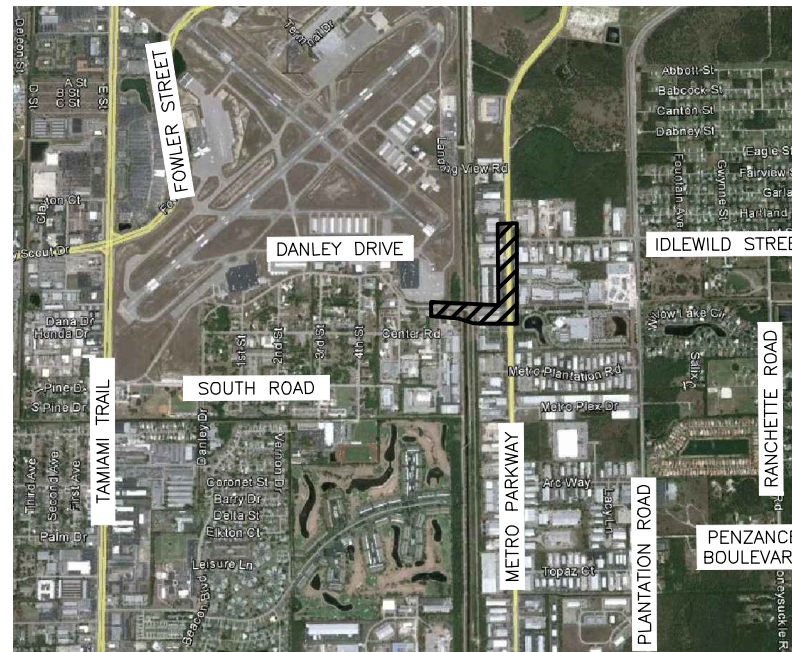


# LEE COUNTY UTILITIES

## PAGE PARK WATER MAIN IMPROVEMENTS PHASE 1

### DRAWING INDEX

SHEET NUMBER	DRAWING NUMBER	DESCRIPTION
<b>GENERAL</b>		
1	G1	COVER SHEET
2	G2	GENERAL NOTES
3	G3	GENERAL NOTES
4	G4	LEGEND
5	G5	SUE AND CONTROL POINT DESCRIPTIONS
6	G6	KEY MAP
7	G7	TYPICAL SECTIONS
8	G8	TYPICAL SECTIONS
<b>CIVIL</b>		
9	C1	PLAN & PROFILE STA 10+00 TO STA 13+00
10	C2	PLAN & PROFILE STA 13+00 TO STA 18+00
11	C3	PLAN & PROFILE STA 18+00 TO STA 21+00
12	C4	PLAN & PROFILE STA 21+00 TO STA 25+00
13	C5	PLAN & PROFILE STA 25+00 TO STA 30+00
14	C6	PLAN & PROFILE STA 30+00 TO STA 32+50
15	C7	STANDARD DETAILS
16	C8	STANDARD DETAILS
17	C9	STANDARD DETAILS
18	C10	STANDARD DETAILS
19	C11	STANDARD DETAILS
20	C12	STANDARD DETAILS
21	C13	STANDARD DETAILS
22	C14	STANDARD DETAILS
23	C15	SPECIAL DETAILS
24	C16	SPECIAL DETAILS
25	C17	SPECIAL DETAILS
26	C18	STORMWATER POLLUTION PREVENTION PLAN
27	C19	STORMWATER POLLUTION PREVENTION DETAILS
28	C20	STORMWATER POLLUTION PREVENTION DETAILS
29	C21	STORMWATER POLLUTION PREVENTION DETAILS
30	C22	MAINTENANCE OF TRAFFIC - PLAN 1
31	C23	MAINTENANCE OF TRAFFIC - PLAN 2
32	L1	PARTIAL LANDSCAPE PLAN



SECTIONS 6, 7 & 12, TOWNSHIP 45 S. RANGE 24 & 25 E  
LEE COUNTY, FLORIDA

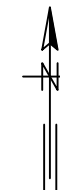


5252 SUMMERLIN COMMONS WAY, SUITE 104  
FORT MYERS, FLORIDA 33907

CERTIFICATE OF AUTHORIZATION NO. 37

MAY 2017

PROJECT LOCATION



### LEE COUNTY COMMISSIONERS

- DIST. 1. JOHN E. MANNING
- DIST. 2. CECIL L. PENDERGRASS
- DIST. 3. LARRY KIKER
- DIST. 4. BRIAN HAMMAN
- DIST. 5. FRANK MANN



ATTENTION IS DIRECTED TO THE FACT THAT THESE PLANS MAY HAVE BEEN REDUCED IN SIZE THROUGH REPRODUCTION. THIS MUST BE CONSIDERED WHEN OBTAINING SCALED DATA.

