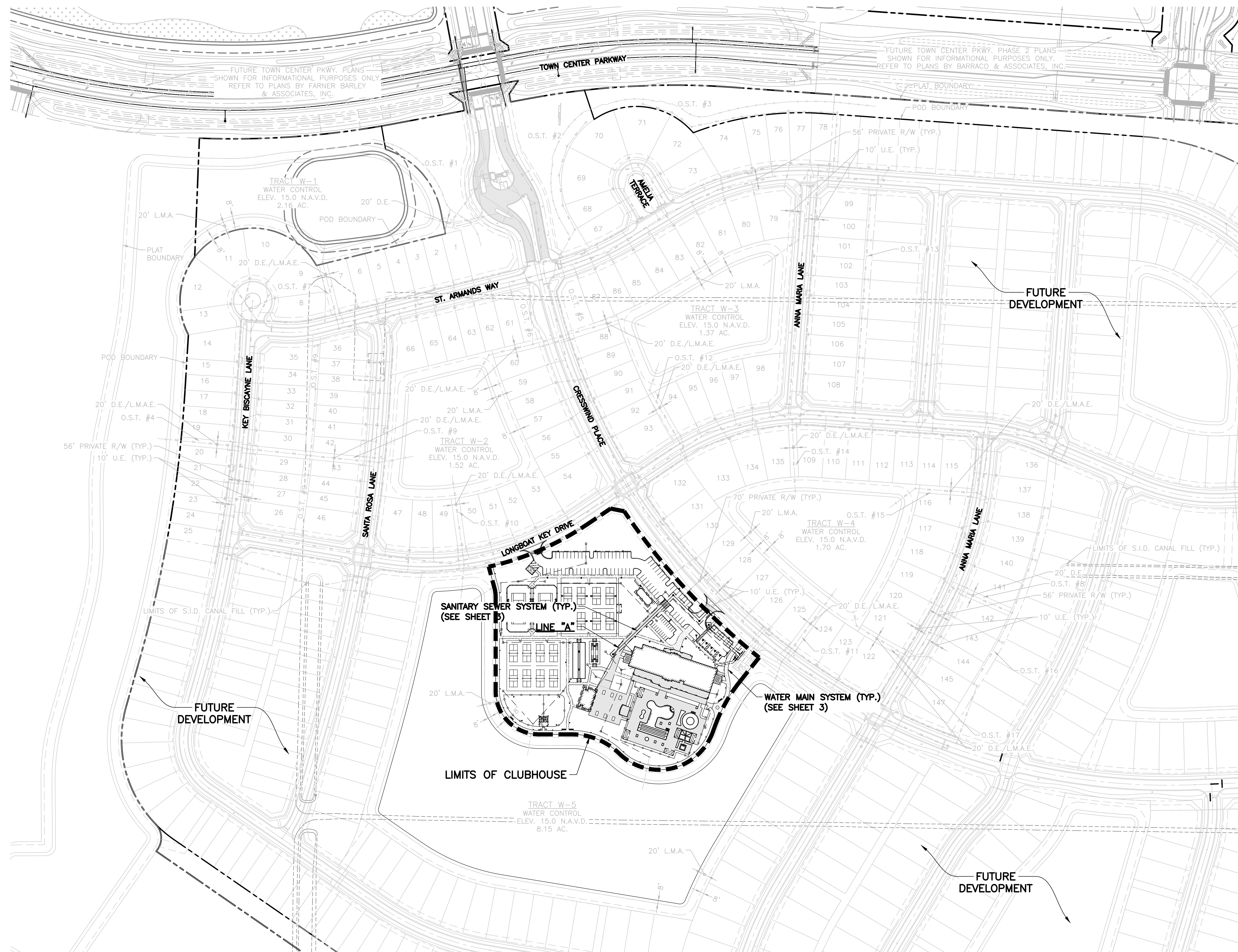
WATER AND WASTEWATER PLANS

CRESSWIND PALM BEACH
CLUBHOUSE
CITY OF WESTLAKE, FLORIDA
TITLE SHEET



DESIGN P.B. DRAWN D.B. CHECKED APPROVED DATE

JOB NO. 18-150(O) DRAWING NO. 18150(O)W01 SHEET 1 OF 9



- LEGEND**
- LIMITS OF PHASE 1
 - - - L.M.A. LAKE MAINTENANCE AREA
 - - - D.E. DRAINAGE EASEMENT
 - - - U.E. UTILITY EASEMENT
 - - - O.S.T. OPEN SPACE TRACT
 - - - L.M.A.E. LAKE MAINTENANCE ACCESS EASEMENT

DATUM NOTES:
 1.) ALL ELEVATIONS AND BENCHMARKS SHOWN HEREON ARE RELATIVE TO THE NORTH AMERICAN VERTICAL DATUM (N.A.V.D.) OF 1988.
 2.) AN APPROXIMATE CONVERSION BETWEEN THE NATIONAL GEODETIC VERTICAL DATUM (N.G.V.D.) OF 1929 AND N.A.V.D. CAN BE MADE BY ADDING 1.47 TO THE N.A.V.D. ELEVATION TO OBTAIN THE N.G.V.D. ELEVATION.
 3.) TOPOGRAPHIC INFORMATION SHOWN WAS PROVIDED BY CAULFIELD & WHEELER, INC. (561) 392-1991 AND WAS RECEIVED ON NOVEMBER 20, 2018.

48 HOURS BEFORE DIGGING
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 ST. LUCIE • MARTIN COUNTIES
 1-800-432-4770
 SUNSHINE STATE 1 CALL
 UNDERGROUND UTILITIES
 NOTIFICATION CENTER

1.) REVISED BUILDING FOOTPRINT, POOL AREA & PARKING PER SITE PLAN CHANGES, 06/16/20 D.B.

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CRESSWIND PALM BEACH CLUBHOUSE
 CITY OF WESTLAKE, FLORIDA
 MASTER PLAN

DESIGN	DRAWN	CHECKED	APPROVED	DATE
P.B.	D.B.			

JOB NO.	DRAWING NO.	SHEET	OF
18-150(O)	18150(O)W02	2	9

NOTES:

- 1.) CONTRACTOR SHALL CONFIRM LOCATION, DEPTH, CONDITION AND MATERIAL OF ALL EXISTING UTILITIES PRIOR TO CONSTRUCTION AND NOTIFY ENGINEER OF ANY CONFLICTS.
- 2.) CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING RELOCATION OF EXISTING UTILITIES & SUPPORT/RELOCATION OF EXISTING POWER/UTILITY POLES WITH APPLICABLE UTILITY COMPANY PRIOR TO CONSTRUCTION.
- 3.) CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATION OF RELOCATION OF ALL EXISTING LIGHTING, IRRIGATION AND LANDSCAPING IN CONFLICT WITH PROPOSED CONSTRUCTION WITHIN R/W.
- 4.) FIRE LINES TO BUILDINGS TO BE DESIGNED, CERTIFIED AND INSTALLED BY LICENSED FIRE SPRINKLER CONTRACTOR. ALL FIRE LINES SHALL BE D.I.P.
- 5.) ALL FIRE HYDRANTS SHALL BE PLACED SO THAT A MINIMUM OF 7.5' CLEARANCE IS MET AT ALL SIDES AND 4.5' TO THE REAR. HYDRANTS CANNOT BE PLACED MORE THAN 12' FROM E.O.P. AND NOT LESS THAN 6'.
- 6.) ALL WATER SERVICES TO BUILDINGS AFTER R.P.Z. SHALL BE INSTALLED BY BUILDING PLUMBER.
- 7.) BLUE REFLECTIVE PAVEMENT MARKERS SHALL BE INSTALLED IN THE CENTER OF THE NEAREST TRAVEL LANE OPPOSITE ALL FIRE HYDRANTS.
- 8.) ALL F.D.C.'s MUST BE VISIBLE AND UNOBSTRUCTED FROM VIEW OF CORRESPONDING D.D.C.V. ASSEMBLY.
- 9.) NO VALVES SHALL BE LOCATED WITHIN CURBS OR PARKING SPACES.
- 10.) ALL ELEVATIONS SHOWN REFERENCE N.A.V.D.1988.
- 11.) ALL BACKFLOW PREVENTER SHALL BE U.S.C. APPROVED.
- 12.) ALL CONSTRUCTION, MATERIALS AND TESTING SHALL BE IN ACCORDANCE WITH S.I.D. AND WITH ALL APPLICABLE FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION RULES AND REGULATIONS.

STANDARD WATER AND SEWER SEPARATION STATEMENT

1. NEW OR RELOCATED UNDERGROUND WATER MAINS WILL BE LAID TO PROVIDE A HORIZONTAL DISTANCE OF AT LEAST THREE FEET BETWEEN THE OUTSIDE OF THE WATER MAIN AND THE OUTSIDE OF ANY EXISTING OR PROPOSED VACUUM TYPE SANITARY SEWER, STORM SEWER, STORMWATER FORCE MAIN OR PIPELINE CONVEYING RECLAIMED WATER REGULATED UNDER PART III OF CHAPTER 62-610, F.A.C.; A HORIZONTAL DISTANCE OF AT LEAST SIX FEET BETWEEN THE OUTSIDE OF THE WATER MAIN AND THE OUTSIDE OF ANY EXISTING OR PROPOSED GRAVITY TYPE SANITARY SEWER (OR A HORIZONTAL DISTANCE OF AT LEAST THREE FEET BETWEEN THE OUTSIDE OF THE WATER MAIN AND THE OUTSIDE OF ANY EXISTING OR PROPOSED GRAVITY TYPE SANITARY SEWER IF THE BOTTOM OF THE WATER MAIN WILL BE LAID AT LEAST SIX INCHES ABOVE THE TOP OF THE SEWER); A HORIZONTAL DISTANCE OF AT LEAST SIX FEET BETWEEN THE OUTSIDE OF THE WATER MAIN AND THE OUTSIDE OF ANY EXISTING OR PROPOSED PRESSURE TYPE SANITARY SEWER, WASTEWATER FORCE MAIN OR PIPELINE CONVEYING RECLAIMED WATER NOT REGULATED UNDER PART III OF CHAPTER 62-610, F.A.C.; AND A HORIZONTAL DISTANCE OF AT LEAST TEN FEET BETWEEN THE OUTSIDE OF THE WATER MAIN AND ALL PARTS OF ANY EXISTING OR PROPOSED "ON-SITE SEWAGE TREATMENT AND DISPOSAL SYSTEM."
2. NEW OR RELOCATED UNDERGROUND WATER MAINS 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 IS AT LEAST SIX INCHES ABOVE THE OTHER PIPELINE OR AT LEAST 12 INCHES BELOW THE OTHER PIPELINE; NEW OR RELOCATED UNDERGROUND WATER MAINS THAT WILL CROSS ANY EXISTING OR PROPOSED PRESSURE TYPE SANITARY SEWER, WASTEWATER OR STORMWATER FORCE MAINS, 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.
3. AT THE UTILITY CROSSINGS, ONE FULL LENGTH OF WATER MAIN 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, STORMWATER FORCE MAINS OR PIPELINES CONVEYING RECLAIMED WATER REGULATED UNDER PART III OF CHAPTER 62-610, F.A.C., AND AT LEAST SIX FEET FROM THE JOINTS IN ALL GRAVITY OR PRESSURE TYPE SANITARY SEWERS, WASTEWATER FORCE MAINS, OR PIPELINES CONVEYING RECLAIMED WATER NOT REGULATED UNDER PART III OF CHAPTER 62-610, F.A.C.

POTABLE WATER MAIN COLOR CODING REQUIREMENT

ALL WATER MAIN DUCTILE IRON PIPE AND PIPE FITTINGS SHALL BE PAINTED WITH A 4" WIDE CONTINUOUS BLUE LINE THAT RUNS PARALLEL TO THE AXIS OF THE PIPE AND THAT IS LOCATED ALONG THE TOP OF THE PIPE. APPROVED PAINT: INDURON, AQUANAUT 5082 ALASKAN BLUE (ONE COAT, 3 MILS DRY FILM THICKNESS APPLIED WITH 1/2" NAP MEDIUM ROLLER)

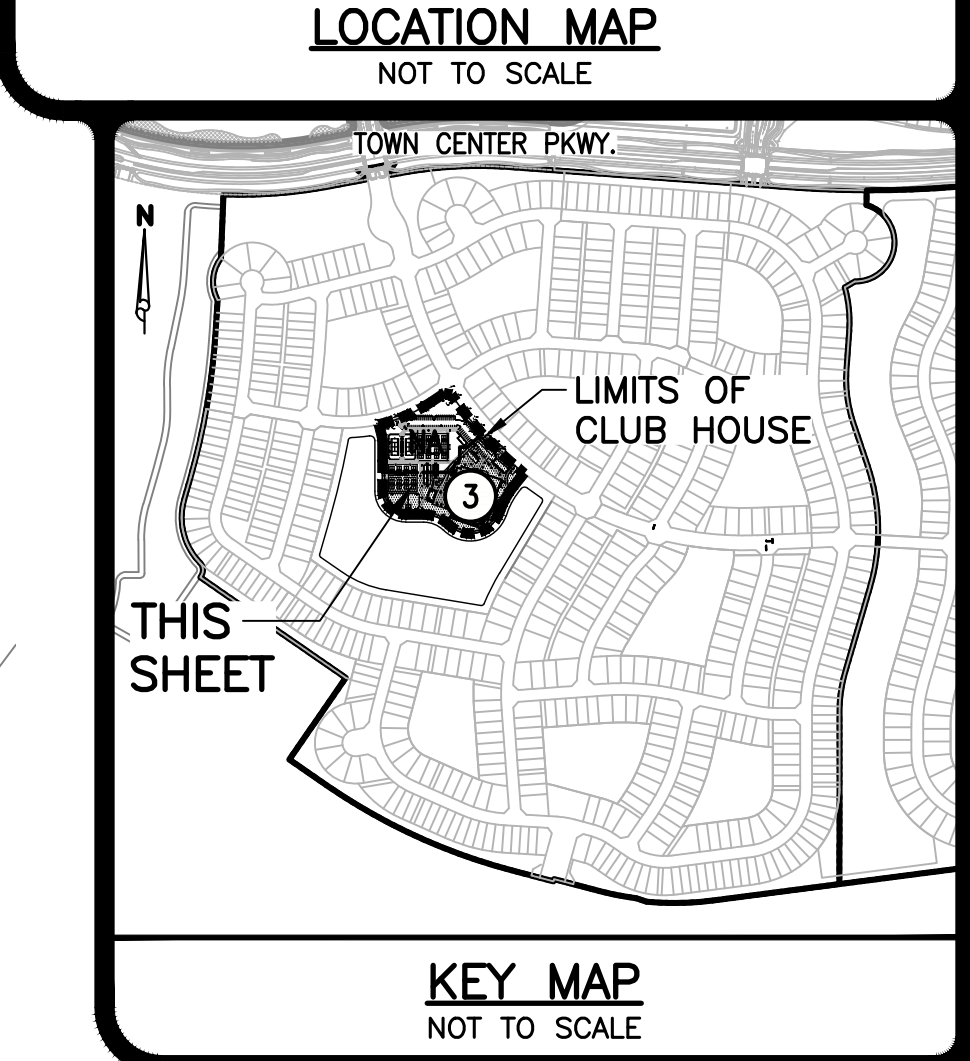
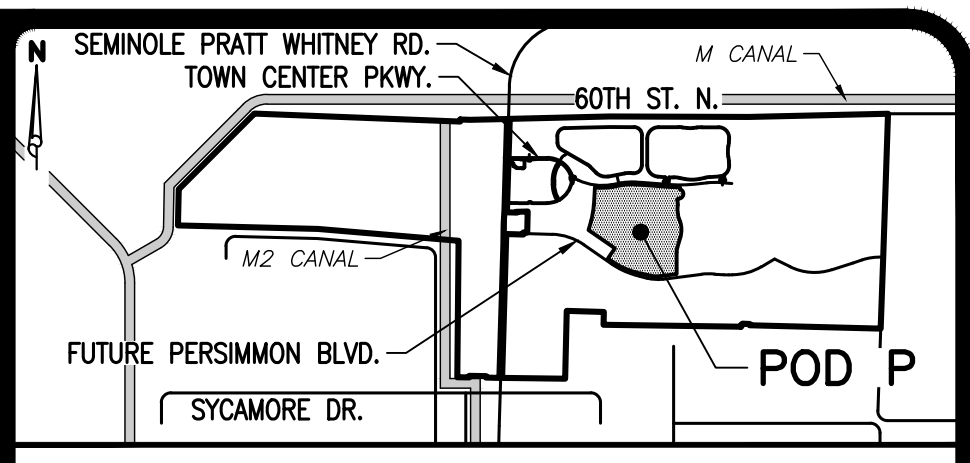
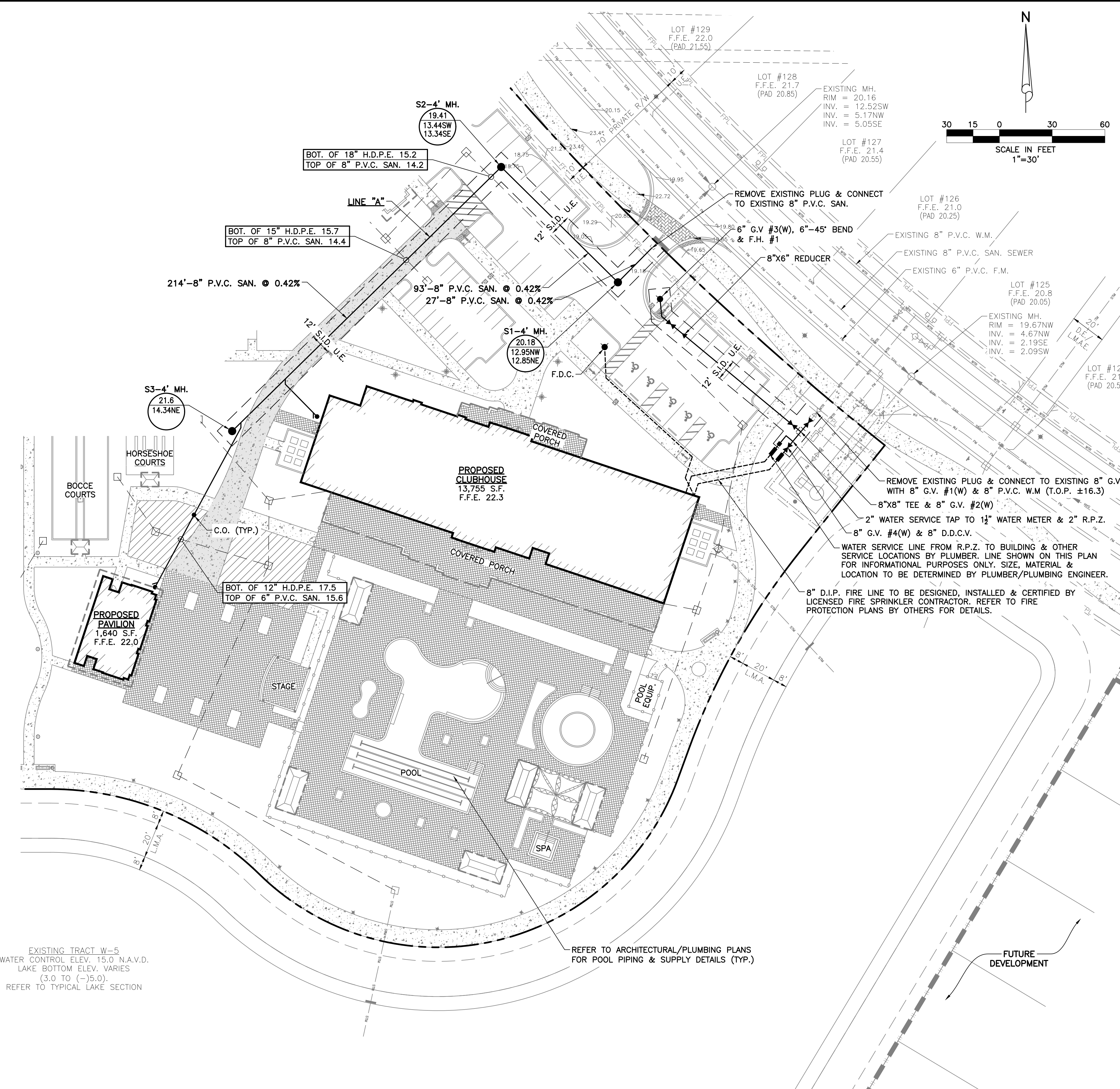
ALL WATER MAINS SHALL BE MARKED WITH ONE CONTINUOUS STRIP OF 6" WIDE MAGNETIC BLUE CODED TAPE IMPRINTED WITH TWO (2) INCH HIGH LETTERING READING "CAUTION - POTABLE WATER LINE BURIED BELOW", AND LOCATED APPROXIMATELY TWELVE (12) INCHES ABOVE THE CROWN OF THE PIPE.

EXISTING TRACT W-5
WATER CONTROL ELEV. 15.0 N.A.V.D.
LAKE BOTTOM ELEV. VARIES
(3.0 TO (-)5.0).
REFER TO TYPICAL LAKE SECTION

DATUM NOTES:

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- 3.) TOPOGRAPHIC INFORMATION SHOWN WAS PROVIDED BY CAULFIELD & WHEELER, INC. (561) 392-1991 AND WAS RECEIVED ON NOVEMBER 20, 2018.

48 HOURS BEFORE DIGGING
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ST. LUCIE • MARTIN COUNTIES
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1-800-432-4770
SUNSHINE STATE 1 CALL
UNDERGROUND UTILITIES
NOTIFICATION CENTER



LEGEND

S23-4' MH.	MANHOLE NUMBER AND TYPE
(20.94)	MANHOLE TOP ELEVATION
(15.14)	MANHOLE INVERT ELEVATION
— —	SINGLE SEWER SERVICE W/ CLEAN-OUT
— — —	DOUBLE SEWER SERVICE W/ CLEAN-OUT
—●—	SANITARY SEWER LINE, MANHOLE & DIRECTION OF FLOW
— — —	FIRE HYDRANT W/ GATE VALVE
— —	SINGLE WATER SERVICE (REFER TO POTABLE WATER SERVICE SINGLE METER INSTALLATION DETAIL)
— —	DOUBLE WATER SERVICE (REFER TO POTABLE WATER SERVICE DUAL METER INSTALLATION DETAIL)
— —	SINGLE RECLAIMED WATER MAIN SERVICE
— —	DUAL RECLAIMED WATER MAIN SERVICE
— —	WATER MAIN & GATE VALVE
— —	STORM SEWER & INLET (SEE "THE MEADOWS - PHASE 1" PAVING AND DRAINAGE PLANS)
— —	FUTURE FPL CONDUIT SHOWN FOR LOCATION PURPOSES ONLY. CONDUIT INSTALLATION, SIZE, MATERIAL AND SPECIFICATIONS BY OTHERS
— —	LIGHT POLE (BY OTHERS)
F.F.E. 21.4	FINISH FLOOR ELEVATION
ELEV.	ELEVATION
R/W	RIGHT OF WAY
E.O.W.	EDGE OF WATER
T.O.B.	TOP OF BANK
L.M.E.	LAKE MAINTENANCE EASEMENT
L.M.A.E.	LAKE MAINTENANCE ACCESS EASEMENT
O.S.T. #4	OPEN SPACE TRACT & NUMBER
D.E.	DRAINAGE EASEMENT
U.E.	UTILITY EASEMENT
R.W.M.	RECLAIMED WATER MAIN
W.M.	WATER MAIN
F.M.	FORCE MAIN
F.H.	FIRE HYDRANT
8" G.V. #12W	SIZE, GATE VALVE & NUMBER (WATER)
6" G.V. #1F	SIZE, GATE VALVE & NUMBER (FORCE)
6" G.V. #21R	SIZE, GATE VALVE & NUMBER (RECLAIMED)

6/16/2020

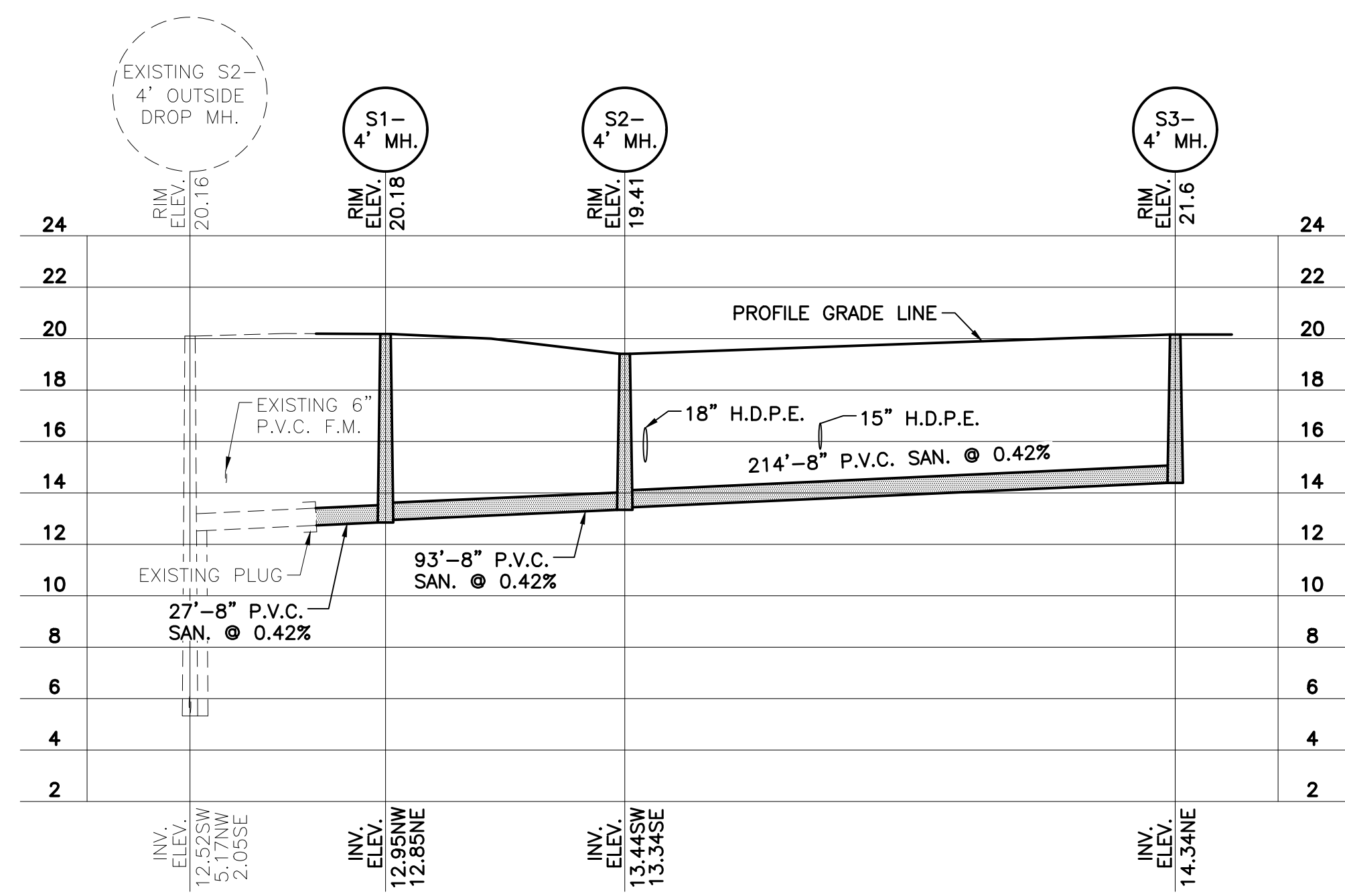
CRESSWIND PALM BEACH CLUBHOUSE
CITY OF WESTLAKE, FLORIDA
WATER AND WASTEWATER PLAN

DESIGN P.B.	DRAWN D.B.	CHECKED	APPROVED	DATE
JOB NO. 18-150(O)	DRAWING NO. 18150(O)W03	SHEET 3	OF 9	

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1.) REVISED BUILDING FOOTPRINT, POOL AREA & PARKING PER SITE PLAN CHANGES, 06/16/20 D.B.

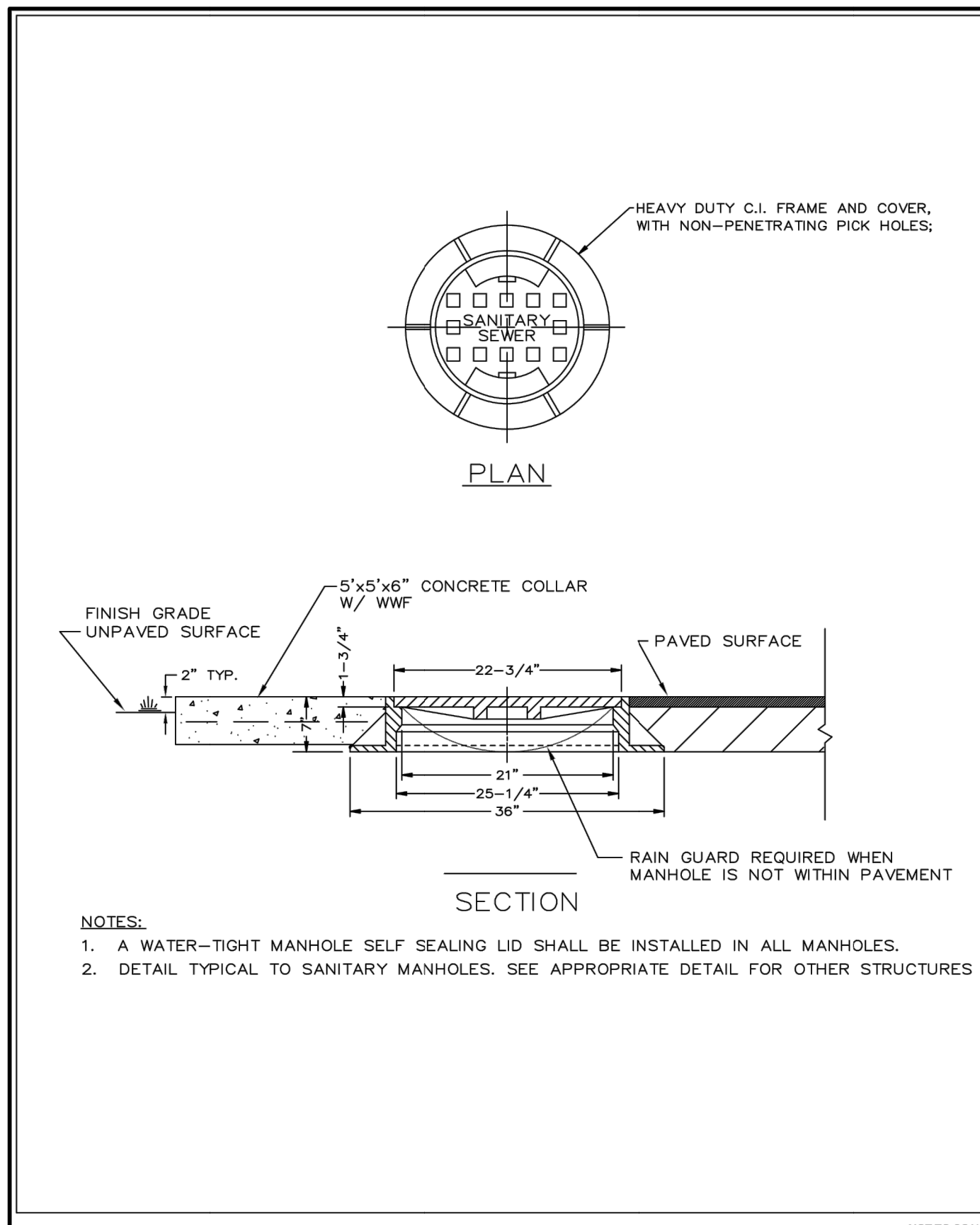
REVISIONS	DESIGN P.B.	DRAWN D.B.	CHECKED	APPROVED	DATE
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LINE "A"
 SCALE: 1"=50' (HORIZ.)
 1"=5' (VERT.)

6/16/2020

 <p>SIMMONS & WHITE <small>ENGINEERING PLANNING CONSULTING SINCE 1982</small> <small>2581 Metrocentre Blvd West • Suite 3 • West Palm Beach, Florida 33407 • (561) 478-7848</small></p>					<p>CRESSWIND PALM BEACH CLUBHOUSE CITY OF WESTLAKE, FLORIDA SANITARY SEWER PROFILE</p>			
					<p>DESIGN P.B.</p>	<p>DRAWN D.B.</p>	<p>CHECKED</p>	<p>APPROVED</p>



LATEST REVISION DATE: 09/13/18

NOT TO SCALE

STANDARD MANHOLE FRAME AND COVER

SS-17

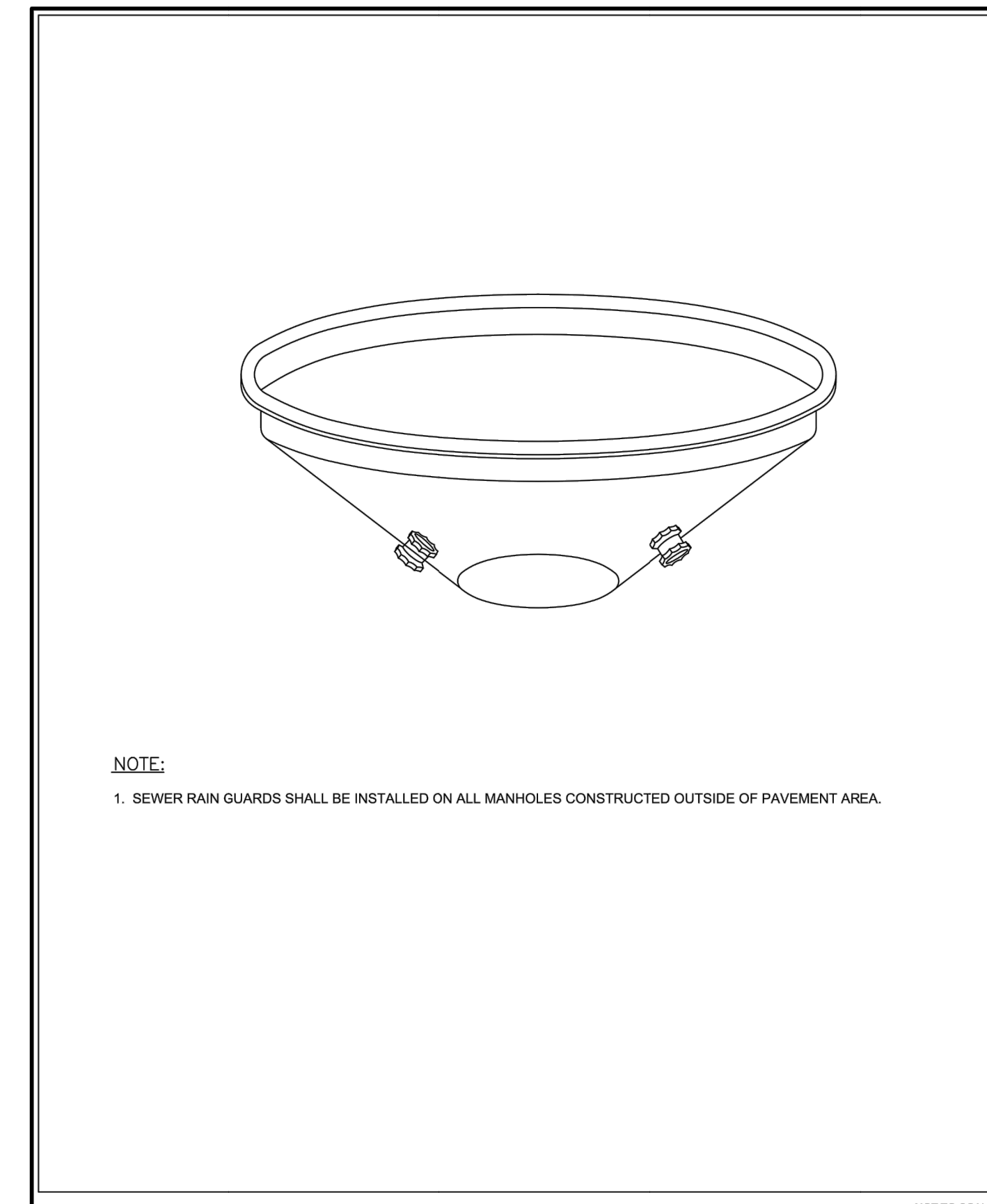
ENGINEERS SURVEYORS PLANNERS

SEMID SEMINOLE IMPROVEMENT DISTRICT

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4600 N.E. 83rd Road • Miami, Florida 33186 • (305) 748-3128

FILE NAME: SS - SANITARY DETAILS.DWG



LATEST REVISION DATE: 09/13/18

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MANHOLE RAIN GUARD

SS-18

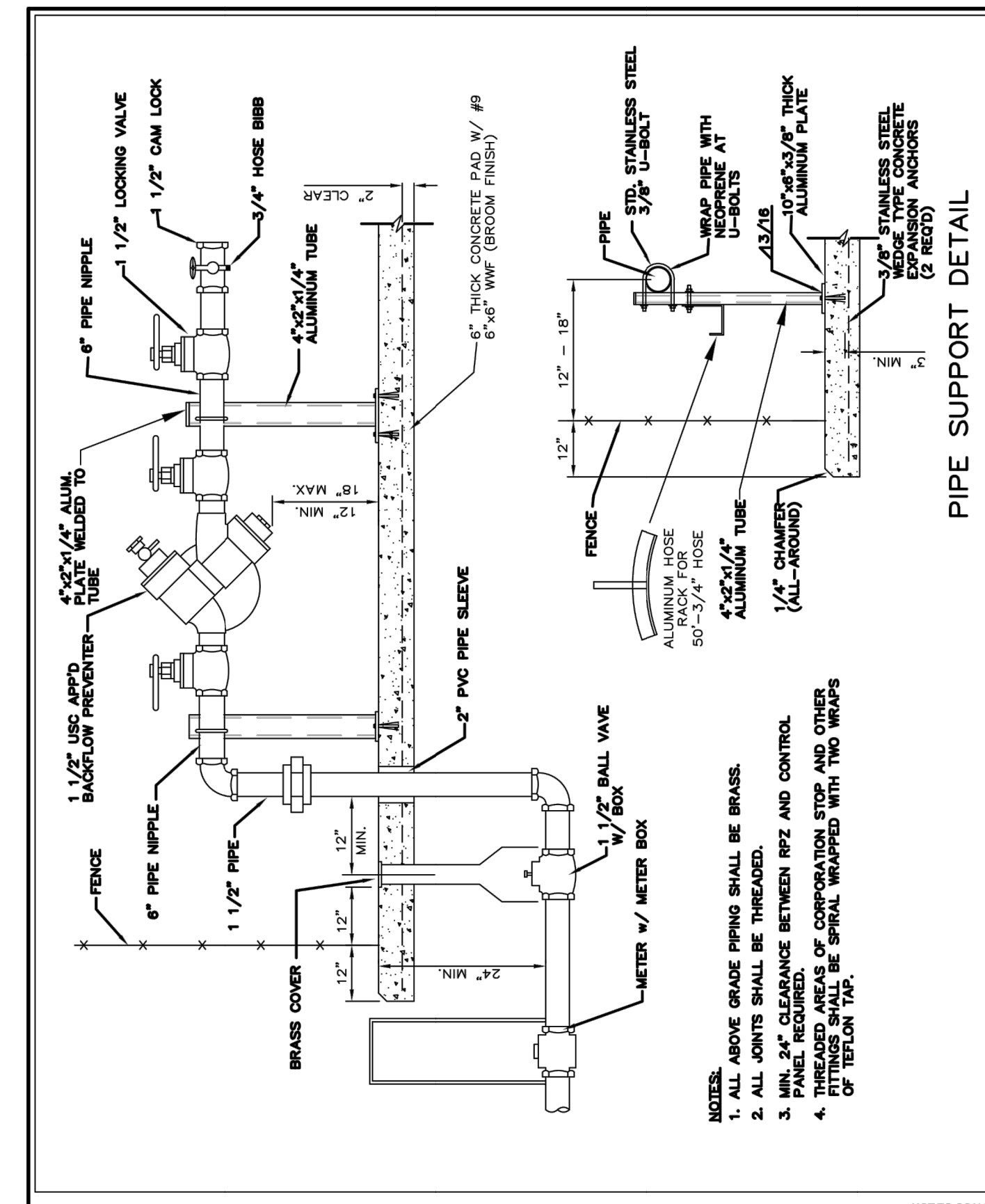
ENGINEERS SURVEYORS PLANNERS

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FILE NAME: SS - SANITARY DETAILS.DWG



LATEST REVISION DATE: 09/13/18

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WATER CONNECTION DETAIL AT LIFT STATION