APPROVED

GARY C. FERRANTE  
P.E. NO. 65011

THIS IS TO CERTIFY THAT THESE PLANS AND THE ASSOCIATED CONSTRUCTION PROJECTS ARE IN SUBSTANTIAL COMPLIANCE WITH THE LEE COUNTY LAND DEVELOPMENT CODE WITH THE EXCEPTION OF THE FOLLOWING DEVIATIONS WHICH HAVE BEEN APPROVED BY THE DIRECTOR OF PUBLIC WORKS:

DATE \_\_\_\_\_ GARY C. FERRANTE, P.E.  
FLORIDA P.E. # 65011

DEVELOPMENT ORDER APPROVED:  
PUBLIC WORKS ADMINISTRATION

DATE \_\_\_\_\_ DOUGLAS MEURER, P.E.  
DIRECTOR OF PUBLIC WORKS



# GENERAL NOTES (Continued)

- I. THE CONTRACTOR SHALL PROVIDE SUFFICIENT PERSONNEL AND EQUIPMENT ON THE JOB AT ALL TIMES DURING CONSTRUCTION TO SATISFY THE SPECIFICATIONS AND TO COMPLETE WORK.
- J. LCU INSPECTION STAFF MAY OBSERVE PROJECT CONSTRUCTION.
- K. THE CONTRACTOR IS TO UNCOVER ALL EXISTING LINES BEING TIED INTO AND VERIFY GRADES BEFORE BEGINNING CONSTRUCTION.
- L. IT IS THE CONTRACTOR'S RESPONSIBILITY TO LOCATE AND TAKE ALL POSSIBLE PRECAUTIONS TO AVOID ANY DAMAGE TO ALL UNDERGROUND PIPELINES, TELEPHONE, CABLE TV, ELECTRIC LINES/CONDUITS AND STRUCTURES IN ADVANCE OF ANY CONSTRUCTION. LCU WILL NOT GUARANTEE ANY LOCATIONS AS SHOWN ON THESE PLANS OR THOSE OMITTED FROM THESE PLANS. THE CONTRACTOR SHALL BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MAY OCCUR BY HIS FAILURE TO EXACTLY LOCATE AND PROTECT EXISTING UTILITIES AND STRUCTURES.
- M. CONTRACTOR SHALL VERIFY ALL QUANTITIES SHOWN ON THE PLANS. IF ANY DISCREPANCIES IN QUANTITIES ARE FOUND, THE CONTRACTOR SHALL NOTIFY THE PROJECT ENGINEER AND LCU.
- N. ALL REGULATORY AND PERMITTING AGENCIES' REQUIREMENTS SHALL BE COMPLIED WITH.
- O. APPROPRIATE TURBIDITY CONTROL DEVICES (E.G. SILT FENCES, HAY BALES) WILL BE UTILIZED DURING ALL PHASES OF INSTALLATION AND GRADING. CONTRACTOR IS RESPONSIBLE FOR SUBMITTING THE NOTICE OF INTENT AND NOTICE OF TERMINATION TO THE EPA IN COMPLIANCE WITH LEE COUNTY'S NPDES PERMIT. CONTRACTOR IS RESPONSIBLE FOR DEVELOPING AND MAINTAINING AN EFFECTIVE STORM WATER POLLUTION PREVENTION PLAN.
- P. IN THE EVENT THAT HARD LIMESTONE FORMATION IS ENCOUNTERED, MAKING IT IMPOSSIBLE TO EXCAVATE TO THE DEPTH REQUIRED UNDER THIS CONTRACT, THE CONTRACTOR MAY BE ALLOWED TO REDUCE THE PIPE COVER TO NOT LESS THAN TWO (2) FEET WHILE MAINTAINING THE LCU REQUIRED THICKNESS OF BEDDING UNDER THE PIPE. SUCH DEVIATION FROM THE PLANS MUST FIRST BE APPROVED BY LCU AND THE ENGINEER PRIOR TO THE PIPE LAYING. IF TWO FEET OF COVER OR MORE CANNOT BE ATTAINED, THE CONTRACTOR SHALL PROVIDE OTHER METHOD OF CONSTRUCTION OR PIPE PROTECTION WHICH SHALL FIRST BE APPROVED BY LCU AND THE ENGINEER, AT NO ADDITIONAL COST TO THE COUNTY.