SS-19

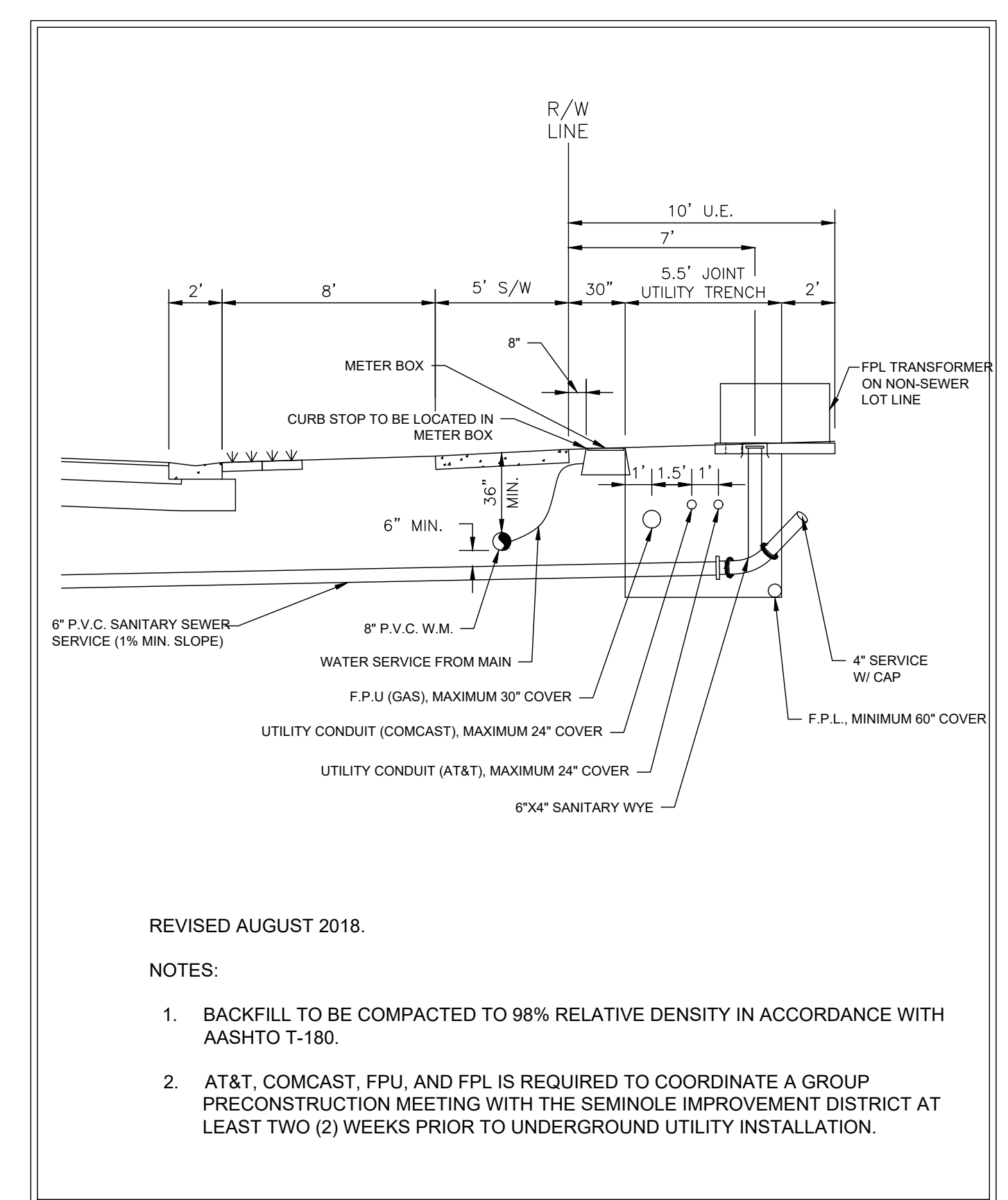
ENGINEERS SURVEYORS PLANNERS

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FILE NAME: SS - SANITARY DETAILS.DWG



LATEST REVISION DATE: 10/11/18

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TYPICAL UTILITY TRENCH

TR-1

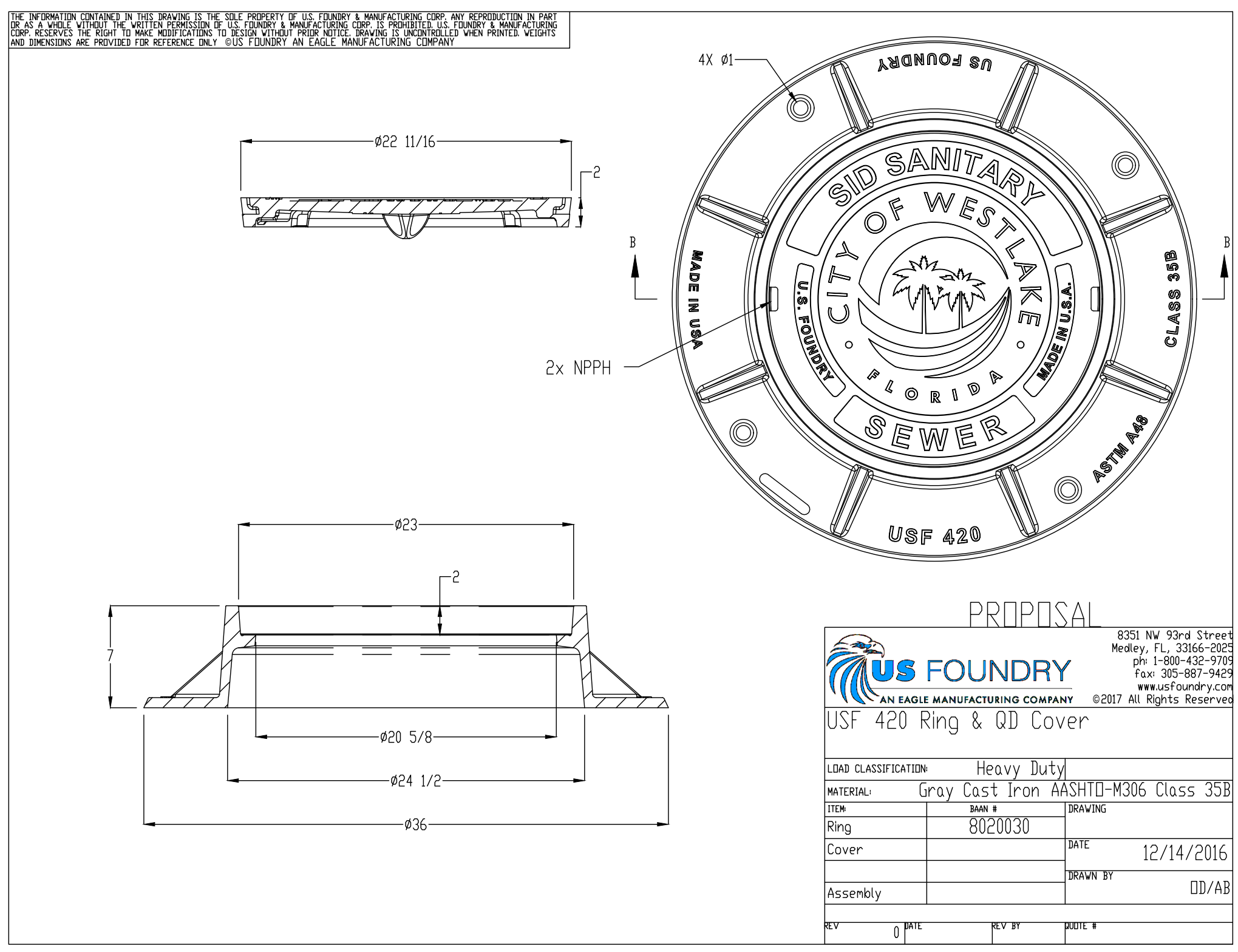
ENGINEERS SURVEYORS PLANNERS

SEMID SEMINOLE IMPROVEMENT DISTRICT

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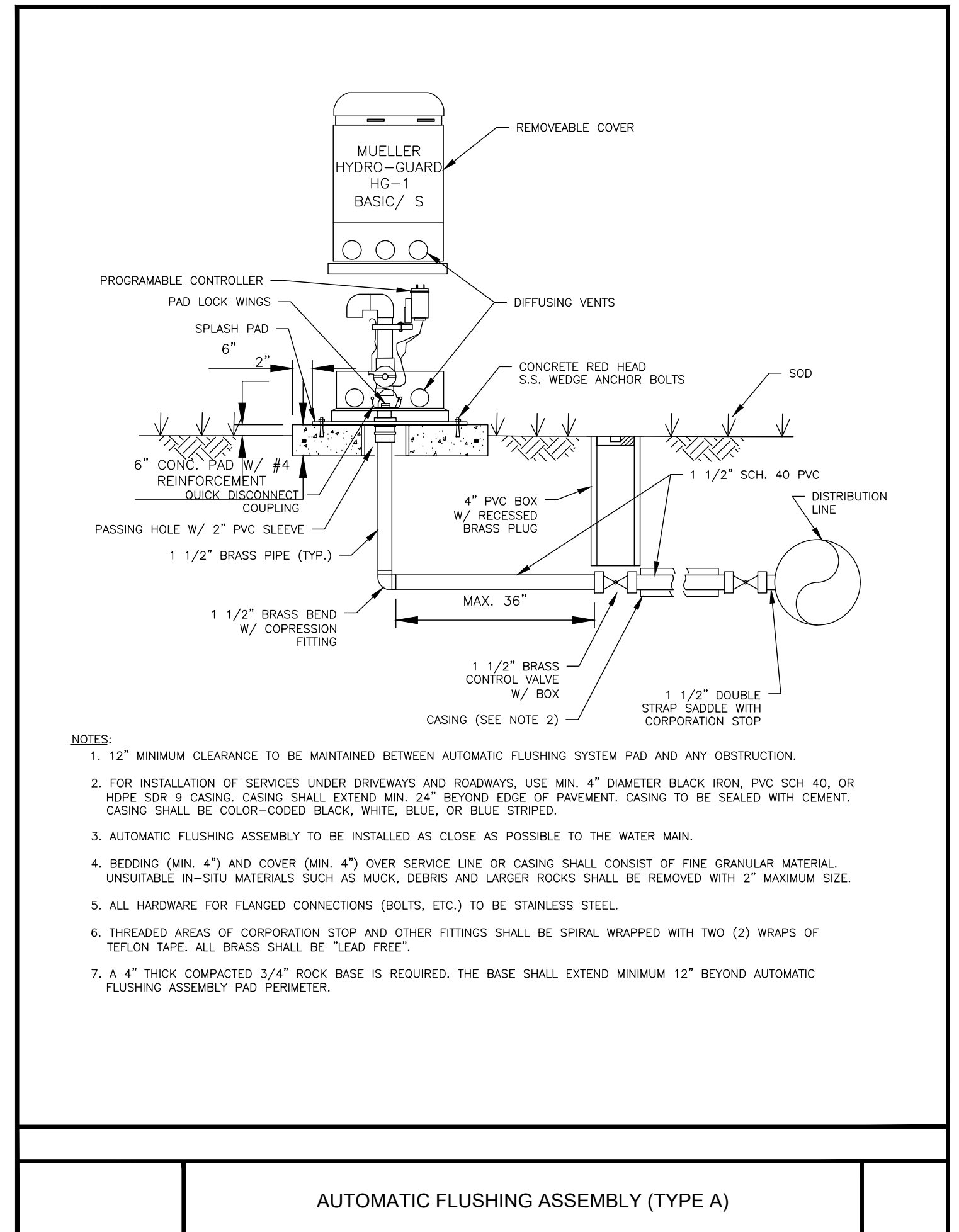
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FILE NAME: SS - SANITARY DETAILS.DWG



WASTEWATER MANHOLE COVER DETAIL

NOT TO SCALE



6/16/2020

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P.B.	D.B.			

REVISIONS

JOB NO.	DRAWING NO.	SHEET	OF
18-150(O)	18150(O)W05	5	9

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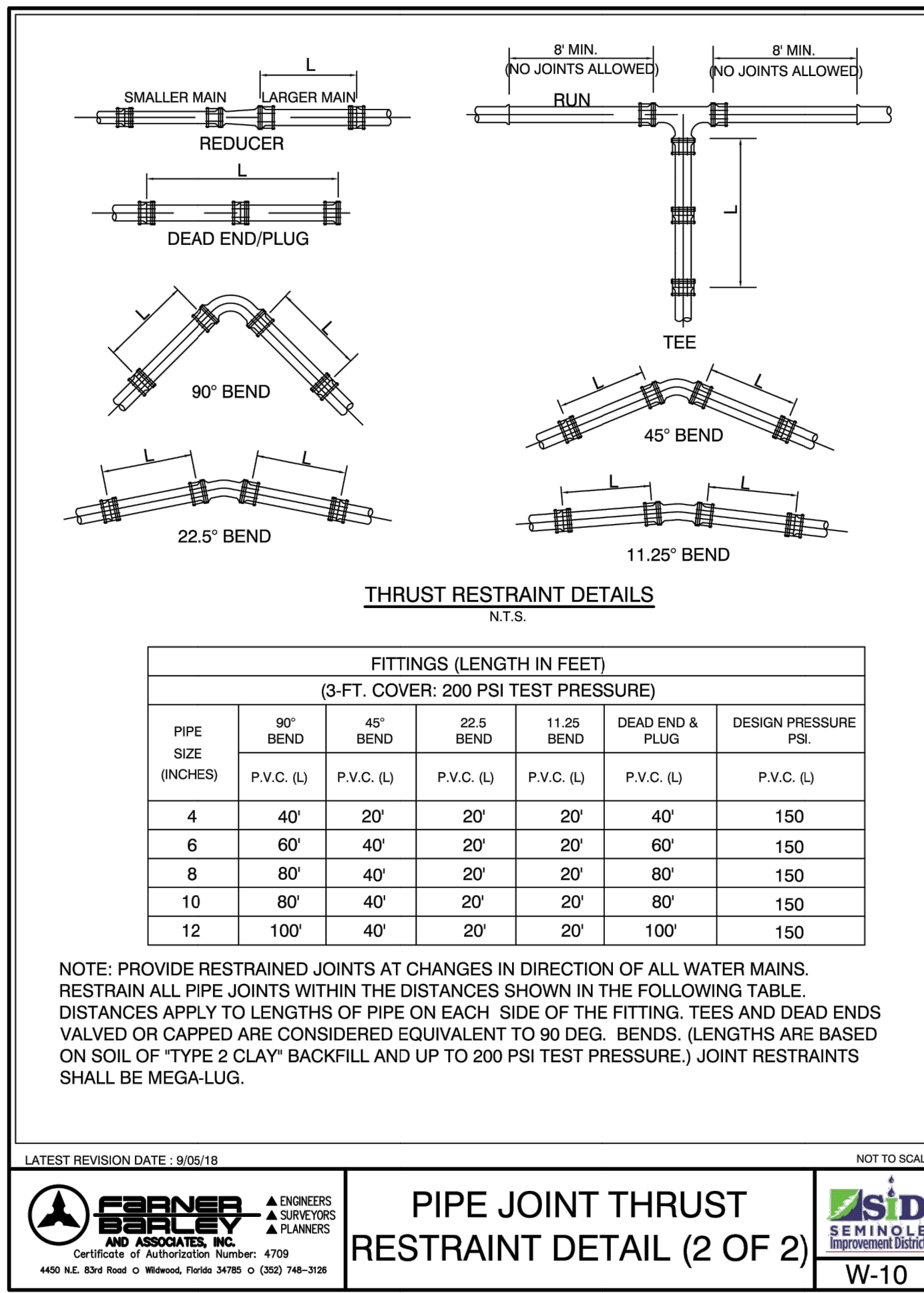
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CRESSWIND PALM BEACH CLUBHOUSE

CITY OF WESTLAKE, FLORIDA

WATER AND WASTEWATER DETAILS



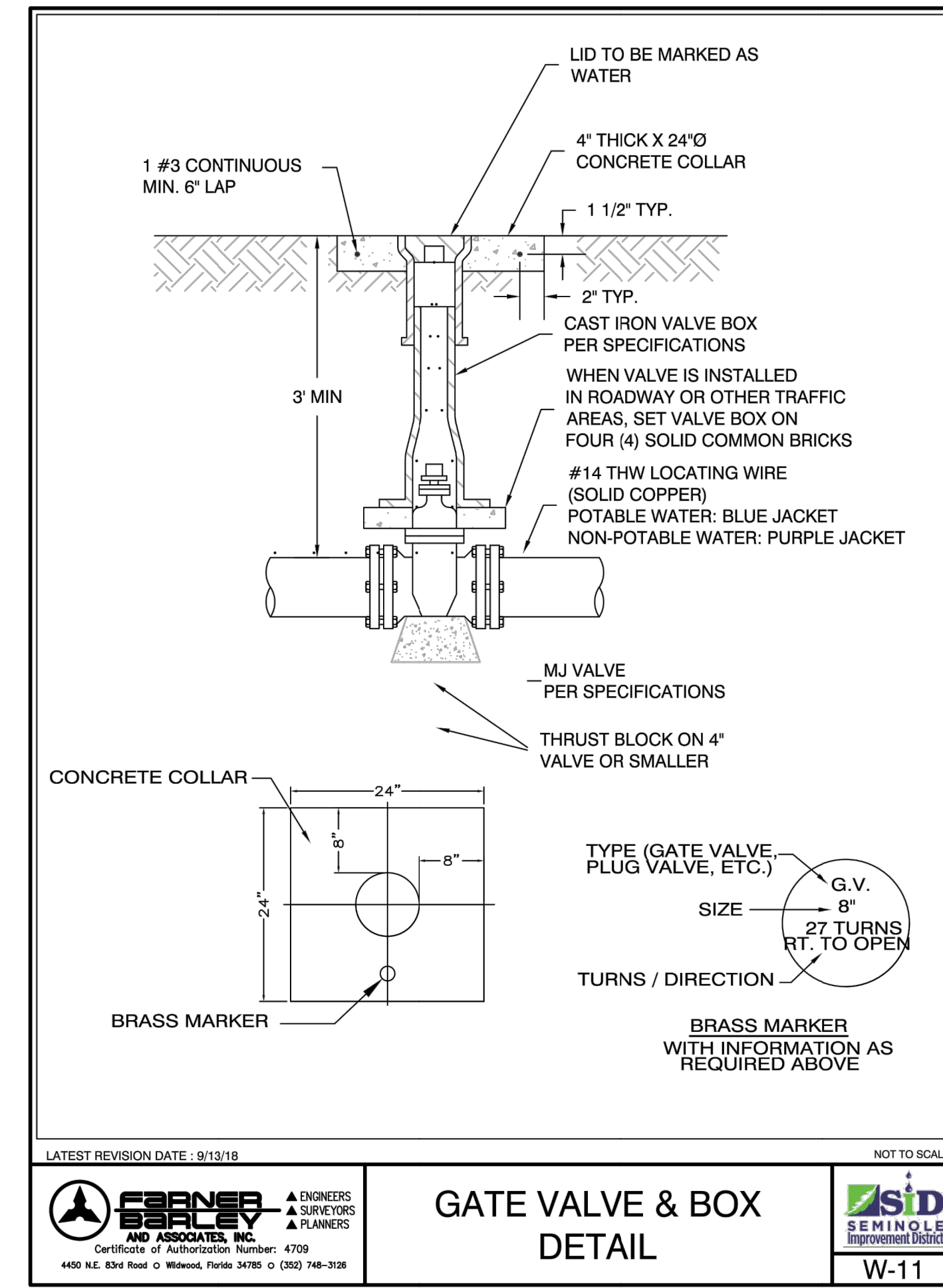
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SEMINOLE IMPROVEMENT DISTRICT

PIPE JOINT THRUST RESTRAINT DETAIL (2 OF 2)

W-10



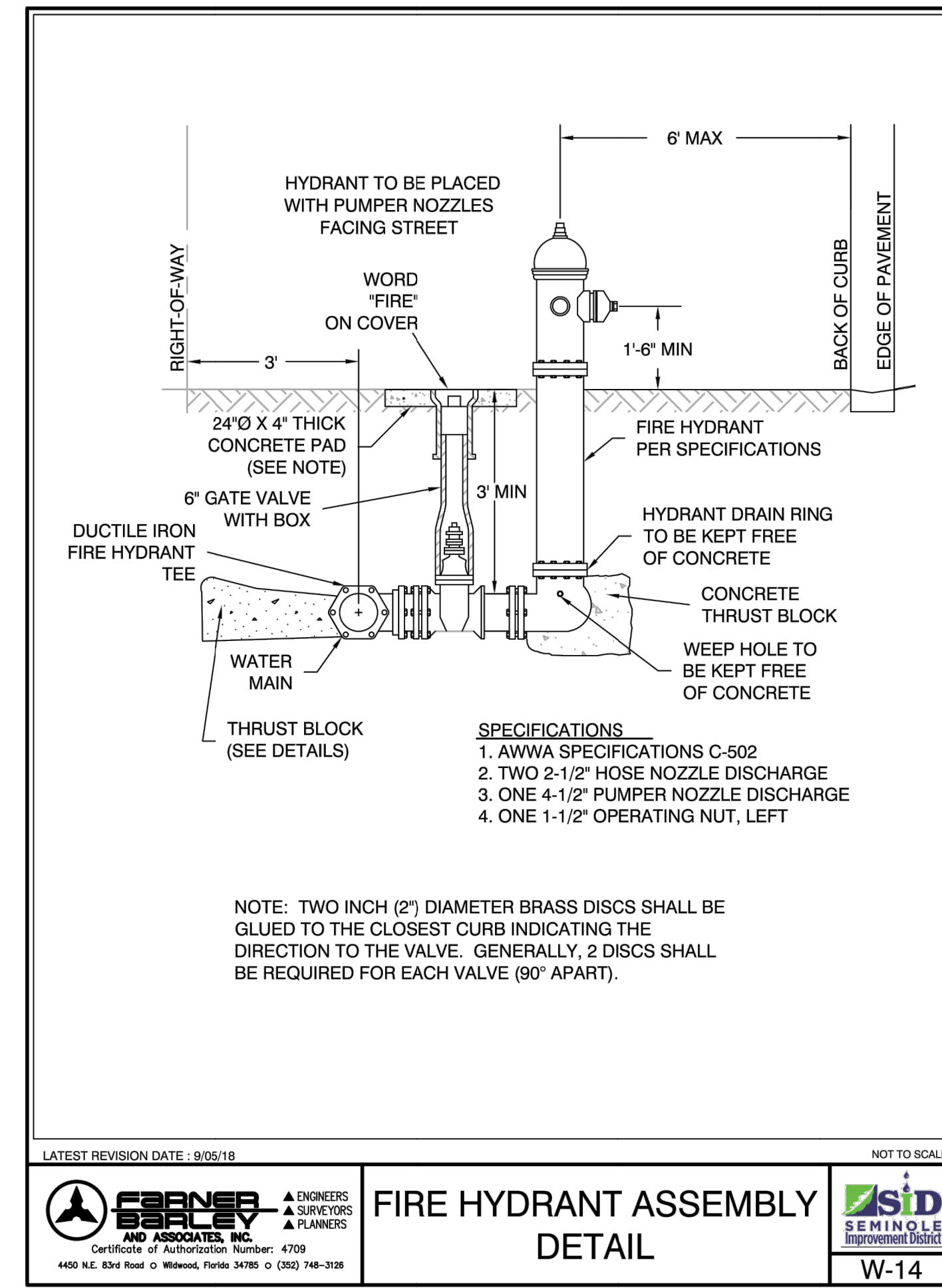
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SEMINOLE IMPROVEMENT DISTRICT

GATE VALVE & BOX DETAIL

W-11



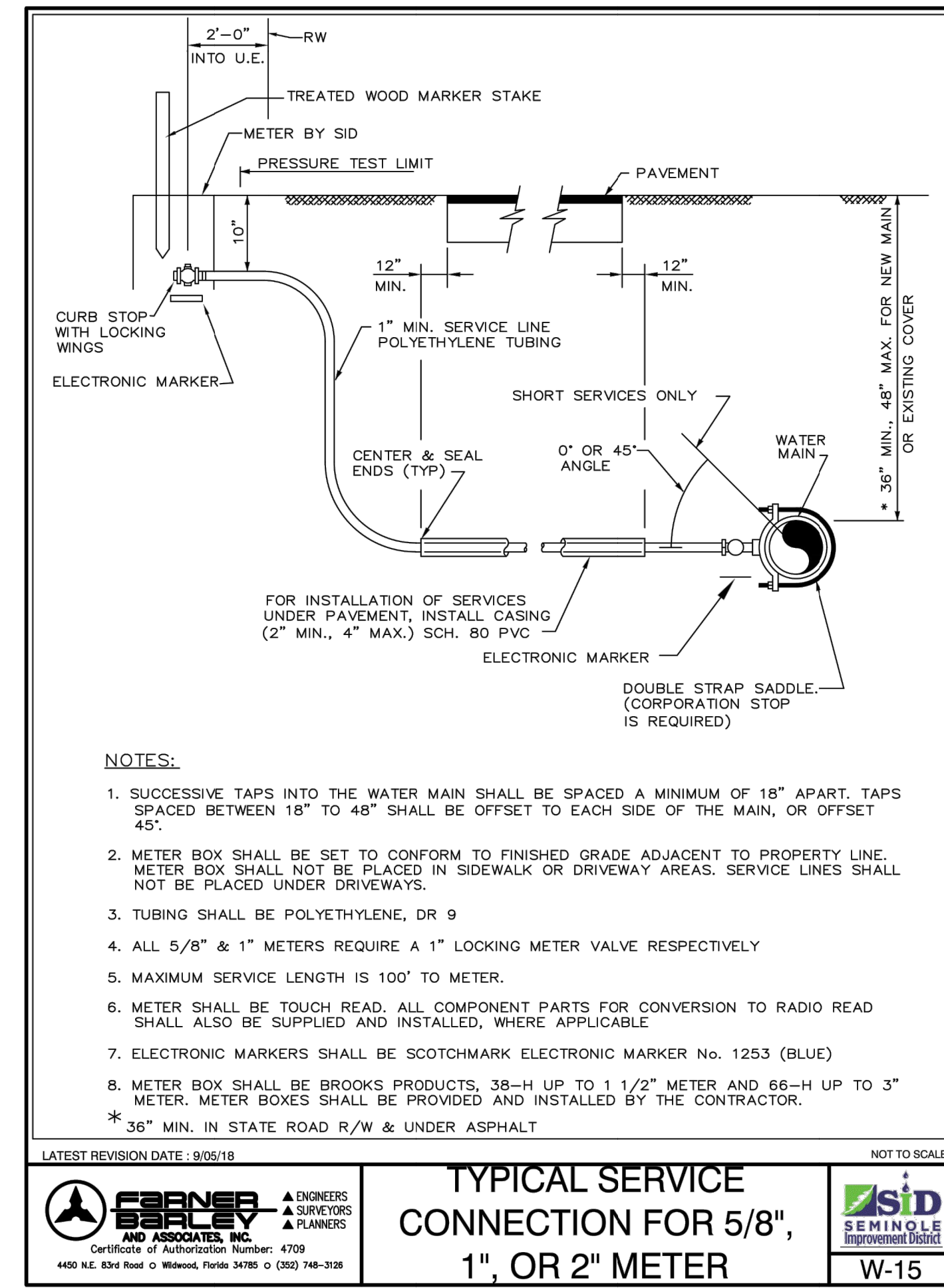
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SEMINOLE IMPROVEMENT DISTRICT

FIRE HYDRANT ASSEMBLY DETAIL

W-14



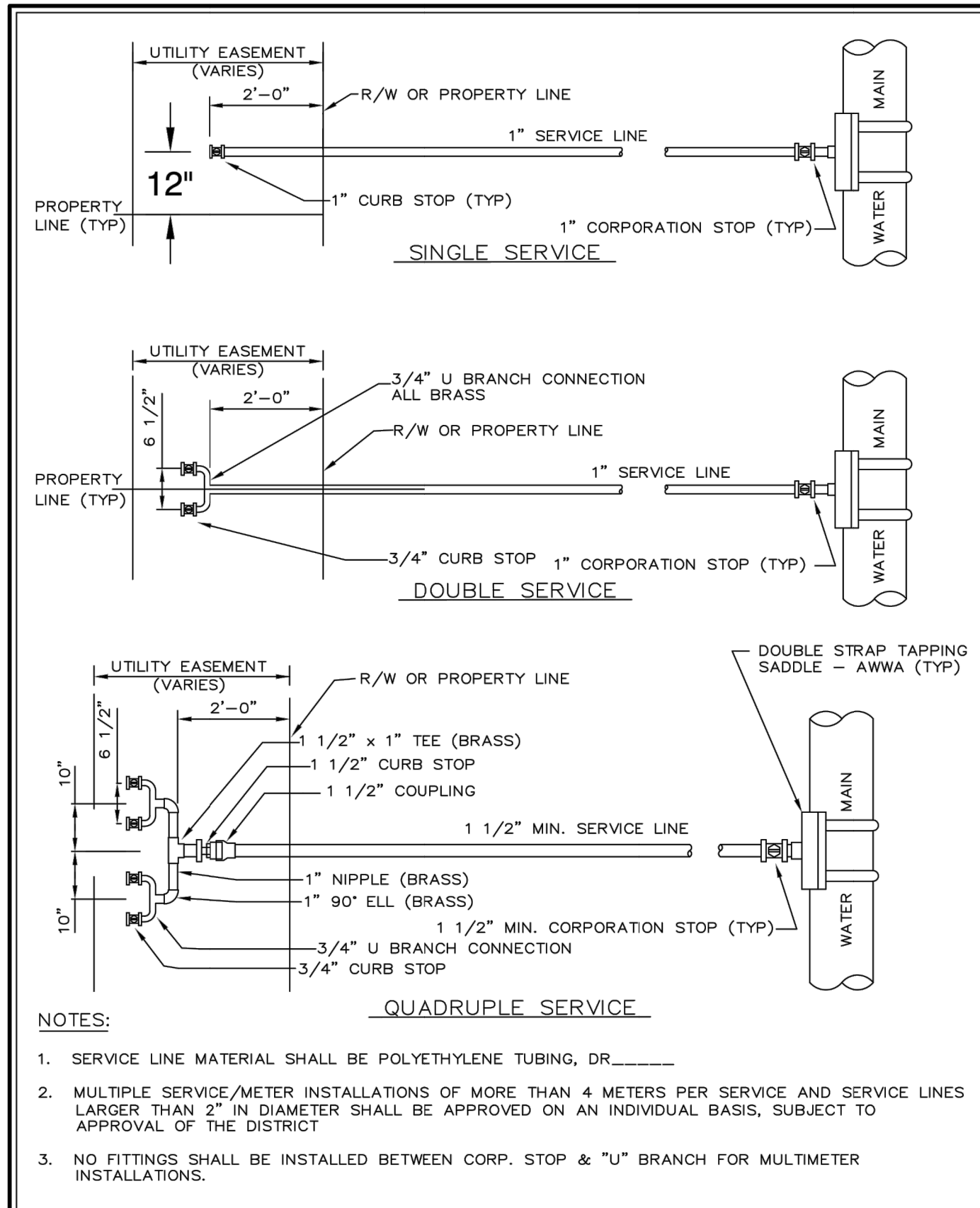
LATEST REVISION DATE: 9/05/18

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SEMINOLE IMPROVEMENT DISTRICT

TYPICAL SERVICE CONNECTION FOR 5/8", 1", OR 2" METER

W-15



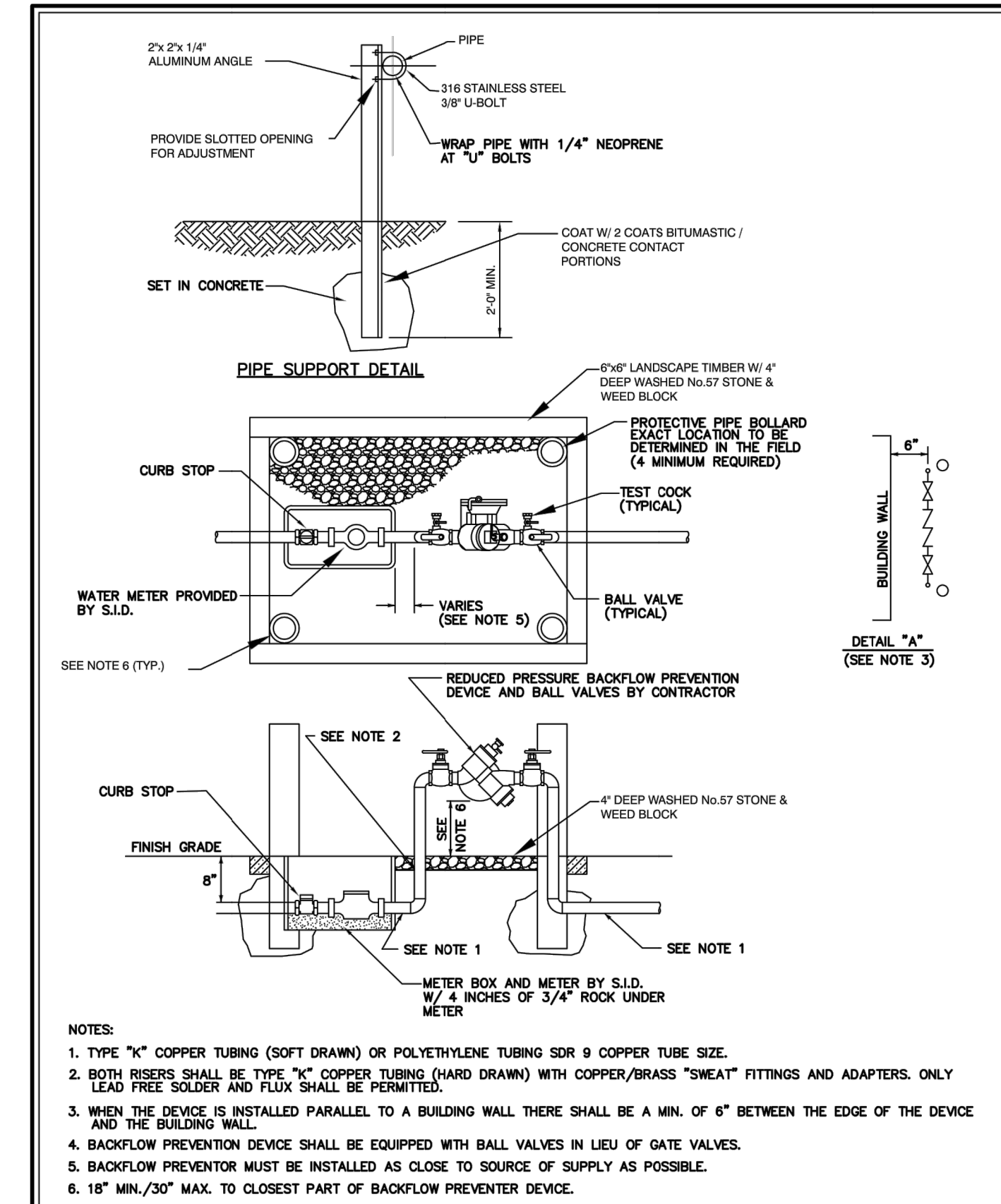
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SEMINOLE IMPROVEMENT DISTRICT

TYPICAL SINGLE SERVICE AND MULTIPLE SERVICES

W-16



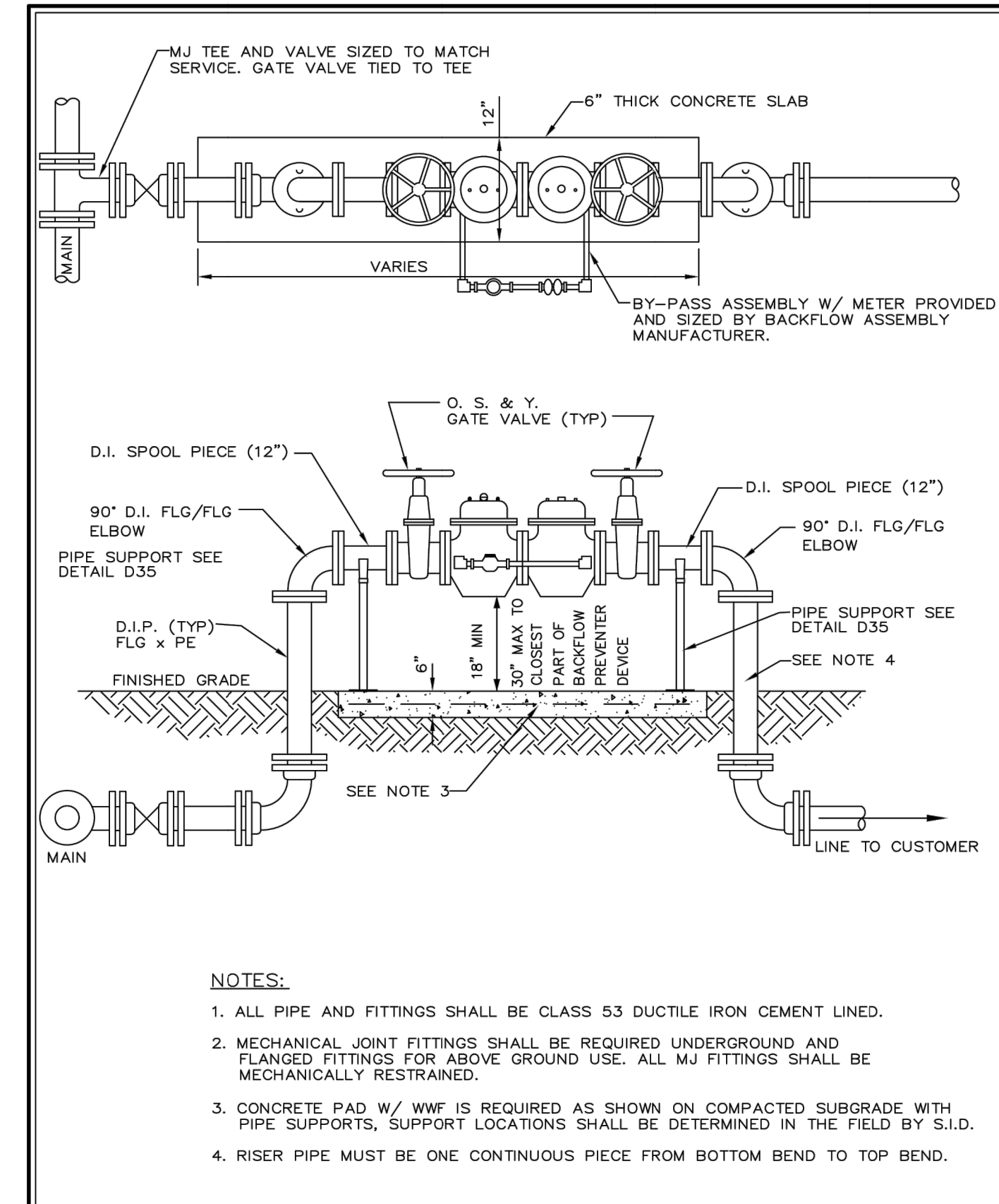
LATEST REVISION DATE: 9/13/18

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SEMINOLE IMPROVEMENT DISTRICT

TYPICAL COMMERCIAL METER, BACKFLOW PREVENTION DETAIL

W-17



LATEST REVISION DATE: 9/13/18

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SEMINOLE IMPROVEMENT DISTRICT

FIRE LINE BACKFLOW

W-19

6/16/2020

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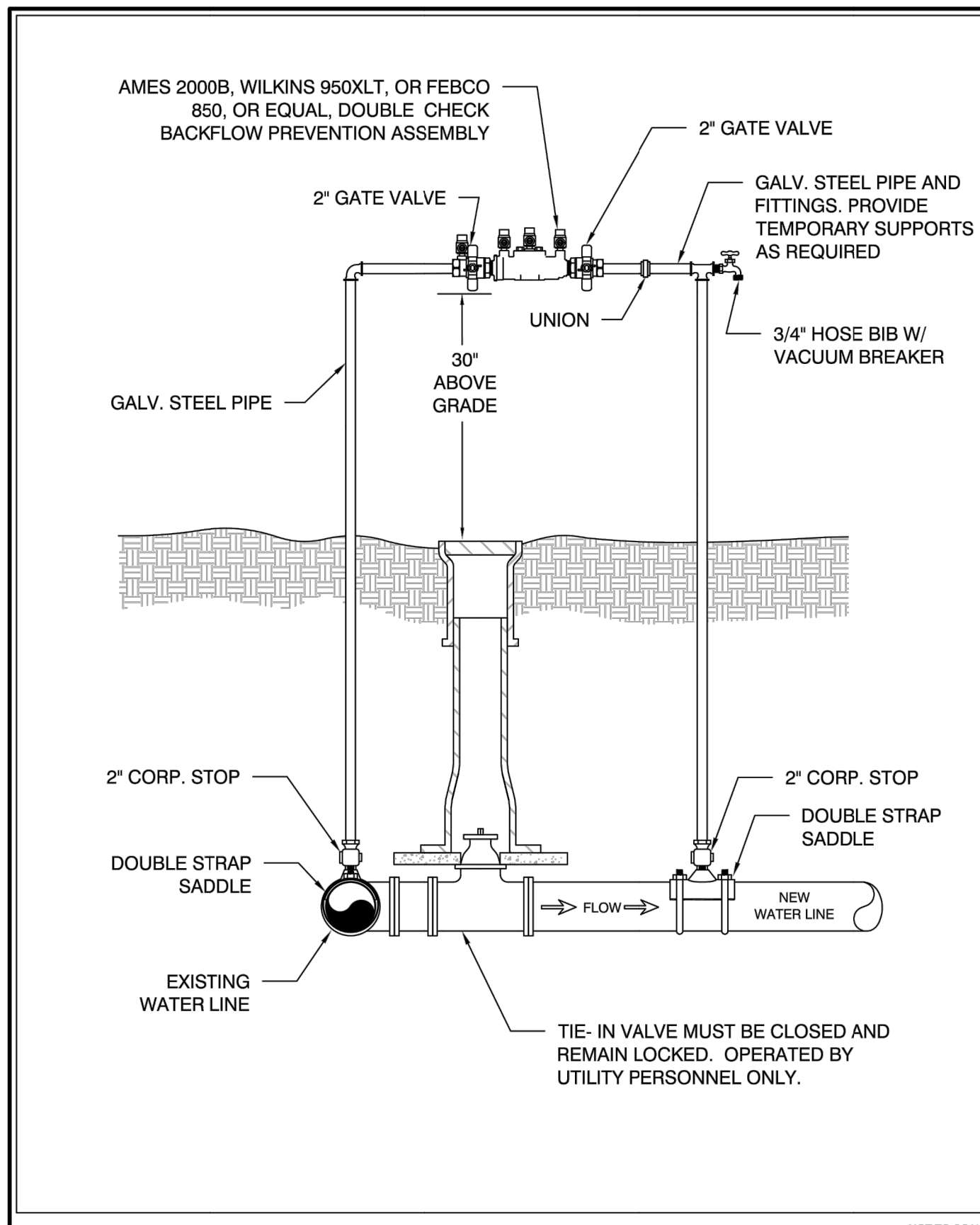
CRESSWIND PALM BEACH CLUBHOUSE