22. DATE OF SURVEY FIELD WORK, AUGUST 19, 2013.

23. HORIZONTAL CONTROL FOR THIS PROJECT IS BASED ON THE STATE PLANE COORDINATE SYSTEM, FLORIDA WEST ZONE, NORTH AMERICAN DATUM OF 1983 (NAD 83).

24. DISTANCES ARE IN FEET AND DECIMALS THEREOF.

25. LINES SHOWN ON THE PLANS REPRESENTING RIGHT-OF-WAY LINES, PROPERTY LINES AND EASEMENT LINES ARE BASED ON SUBDIVISION PLATS, DEEDS OF RECORD AND FOUND MONUMENTATION. THESE LINES ARE APPROXIMATE IN THAT INDIVIDUAL LINES HAVE NOT BEEN SURVEYED ON THE GROUND.

26. SOIL BORING LOCATIONS ARE SHOWN ON PLANS FOR REFERENCE ONLY. SEE ARDAMAN AND ASSOCIATES REPORT DATED SEPTEMBER 17, 2013.

27. THE CONTRACTOR SHALL BE RESPONSIBLE TO REMOVE AWAY FROM THE SITE OF THE WORK TO HIS OWN PLACE OF DISPOSAL ALL EXCESS ITEMS. IN ACCORDANCE WITH ALL APPLICABLE LAWS.

28. REMOVAL AND DISPOSAL OF ASBESTOS CEMENT PIPE SHALL BE PERFORMED BY CONTRACTOR LICENSED AND CERTIFIED TO DO SO AND SHALL BE DONE IN ACCORDANCE WITH ALL LOCAL, STATE AND FEDERAL REGULATIONS, INCLUDING, BUT NOT LIMITED TO, THOSE OF F.DE.P., O.S.H.A., AND F.D.O.T.

29. THE CONTRACTOR SHALL EMPLOY A FLORIDA-CERTIFIED ARBORIST TO SUPERVISE AND/OR PERFORM TREE TRIMMING OR ROOT PRUNING OF ALL TREES TO REMAIN THAT ARE IMPACTED BY UTILITY TRENCHING OR CONSTRUCTION OPERATIONS.

30. FOR THE AREA ALONG THE WEST SIDE OF METRO PARKWAY BETWEEN STATION 20+40 AND STATION 22+53 CONTAINED WITHIN THE PERMANENT AND TEMPORARY CONSTRUCTION EASEMENT LIMITS, THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE FOLLOWING ITEMS OF WORK:

- A. PROVIDE WRITTEN NOTICE TO PROPERTY OWNER A MINIMUM OF TWO WEEKS PRIOR TO COMMENCING WORK IN THIS AREA. THE PROPERTY OWNER'S CONTACT INFORMATION IS:

JEREMIAH HOGAN, PRESIDENT  
 METRO PLACE ASSOCIATION, INC.  
 11000 METRO PARKWAY, #02  
 FORT MYERS, FL 33912

- B. REMOVAL AND DISPOSAL OF 14 MAHOGANY TREES AND 2 PALM TREES, INCLUDING STUMPS AND ROOTS TO A DEPTH OF 4' BELOW EXISTING GROUND SURFACE AS INDICATED ON THE PLANS
- C. SAW CUTTING AND REMOVAL OF A STRIP OF PARKING LOT PAVEMENT 5' IN WIDTH, AND REPLACEMENT WITH 8" OF COMPACTED LIMEROCK BASE AND 1 1/2" OF TYPE SIII ASPHALT
- D. RE-STRIPING 51 PARKING LOT SPACES
- E. REMOVAL OF 51 CONCRETE WHEEL STOPS, AND INSTALLING 51 NEW WHEEL STOPS
- F. REMOVAL AND REPLACEMENT OF EXISTING LANDSCAPE ISLAND CURBING
- G. INSTALLATION OF A NEW 15' WIDE TYPE D LANDSCAPE BUFFER PER THE PROVIDED LANDSCAPE PLANTING PLAN DEVELOPED BY LEE COUNTY UTILITIES