CITY OF WESTLAKE, FLORIDA

WATER AND WASTEWATER DETAILS

REVISIONS	DESIGN P.B.	DRAWN D.B.	CHECKED	APPROVED	DATE

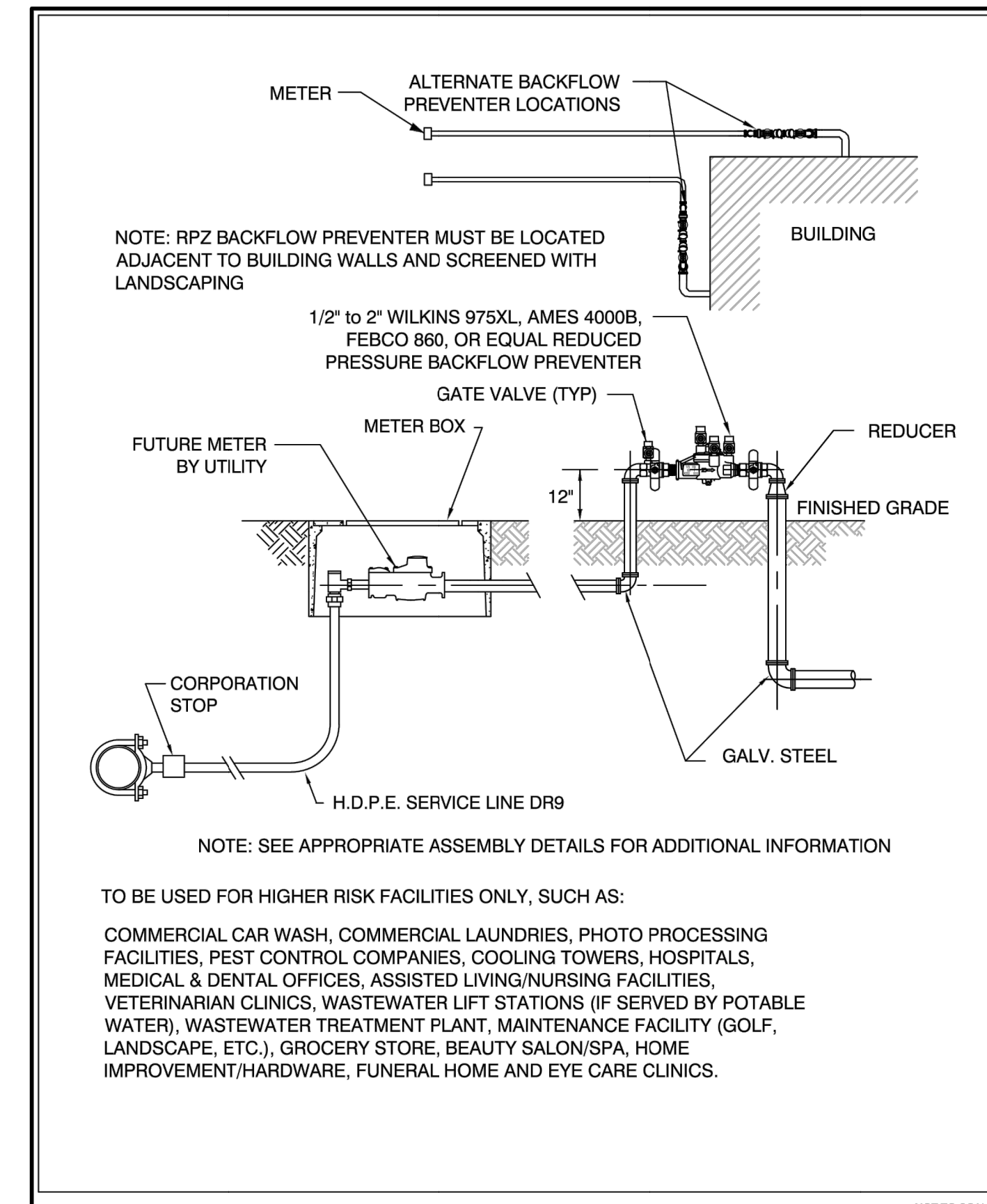
JOB NO. 18-150(O)	DRAWING NO. 18150(O)W06	SHEET 6	OF 9
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LATEST REVISION DATE : 9/05/18 NOT TO SCALE

TEMPORARY JUMPER DETAIL

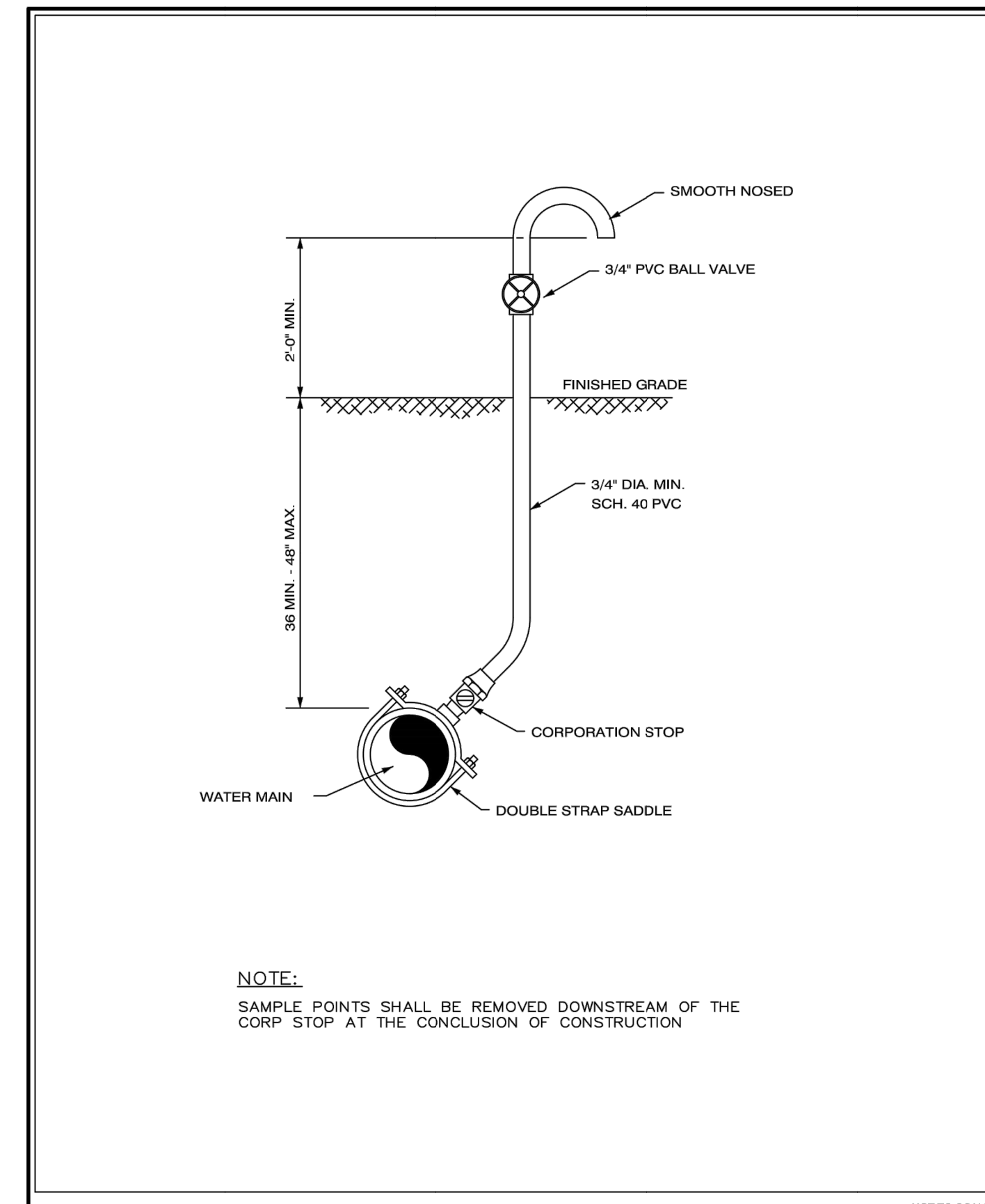
W-27



LATEST REVISION DATE : 9/05/18 NOT TO SCALE

BACKFLOW PREVENTER ASSEMBLY DETAIL

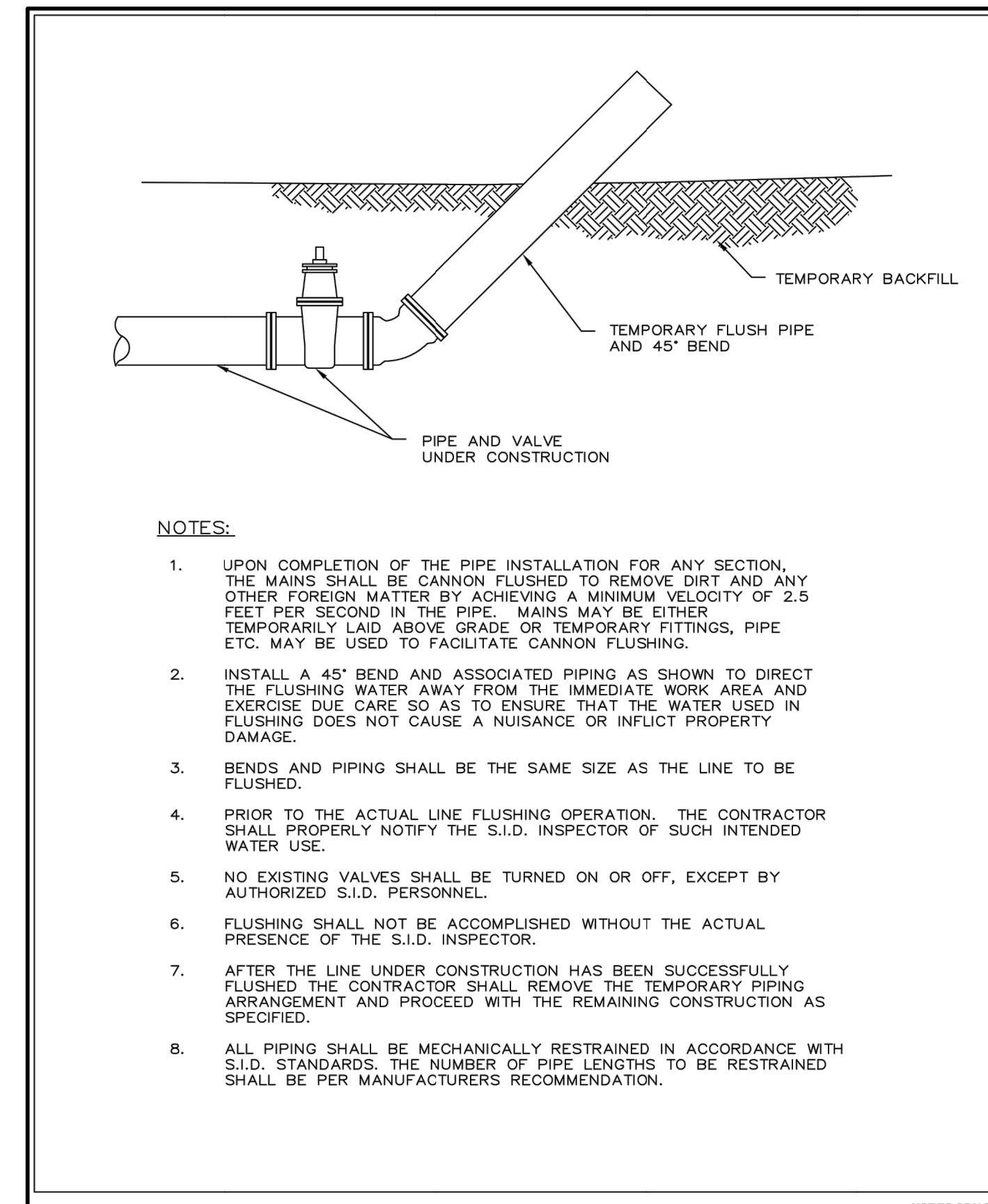
W-28



LATEST REVISION DATE : 09/13/18 NOT TO SCALE

SAMPLING POINT (ON MAIN)

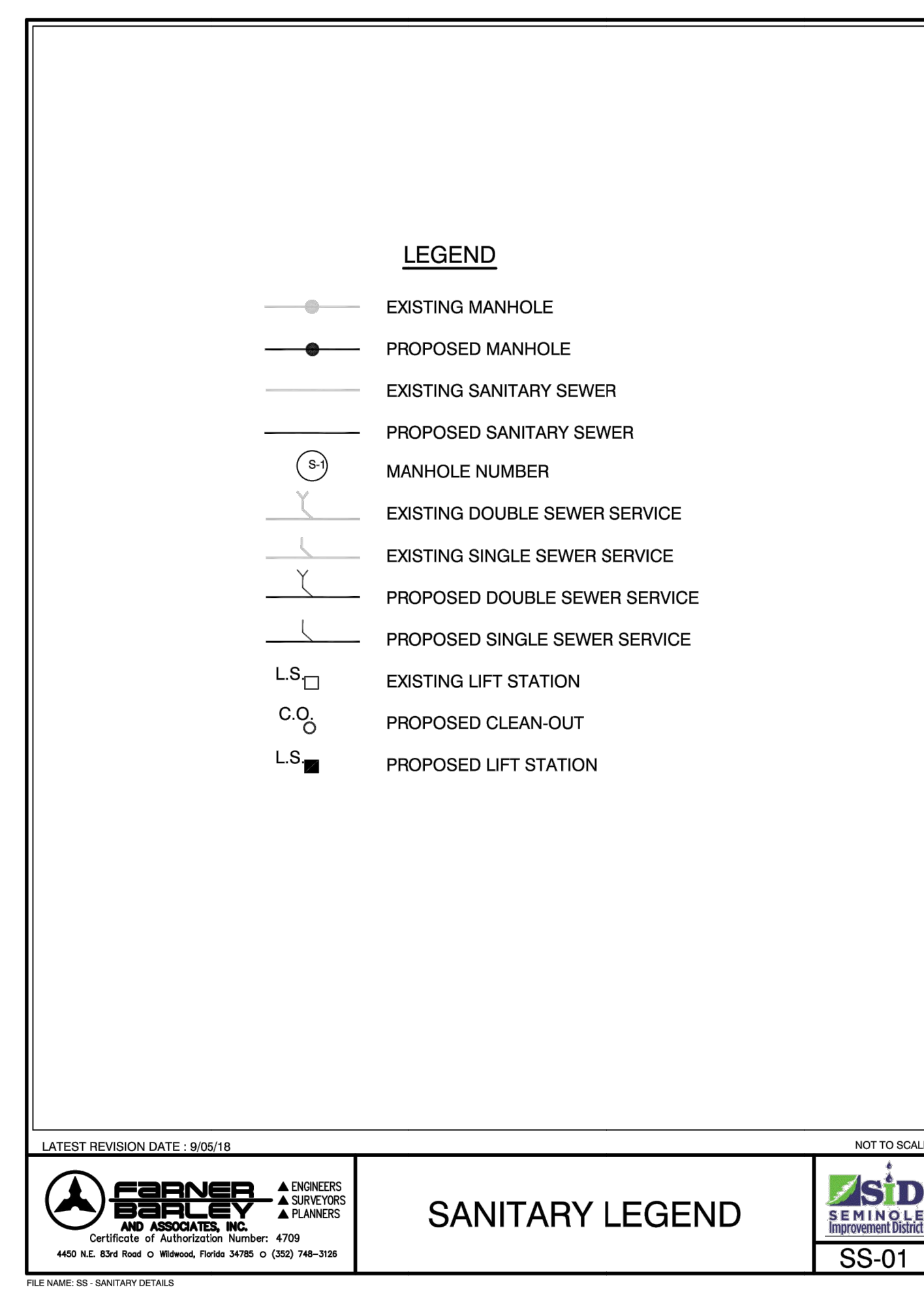
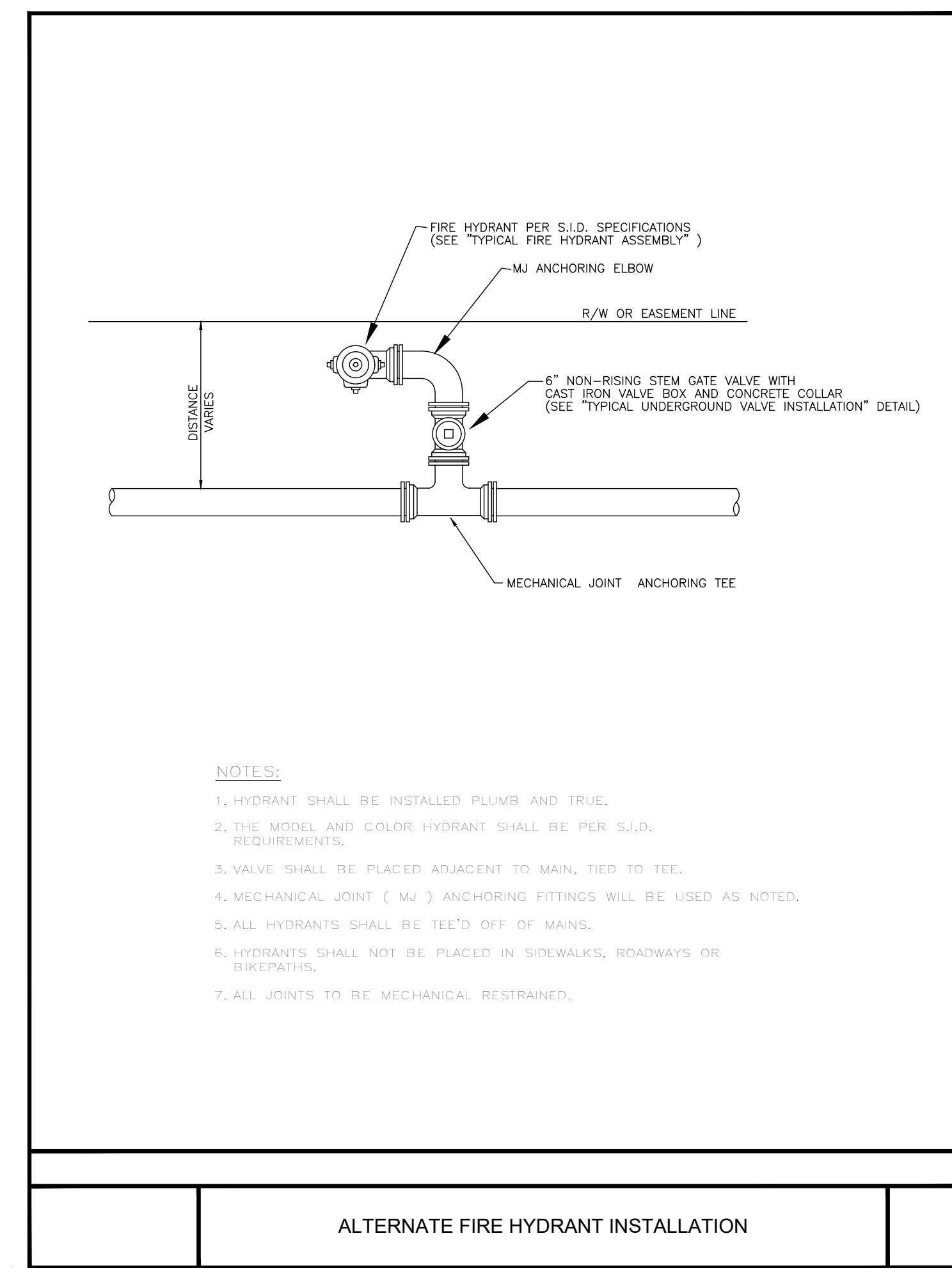
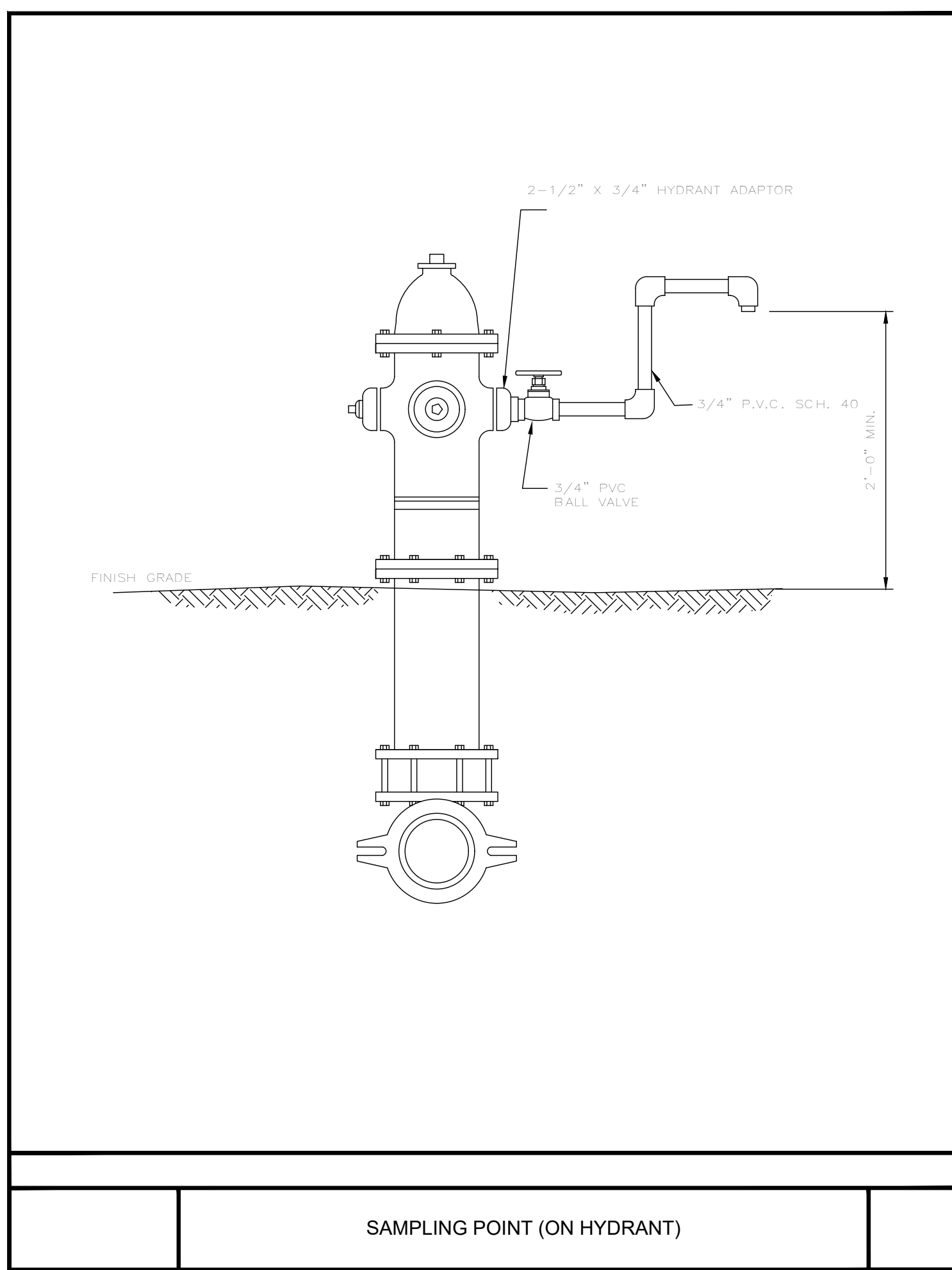
W-35