31. FOR THE AREA ALONG THE EAST SIDE OF METRO PARKWAY BETWEEN STATION 23+94 AND STATION 31+63 CONTAINED WITHIN THE PERMANENT EASEMENT LIMITS, THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE FOLLOWING ITEMS OF WORK:


- A. PROVIDE WRITTEN NOTICE TO PROPERTY OWNER A MINIMUM OF TWO WEEKS PRIOR TO COMMENCING WORK IN THIS AREA. THE PROPERTY OWNER'S CONTACT INFORMATION IS:

JOHN FOX, SENIOR MANAGER - OPERATIONS & FACILITIES  
 CHICO'S RETAIL SERVICES, INC.  
 11215 METRO PARKWAY  
 FORT MYERS, FL 33966

- B. REMOVAL AND DISPOSAL OF TREES, SHRUBS, AND OTHER VEGETATION, INCLUDING STUMPS AND ROOTS TO A DEPTH OF 4' BELOW EXISTING GROUND SURFACE AS INDICATED ON THE PLANS AND QUANTIFIED BELOW:

VEGETATION TYPE	QUANTITY TO BE REMOVED
OAK	15
VIBURNUM	17
OLEANDER	2
SAW PALMETTO	29
ALLAMANDA	14
SABAL PALM	7
COCOPLUM	5
FAKAHATCHEE GRASS	14
SAGO	3
INDIAN HAWTHORN	7

- C. RE-GRADING AND PREPARING THE DISTURBED AREA FOR THE PROPERTY OWNER TO INSTALL NEW LANDSCAPING AFTER THE NEW WATER MAIN INSTALLATION HAS BEEN COMPLETED
- D. REMOVAL, REPLACEMENT, AND RE-ALIGNMENT OF A PORTION OF THE EXISTING WROUGHT IRON AND CHAIN LINK FENCE FROM STATION 31+30 TO STATION 31+58 AS INDICATED ON THE PLANS



**GREELEY AND HANSEN**  
 5252 SUMMERLIN COMMONS WAY, SUITE 104  
 FORT MYERS, FLORIDA 33907  
 CERTIFICATE OF AUTHORIZATION NO. 37

DESIGNED	BRG
DRAWN	RAM
CHECKED	GCF

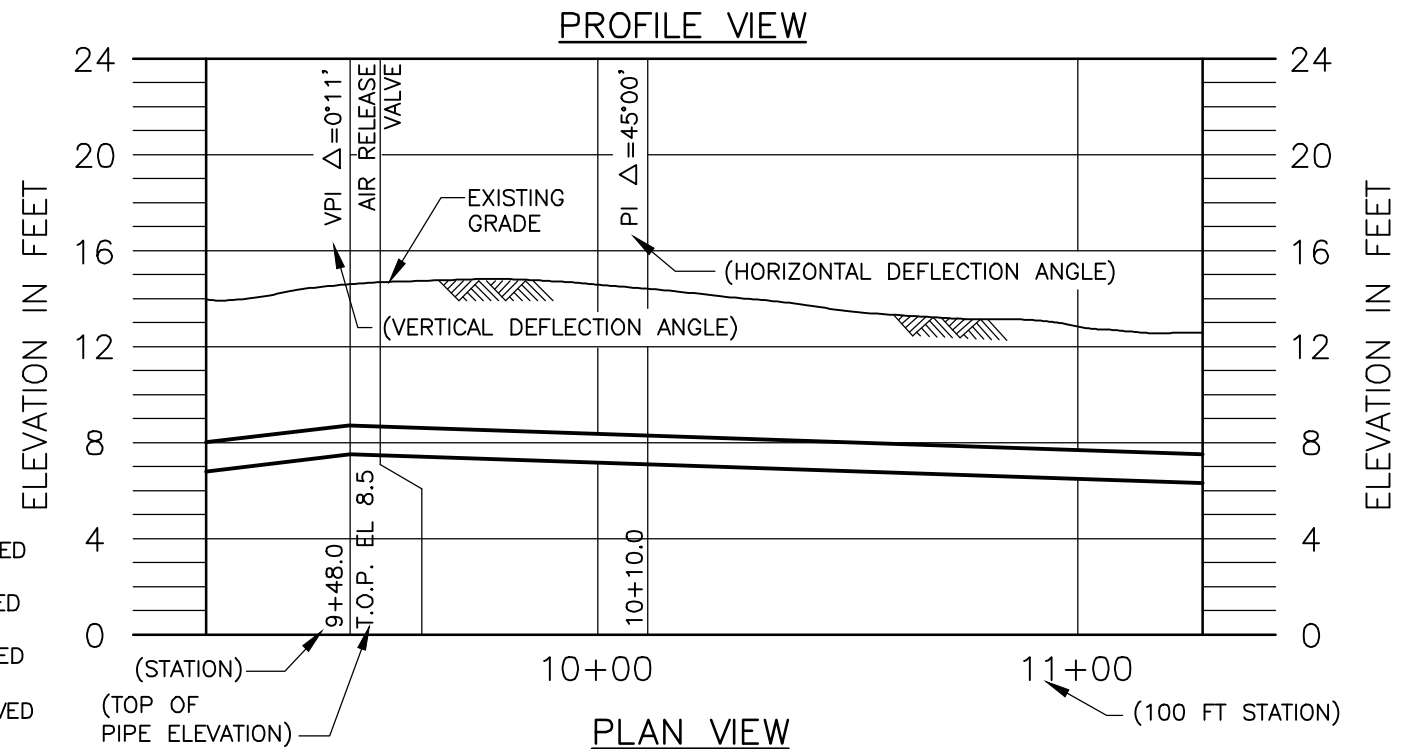
NO.	DATE	APPD	REVISION
P.E. NAME: GARY C. FERRANTE		P.E. NO. 65011	
P.E. NAME: _____		DATE: _____	