LATEST REVISION DATE : 09/13/18 NOT TO SCALE

CANNON FLUSHING DETAIL

W-37



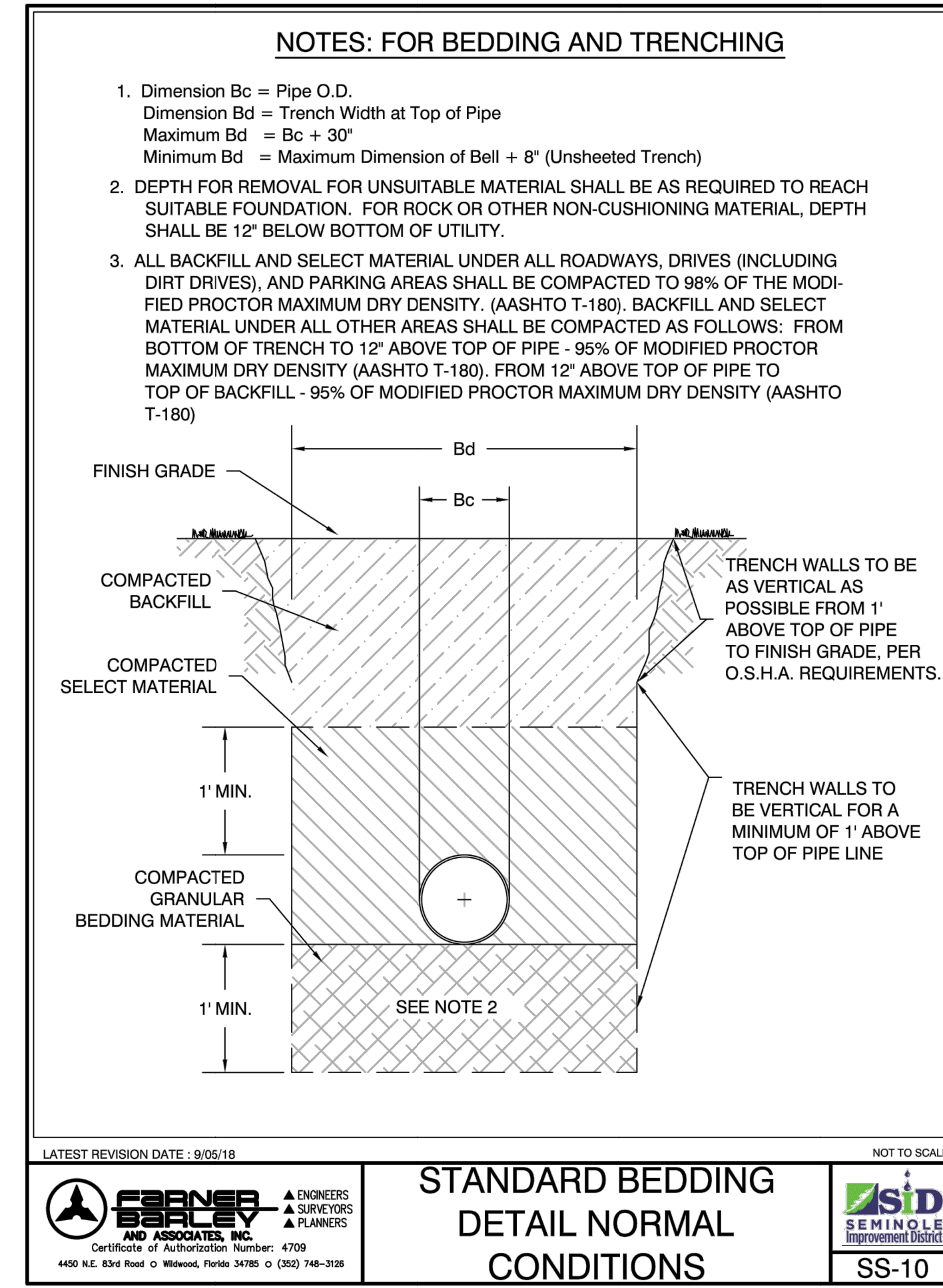
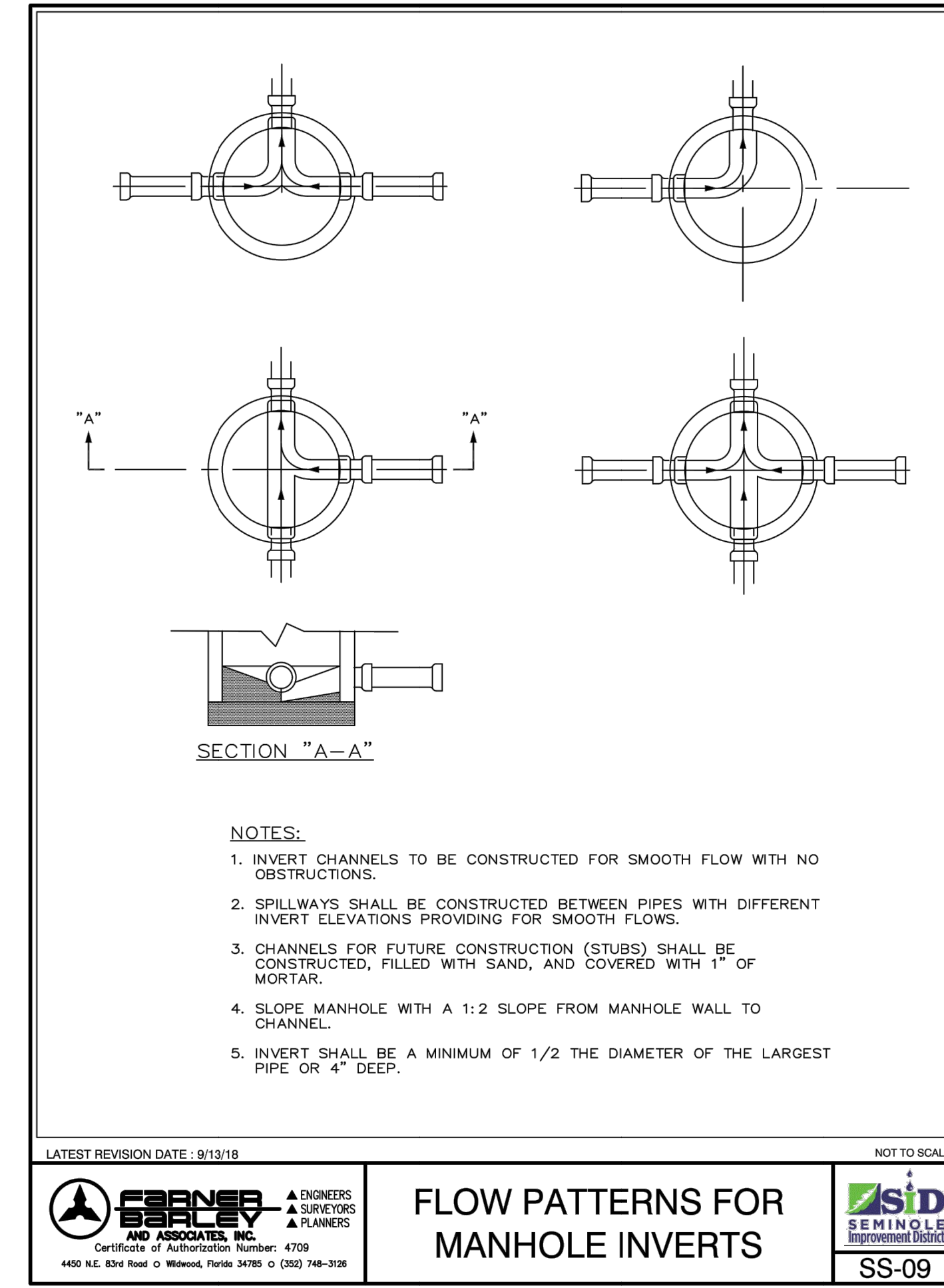
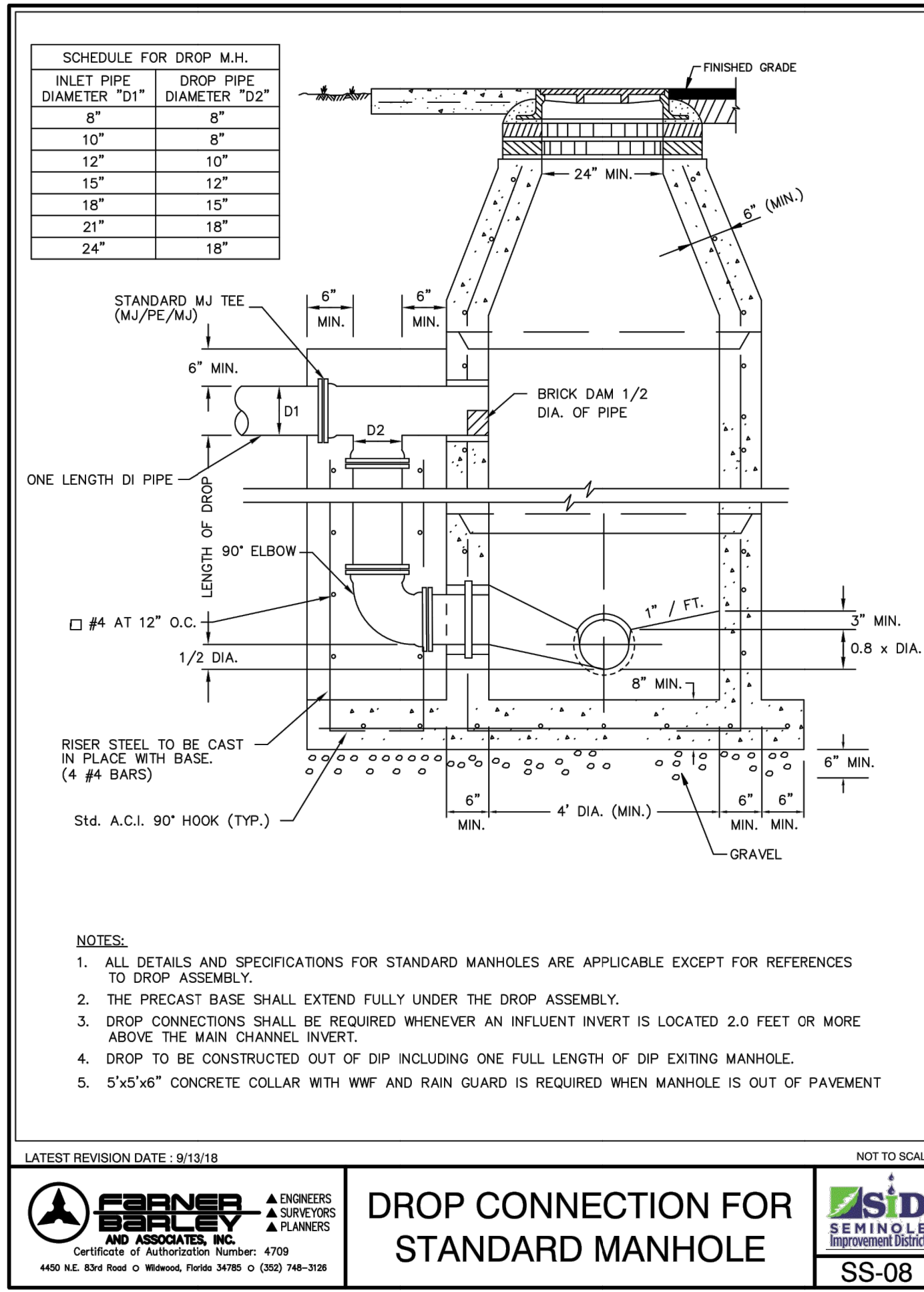
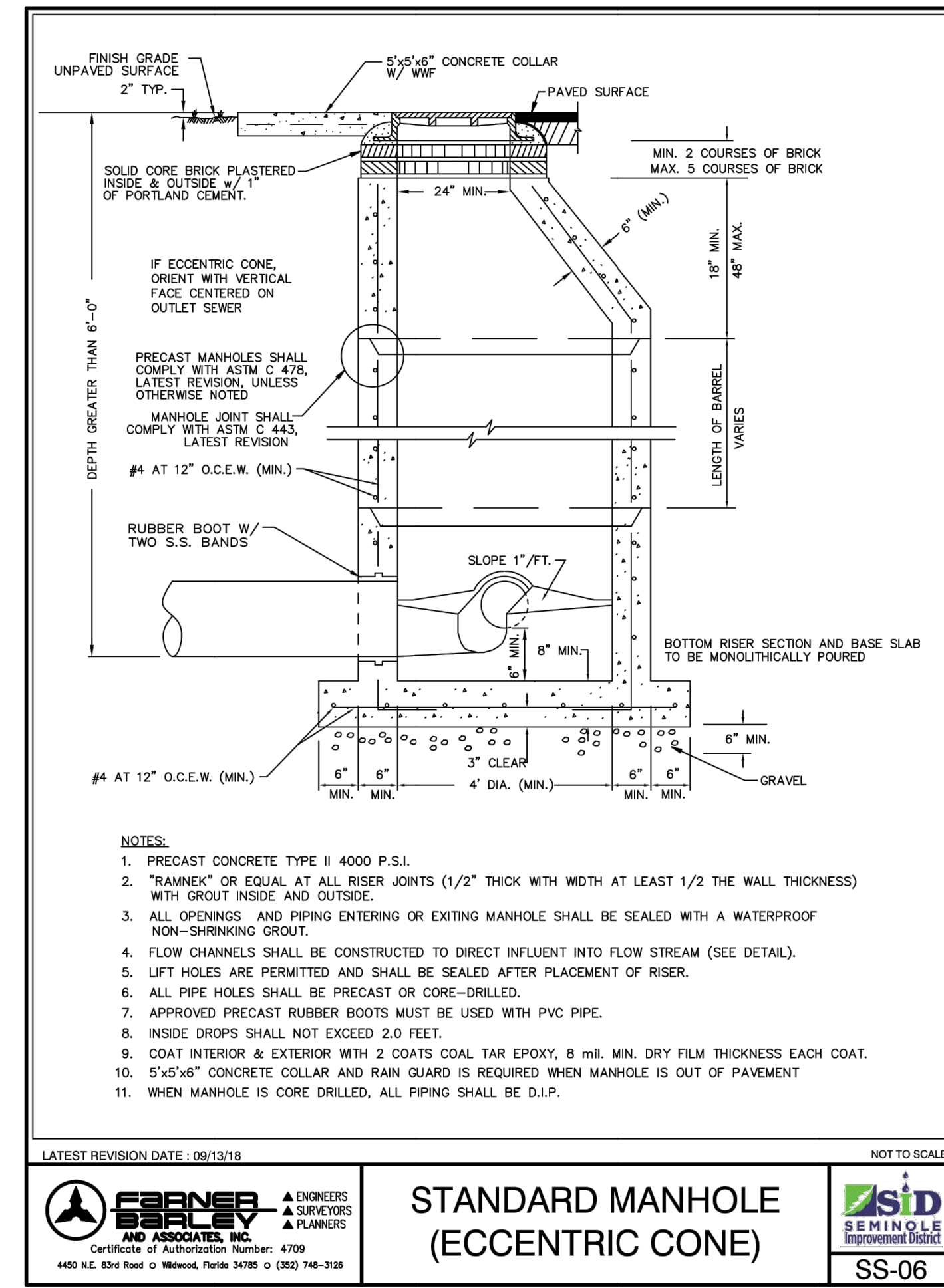
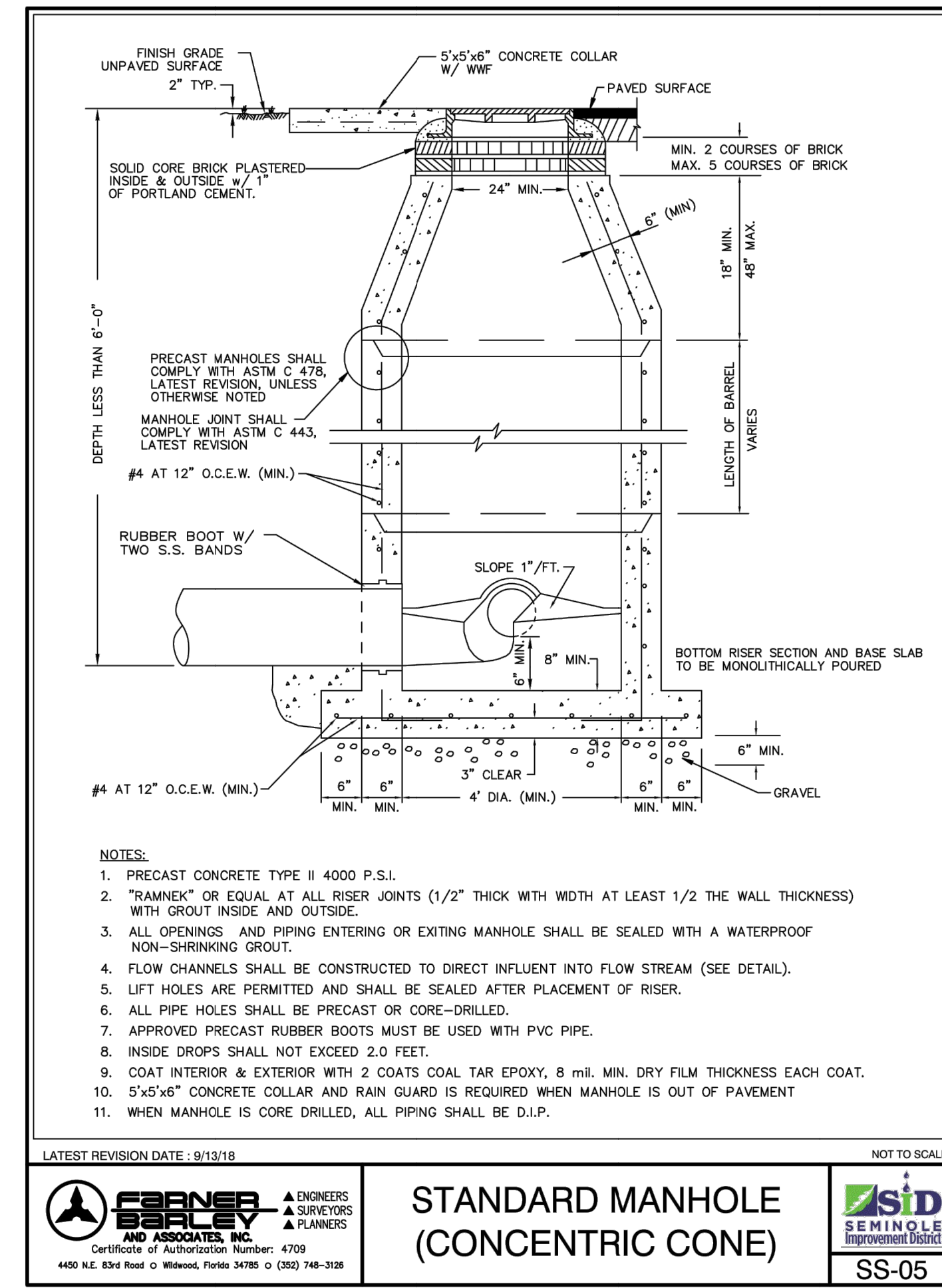
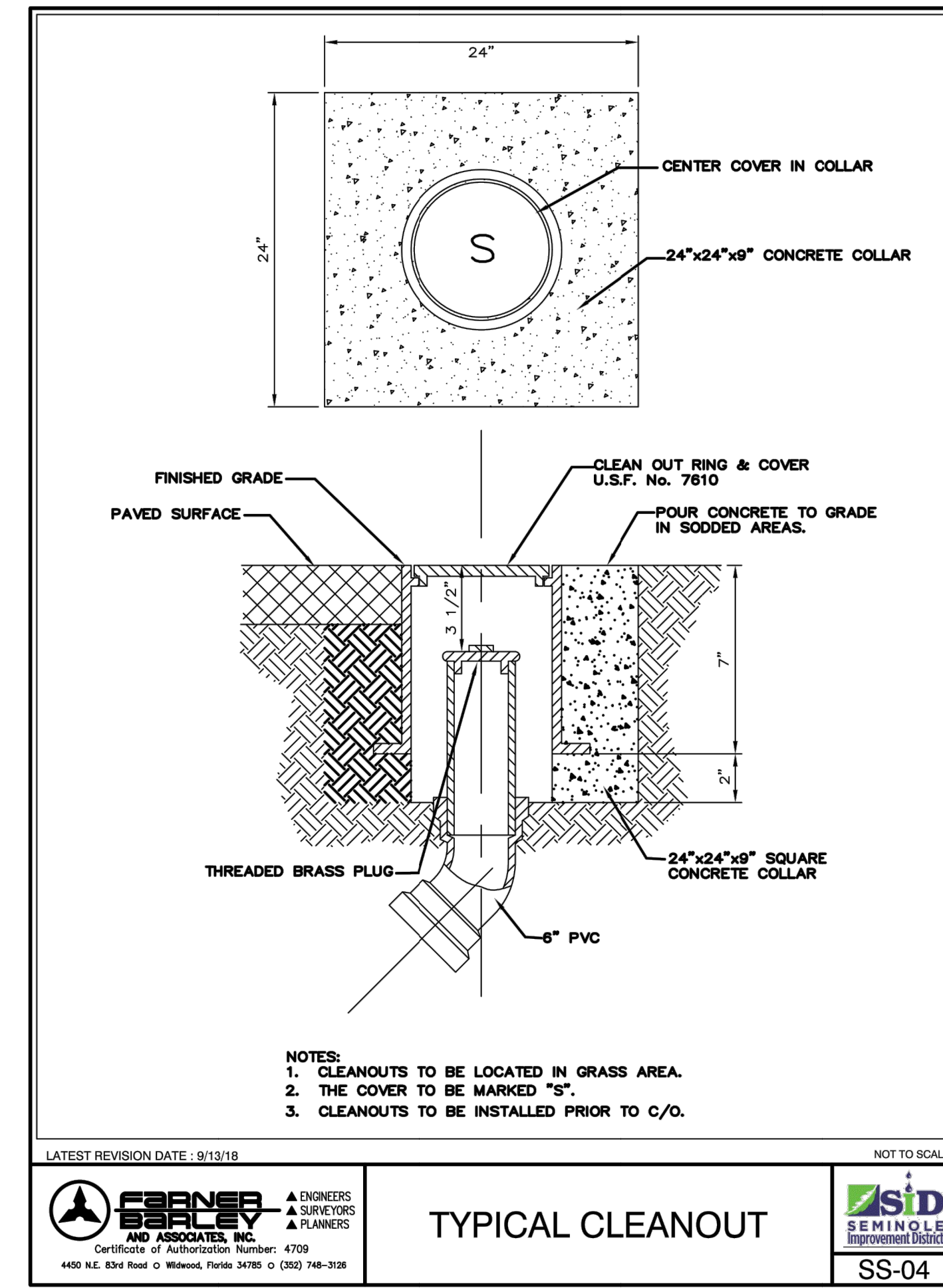
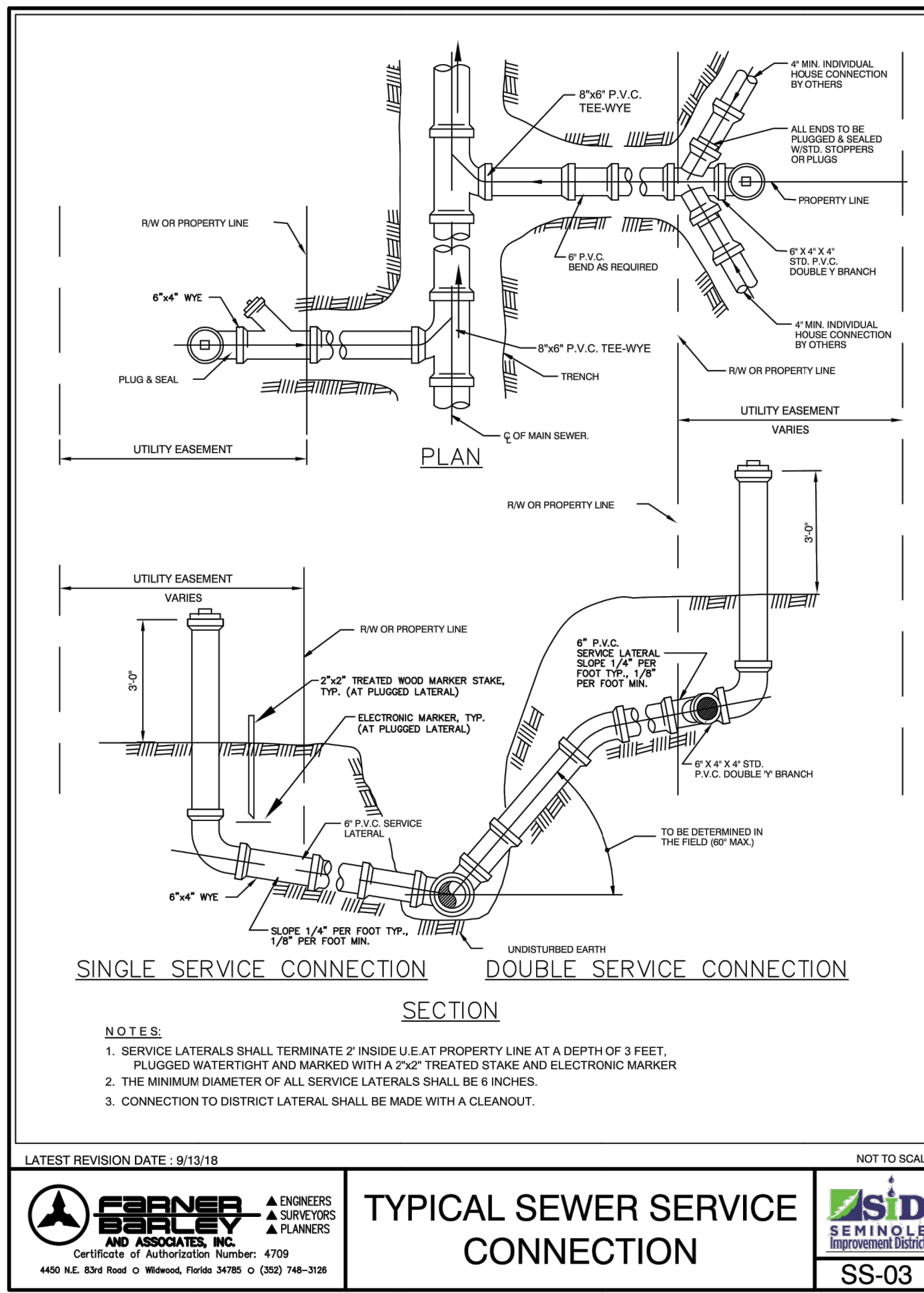
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6/16/2020

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CRESSWIND PALM BEACH CLUBHOUSE
CITY OF WESTLAKE, FLORIDA
WATER AND WASTEWATER DETAILS

DESIGN P.B.	DRAWN D.B.	CHECKED	APPROVED	DATE
REVISIONS	JOB NO. 18-150(O)	DRAWING NO. 18150(O)W07	SHEET 7	OF 9



REVISIONS

DESIGN	DRAWN	CHECKED	APPROVED	DATE
P.B.	D.B.			

JOB NO. 18-150(O)
DRAWING NO. 18150(O)W08
SHEET 8 OF 9

REVISIONS

DESIGN	DRAWN	CHECKED	APPROVED	DATE
P.B.	D.B.			

JOB NO. 18-150(O)
DRAWING NO. 18150(O)W08
SHEET 8 OF 9

REVISIONS

DESIGN	DRAWN	CHECKED	APPROVED	DATE
P.B.	D.B.			

JOB NO. 18-150(O)
DRAWING NO. 18150(O)W08
SHEET 8 OF 9

REVISIONS

DESIGN	DRAWN	CHECKED	APPROVED	DATE
P.B.	D.B.			

JOB NO. 18-150(O)
DRAWING NO. 18150(O)W08
SHEET 8 OF 9

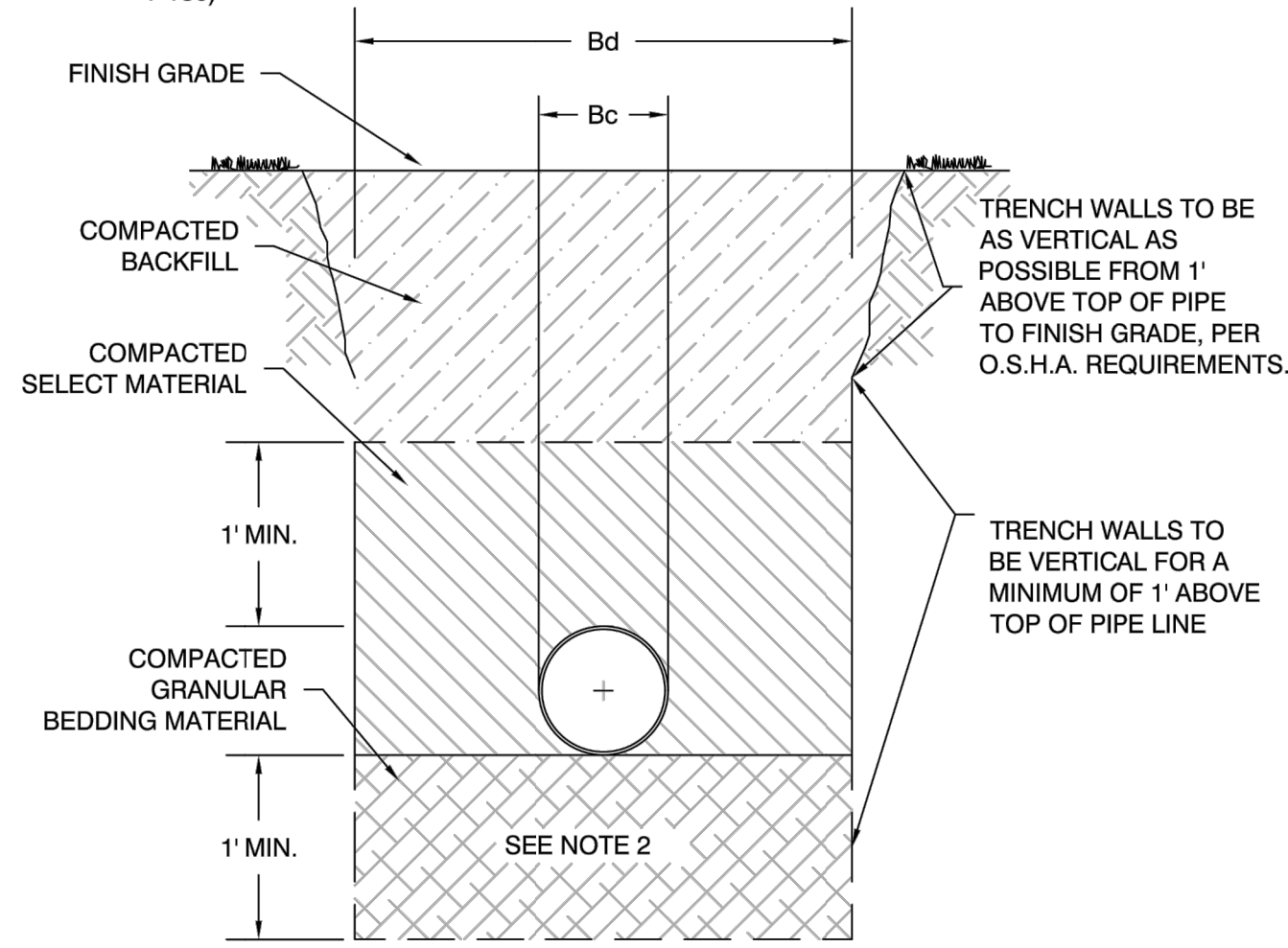
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CRESSWIND PALM BEACH CLUBHOUSE
CITY OF WESTLAKE, FLORIDA
WATER AND WASTEWATER DETAILS

6/16/2020

NOTES: FOR BEDDING AND TRENCHING

- Dimension Bc = Pipe O.D.
Dimension Bd = Trench Width at Top of Pipe
Maximum Bd = Bc + 30"
Minimum Bd = Maximum Dimension of Bell + 8" (Unsheeted Trench)
- DEPTH FOR REMOVAL FOR UNSUITABLE MATERIAL SHALL BE AS REQUIRED TO REACH SUITABLE FOUNDATION. FOR ROCK OR OTHER NON-CUSHIONING MATERIAL, DEPTH SHALL BE 12" BELOW BOTTOM OF UTILITY.
- ALL BACKFILL AND SELECT MATERIAL UNDER ALL ROADWAYS, DRIVES (INCLUDING DIRT DRIVES), AND PARKING AREAS SHALL BE COMPACTED TO 98% OF THE MODIFIED PROCTOR MAXIMUM DRY DENSITY. (AASHTO T-180). BACKFILL AND SELECT MATERIAL UNDER ALL OTHER AREAS SHALL BE COMPACTED AS FOLLOWS: FROM BOTTOM OF TRENCH TO 12" ABOVE TOP OF PIPE - 95% OF MODIFIED PROCTOR MAXIMUM DRY DENSITY (AASHTO T-180). FROM 12" ABOVE TOP OF PIPE TO TOP OF BACKFILL - 95% OF MODIFIED PROCTOR MAXIMUM DRY DENSITY (AASHTO T-180)



LATEST REVISION DATE: 9/05/18 NOT TO SCALE

**STANDARD BEDDING
DETAIL NORMAL
CONDITIONS**

SS-10

GENERAL WATER NOTES

- WATER SYSTEM COMPONENTS SHALL BE INSTALLED IN STRICT ACCORDANCE WITH ALL LOCAL CODES AND REGULATIONS, TESTED, CLEANED, DISINFECTED AND BACTERIOLOGICALLY CLEARED FOR SERVICE IN ACCORDANCE WITH THE LATEST AWWA STANDARDS AND CHAPTER 62-555, FLORIDA ADMINISTRATIVE CODE.
- ALL PIPE SHALL BEAR THE "NSF" SEAL FOR POTABLE WATER.
- WATER MAINS SHALL BE BLUE PVC CONFORMING TO AWWA C-900, DR 18. ALL COUPLINGS, CLEANING COMPOUNDS, SOLVENTS, LUBRICANTS, AND PIPE PREPARATION FOR LAYING, SHALL BE IN ACCORDANCE WITH THE MANUFACTURER'S LATEST RECOMMENDATIONS.
- DEPTH OF WATER LINES FROM CROWN OF PIPE TO FINISHED GRADE SHALL BE 36".
- WATER MAINS TO BE LOCATED 3' FROM RIGHT OF WAY, UNLESS OTHERWISE NOTED.
- WHEN POOL EQUIPMENT IS TO BE INSTALLED AN AIR-GAP OF 3" MINIMUM SHALL BE MAINTAINED BETWEEN EQUIPMENT AND WATER AND SANITARY SYSTEMS.
- ALL POTABLE WATER MAINS THAT ARE NOT BLUE PVC SHALL BE INSTALLED WITH IDENTIFIER TAPE LOCATED ON TOP OF PIPE & SECURED TAPE SHALL BE 3" VINYL BLUE IN COLOR WITH LETTERING INDICATING "POTABLE WATER" AT TWO FOOT INTERVALS ALONG TAPE.

**GENERAL REUSE AND
NON-POTABLE IRRIGATION NOTES**

- ALL REUSE AND NON-POTABLE IRRIGATION PIPING TO BE A SOLID PURPLE COLOR.
- REUSE MAINS SHALL BE PVC CONFORMING TO AWWA C-900, DR 18. ALL COUPLINGS, CLEANING COMPOUNDS, SOLVENTS, LUBRICANTS, AND PIPE PREPARATION, FOR LAYING, SHALL BE IN ACCORDANCE WITH THE PIPE MANUFACTURER'S LATEST RECOMMENDATIONS.
- DEPTH OF REUSE AND NON-POTABLE IRRIGATION LINES TO BE 48" BELOW FINISHED GRADE.
- ALL REUSE AND NON-POTABLE IRRIGATION MAINS THAT ARE NOT PURPLE PVC SHALL BE INSTALLED WITH IDENTIFIER TAPE LOCATED ON TOP OF PIPE & SECURED TAPE SHALL BE 3" VINYL PURPLE IN COLOR WITH LETTERING INDICATING "REUSE" OR "NON-POTABLE IRRIGATION" AT TWO FOOT INTERVALS ALONG TAPE.

LATEST REVISION DATE: 9/05/18 NOT TO SCALE

**TYPICAL UTILITY NOTES
(1 OF 3)**

W-02

POTABLE WATER CLEARANCE REQUIREMENTS

HORIZONTAL SEPARATION: BETWEEN UNDERGROUND WATER MAINS AND SANITARY OR STORM SEWERS, WASTEWATER OR STORMWATER FORCE MAIN, RECLAIMED WATER PIPELINES, AND ON-SITE SEWAGE TREATMENT AND DISPOSAL SYSTEMS.

- NEW OR RELOCATED, UNDERGROUND WATER MAINS SHALL BE LAID TO PROVIDE A HORIZONTAL DISTANCE OF AT LEAST FIVE FEET BETWEEN THE OUTSIDE OF THE WATER MAIN AND THE OUTSIDE OF ANY EXISTING OR PROPOSED STORM SEWER, STORMWATER FORCE MAIN, OR PIPELINE CONVEYING RECLAIMED WATER REGULATED UNDER PART III OF CHAPTER 62-610, F.A.C.
- NEW OR RELOCATED, UNDERGROUND WATER MAINS SHALL BE LAID TO PROVIDE HORIZONTAL DISTANCE OF TEN FEET BETWEEN THE OUTSIDE OF THE WATER MAIN AND THE OUTSIDE OF ANY EXISTING OR PROPOSED VACUUM-TYPE SANITARY SEWER.
- NEW OR RELOCATED, UNDERGROUND WATER MAINS SHALL BE LAID TO PROVIDE A HORIZONTAL DISTANCE OF TEN FEET BETWEEN THE OUTSIDE OF THE WATER MAIN AND THE OUTSIDE OF ANY EXISTING OR PROPOSED GRAVITY-OR PRESSURE-TYPE SANITARY SEWER, WASTEWATER FORCE MAIN, OR PIPELINE CONVEYING RECLAIMED WATER NOT REGULATED UNDER PART III OF CHAPTER 62-610, F.A.C. THE MINIMUM HORIZONTAL SEPARATION DISTANCE BETWEEN WATER MAINS AND GRAVITY-TYPE SANITARY SEWERS SHALL BE REDUCED TO FIVE FEET WHERE THE BOTTOM OF THE WATER MAIN IS LAID AT LEAST TWELVE INCHES ABOVE THE TOP OF THE SEWER.
- NEW OR RELOCATED, UNDERGROUND WATER MAINS SHALL BE LAID TO PROVIDE A HORIZONTAL DISTANCE OF AT LEAST TEN FEET BETWEEN THE OUTSIDE OF THE WATER MAIN AND ALL PARTS OF ANY EXISTING OR PROPOSED "ON-SITE SEWAGE TREATMENT AND DISPOSAL SYSTEM" AS DEFINED IN SECTION 381.0065(2), F.S., AND RULE 64E-6002, F.A.C.
- WHERE AN UNDERGROUND WATER MAIN IS BEING LAID LESS THAN THE REQUIRED MINIMUM HORIZONTAL DISTANCE FROM ANOTHER PIPELINE AND WHERE AN UNDERGROUND WATER MAIN IS CROSSING ANOTHER PIPELINE AND JOINTS IN THE WATER MAIN ARE BEING LOCATED LESS THAN THE REQUIRED MINIMUM DISTANCE FROM JOINTS IN OTHER PIPELINE:
 - USE OF PRESSURE-RATED PIPE CONFORMING TO THE AMERICAN WATER WORKS ASSOCIATION STANDARDS INCORPORATED INTO RULE 62-555.330, F.A.C., FOR THE OTHER PIPELINE IF IT IS GRAVITY-OR VACUUM-TYPE PIPELINE;
 - USE WELDED, FUSED OR OTHERWISE RESTRAINED JOINTS FOR EITHER WATER MAIN OR THE OTHER PIPELINE; OR
 - USE OF WATERTIGHT CASING PIPE OR CONCRETE ENCASEMENT AT LEAST FOUR INCHES THICK FOR EITHER THE WATER MAIN OR THE OTHER PIPELINE.

LATEST REVISION DATE: 9/05/18 NOT TO SCALE

**TYPICAL UTILITY NOTES
(2 OF 3)**

W-03

POTABLE WATER CLEARANCE REQUIREMENTS

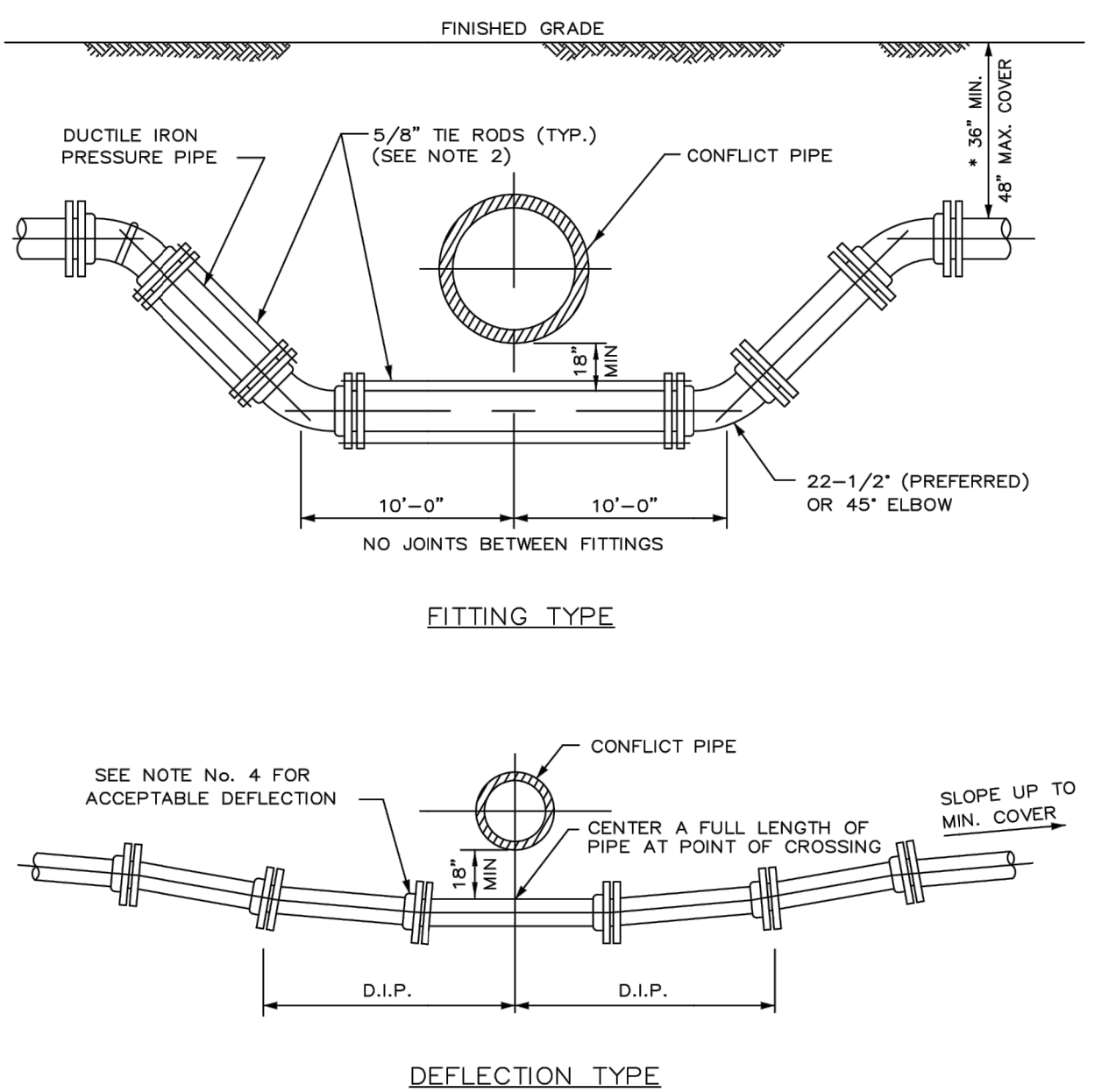
VERTICAL SEPARATION: BETWEEN UNDERGROUND WATER MAINS AND SANITARY OR STORM SEWERS, WASTEWATER OR STORMWATER FORCE MAIN, RECLAIMED WATER PIPELINES.

- NEW OR RELOCATED, UNDERGROUND WATER MAINS CROSSING ANY EXISTING OR PROPOSED GRAVITY-OR VACUUM-TYPE SANITARY SEWER OR STORM SEWER SHALL BE LAID SO THE OUTSIDE OF THE WATER MAIN IS AT LEAST TWELVE INCHES, AND PREFERABLY EIGHTEEN INCHES, ABOVE OR AT LEAST EIGHTEEN INCHES BELOW THE OUTSIDE OF THE OTHER PIPELINE. HOWEVER, IT IS PREFERABLE TO LAY THE WATER MAIN ABOVE THE OTHER PIPELINE.
- NEW OR RELOCATED, UNDERGROUND WATER MAINS CROSSING ANY EXISTING OR PROPOSED PRESSURE-TYPE SANITARY SEWER, WASTEWATER OR STORMWATER FORCE MAIN, OR PIPELINE CONVEYING RECLAIMED WATER SHALL BE LAID SO THE OUTSIDE OF THE WATER MAIN IS AT LEAST EIGHTEEN INCHES ABOVE OR BELOW THE OUTSIDE OF THE OTHER PIPELINE. HOWEVER, IT IS PREFERABLE TO LAY THE WATER MAIN ABOVE THE OTHER PIPELINE.
- AT THE UTILITY CROSSINGS DESCRIBED IN PARAGRAPHS 1 AND 2 ABOVE, ONE FULL LENGTH OF WATER MAIN PIPE SHALL BE CENTERED ABOVE OR BELOW THE OTHER PIPELINE SO THE OTHER PIPELINE JOINTS WILL BE AS FAR AS POSSIBLE FROM THE OTHER PIPELINE. ALTERNATIVELY, AT SUCH CROSSINGS, THE PIPES SHALL BE ARRANGED SO THAT ALL WATER MAIN JOINTS ARE AT LEAST THREE FEET FROM ALL JOINTS IN VACUUM-TYPE SANITARY SEWERS, STORMSEWERS, STORMWATER FORCE MAINS, OR PIPELINES CONVEYING RECLAIMED WATER REGULATED UNDER PART III 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 III OF CHAPTER 62-610, F.A.C.
- SEPARATION BETWEEN WATER MAINS AND SANITARY OR STORM SEWER MANHOLES.
 - NO WATER MAIN SHALL PASS THROUGH, OR COME IN CONTACT WITH, ANY PART OF A SANITARY MANHOLE.
 - WATER MAINS SHALL NOT BE CONSTRUCTED OR ALTERED TO PASS THROUGH, OR COME INTO CONTACT WITH ANY PART OF A STORM SEWER MANHOLE OR INLET STRUCTURE.
- WHERE AN UNDERGROUND WATER MAIN IS BEING LAID LESS THAN THREE FEET HORIZONTALLY FROM ANOTHER PIPELINE AND WHERE AN UNDERGROUND WATER MAIN IS CROSSING ANOTHER PIPELINE AND IS BEING LAID LESS THAN THE REQUIRED MINIMUM VERTICAL DISTANCE FROM THE OTHER PIPELINE:
 - USE OF PIPE, OR CASING PIPE, HAVING HIGH IMPACT STRENGTH (I.E., HAVING AN IMPACT STRENGTH AT LEAST EQUAL TO THAT OF 0.25-INCH-THICK DUCTILE IRON PIPE) OR CONCRETE ENCASEMENT AT LEAST FOUR INCHES THICK FOR THE WATER MAIN; AND
 - USE OF PIPE, OR CASING PIPE, HAVING HIGH IMPACT STRENGTH (I.E., HAVING AN IMPACT STRENGTH AT LEAST EQUAL TO THAT OF 0.25-INCH-THICK DUCTILE IRON PIPE) OR CONCRETE ENCASEMENT AT LEAST FOUR INCHES THICK FOR THE OTHER PIPELINE IF IT IS NEW AND IS CONVEYING WASTEWATER OR RECLAIMED WATER.

LATEST REVISION DATE: 9/05/18 NOT TO SCALE

**TYPICAL UTILITY NOTES
(3 OF 3)**

W-04

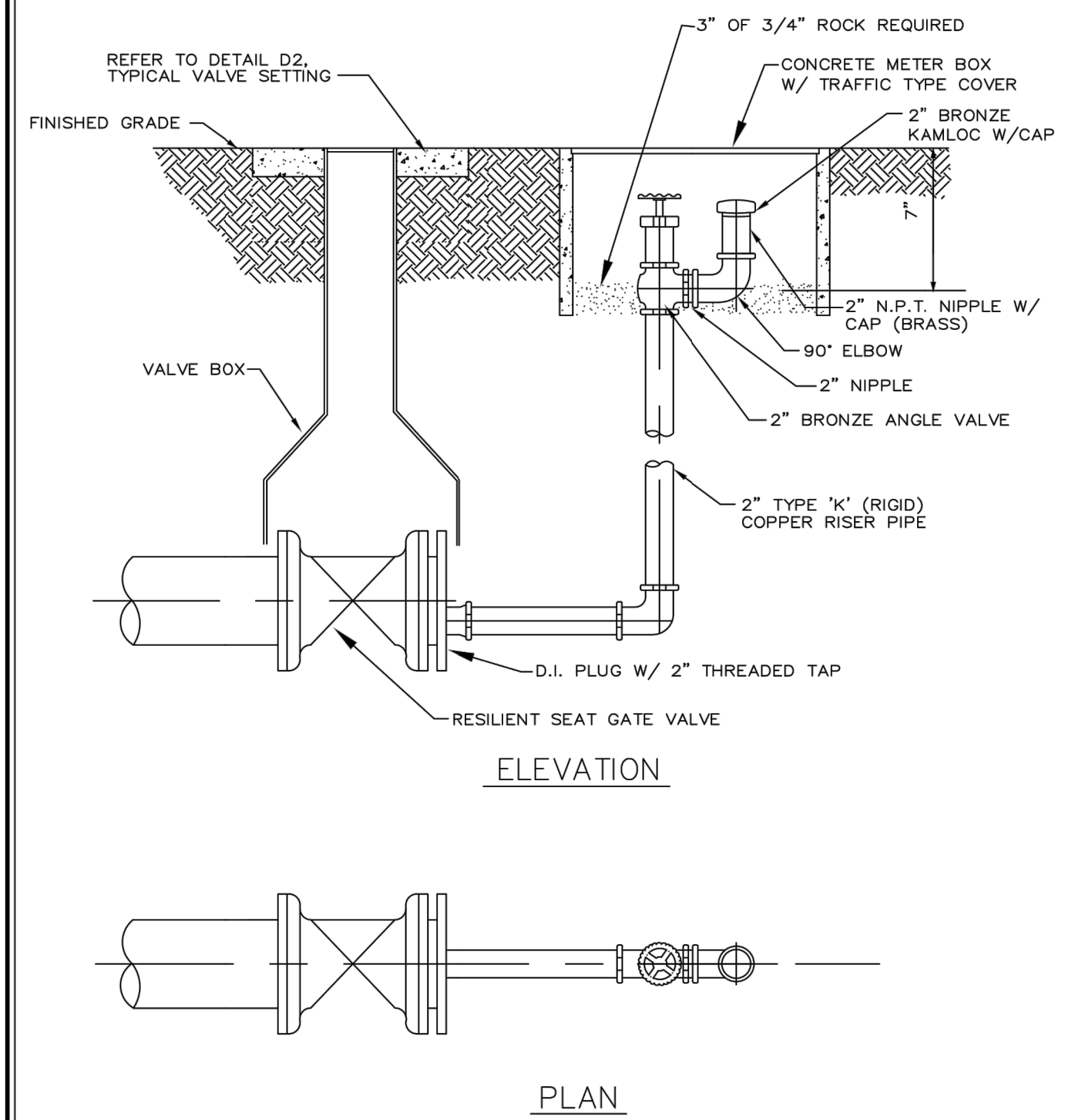


- NOTES:**
- THESE METHODS ARE TO BE USED WHEN INSUFFICIENT COVER EXISTS TO ALLOW PRESSURE PIPE TO CROSS ABOVE CONFLICT PIPE WITH 6" VERTICAL SEPARATION AND MAINTAIN 30" COVER TO FINISHED GRADE.
 - FITTINGS SHALL BE RESTRAINED WITH MECHANICAL RESTRAINTS OR TIE RODS.
 - THE DEFLECTION TYPE CROSSING IS PREFERRED.
 - DO NOT EXCEED 75% OF MANUFACTURER'S RECOMMENDED MAXIMUM JOINT DEFLECTION.
 - MECHANICALLY RESTRAIN ALL FITTINGS, AS PER MANUFACTURER'S RECOMMENDATION.
 - 36" MIN IN STATE ROAD R/W AND UNDER ASPHALT

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**PRESSURE PIPE
CONFLICT DETAIL**

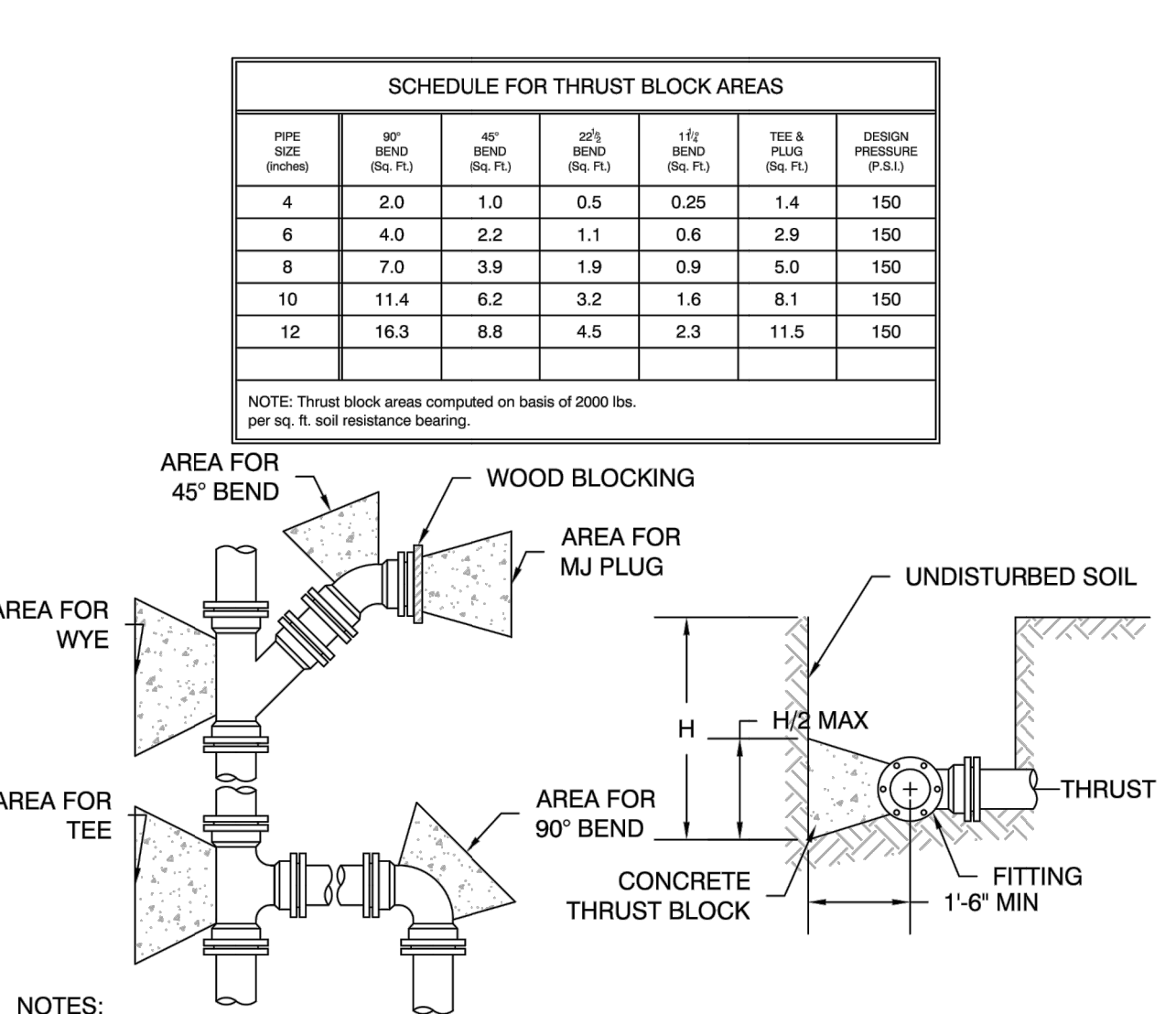
W-05



- NOTES:**
- THE MAIN SHALL BE MECHANICALLY RESTRAINED IN ACCORDANCE WITH THE S.I.D. STANDARDS. THE NUMBER OF PIPE LENGTHS TO BE RESTRAINED SHALL BE PER DETAIL D5.

LATEST REVISION DATE: 9/13/18 NOT TO SCALE

**TYPICAL TERMINAL END
WITH 2\"/>**



- NOTES:**
- THRUST BLOCK BEARING AREAS SHALL BE POURED AGAINST UNDISTURBED MATERIAL WHERE TRENCH WALL HAS BEEN DISTURBED, EXCAVATE ALL LOOSE MATERIAL AND EXTEND TO UNDISTURBED MATERIAL.
 - EXTEND THRUST BLOCK FOR FULL LENGTH OF FITTING. PLACE WOOD BLOCKING IN FRONT OF PLUGS BEFORE POURING CONCRETE. THE JOINTS OF FITTINGS SHALL NOT BE COVERED IN CONCRETE.
 - ALL JOINTS SHALL BE WRAPPED IN PLASTIC FILM BOND BREAKER BEFORE CONCRETE IS PLACED.
 - ROUGH BLOCKING FORMS SHALL BE USED ALONG THE SIDES OF THRUST BLOCKS.
 - THRUST BLOCKS SHALL BE USED IN COMBINATION, AS REQUIRED, TO SUIT THE SPECIFIC FITTING ARRANGEMENT.
 - ALTERNATE DESIGN RESTRAINING SYSTEMS SHALL BE PROVIDED WHERE STANDARD THRUST BLOCKING IS NOT SUITABLE.
 - ALL WOOD BLOCKING SHALL BE PRESSURE TREATED FOR GROUND CONTACT.

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**PIPE JOINT THRUST
RESTRAINT DETAIL (1 OF 2)**

W-09

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DESIGN P.B.	DRAWN D.B.	CHECKED	APPROVED	DATE	JOB NO. 18-150(O)	DRAWING NO. 18150(O)W09	SHEET 9	OF 9
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