LEE COUNTY UTILITIES DEPARTMENT  
 PAGE PARK WATER MAIN IMPROVEMENTS PHASE 1  
 GENERAL  
 GENERAL NOTES

FILE: 05208\_G03  
 DWG. **G3** 3 OF 32  
 DATE MAY 2017

# SURVEY LEGEND & ABBREVIATIONS

<ul style="list-style-type: none"> <li>● CP 1 ▲ CP 1 CONTROL POINT</li> <li>□ FOUND CONCRETE MONUMENT</li> <li>○ FOUND IRON ROD</li> <li>△ FOUND NAIL &amp; DISK</li> <li>○ BOLLARD</li> <li>▵ MITERED END SECTION</li> <li>▩ CATCH BASIN</li> <li>⊙ STORM SEWER MANHOLE</li> <li>⊞ ELECTRIC MISCELLANEOUS</li> <li>⊞ IGE IN-GROUND ELECTRIC BOX</li> <li>⊞ ESB ELECTRIC SERVICE BOX</li> <li>⊞ FLEP UNDERGROUND ELECTRIC FLAG/MARK</li> <li>⊞ FOC IN-GROUND FIBER OPTIC BOX</li> <li>⊞ TEL UNDERGROUND TELEPHONE FLAG/MARK</li> <li>⊞ T TELEPHONE RISER</li> <li>⊞ FO FIBER OPTIC CABLE POST</li> <li>⊞ C CABLE TELEVISION RISER</li> <li>⊞ TSCB TRAFFIC SIGNAL BOX</li> <li>⊞ CONCRETE UTILITY POLE</li> <li>⊞ WOOD UTILITY POLE</li> <li>⊞ METAL UTILITY POLE</li> <li>⊞ GUY ANCHOR</li> <li>⊞ LIGHT POLE</li> <li>⊞ TS TRAFFIC SIGNAL POLE</li> <li>⊞ XS PEDESTRIAN SIGNAL POLE</li> <li>⊞ S SANITARY SEWER MANHOLE</li> <li>⊞ SV SEWER VALVE</li> <li>⊞ SEWER FLAG/PAINT MARK</li> <li>⊞ SEWER CLEANOUT</li> <li>⊞ C/O WATER VALVE</li> <li>⊞ WY WATER FLAG/PAINT MARK</li> <li>⊞ WM WATER METER</li> <li>⊞ FIRE HYDRANT</li> <li>⊞ B.F.A. BACK FLOW ASSEMBLY</li> <li>⊞ W WELL</li> <li>⊞ IRRIGATION VALVE</li> </ul>	<ul style="list-style-type: none"> <li>⊙ FIRE ASSEMBLY</li> <li>⊞ GAS WARNING POST</li> <li>⊞ GAS FLAG/PAINT MARK</li> <li>⊞ SIGN</li> <li>⊞ MB MAILBOX</li> <li>⊞ SPOT ELEVATION (HARD SURFACE)</li> <li>⊞ SPOT ELEVATION (SOFT SURFACE)</li> <li>⊞ SHRUB</li> <li>⊞ MISC TREE</li> <li>⊞ OAK TREE</li> <li>⊞ PINE TREE</li> <li>⊞ PALM TREE</li> <li>BM BENCHMARK</li> <li>CMP CORRUGATED METAL PIPE</li> <li>C.R. COUNTY ROAD</li> <li>S.R. STATE ROAD</li> <li>R/W RIGHT-OF-WAY</li> <li>O.R. OFFICIAL RECORD BOOK</li> <li>(D) DEED</li> <li>(P) PLAT</li> <li>(M) MEASURED</li> <li>RCP REINFORCED CONCRETE PIPE</li> <li>CONC CONCRETE</li> <li>ASPH ASPHALT</li> <li>INV INVERT</li> <li>ELEV ELEVATION</li> <li>-OHW- OVERHEAD WIRES</li> <li>-TOE- TOE OF SLOPE</li> <li>-TOB- TOP OF BANK</li> <li>-STORM- STORM PIPE</li> <li>-EOV- EDGE OF VEGETATION</li> <li>-SS- SANITARY SEWER LINE</li> <li>⊞ FENCE</li> <li>⊞ ASPHALT &amp; CONCRETE WALK/PAD</li> <li>⊞ B1 SOIL BORING (SEE GEOTECHNICAL REPORT)</li> <li>⊞ UNDERGROUND UTILITY MARKER</li> </ul>	<ul style="list-style-type: none"> <li>⊞ SHRUB TO BE REMOVED</li> <li>⊞ MISC TREE TO BE REMOVED</li> <li>⊞ OAK TREE TO BE REMOVED</li> <li>⊞ PINE TREE TO BE REMOVED</li> <li>⊞ PALM TREE TO BE REMOVED</li> </ul>	
---	---	--	--



EXISTING	DESCRIPTION	EXISTING	DESCRIPTION
---	CENTER LINE	— x — x —	CHAIN LINK FENCE
— R/W — R/W —	R/W LINE	— RCW —	RECLAIMED WATER MAIN
— PL —	PROPERTY LINE	— UU — UU — UU —	UNKNOWN BURIED UTILITY
---	EASEMENT	— OHW — OHW — OHW —	OVERHEAD WIRE
— GAS —	GAS LINE	— TOB —	TOP OF BANK
— STORM — STORM — STORM —	STORM SEWER	— W — W — W — W — W —	WATER MAIN (TO REMAIN)
— SS — SS — SS —	SANITARY SEWER < 24"	---	WATER MAIN (CAP, GROUT AND ABANDON)
— FM — FM — FM — FM —	FORCE MAIN	⊞	FIRE HYDRANT ASSEMBLY (INCLUDES VALVE & TEE)
— COMM — COMM —	U/G COMMUNICATION CONDUITS	— W — W — W — W — W —	WATER VALVE
PROPOSED	DESCRIPTION	PROPOSED	DESCRIPTION
---	EASEMENT	.....	WATER MAIN (BY HDD)
— 10+00 —	WATER MAIN AND STATION	— W — W — A — W — W —	AIR RELEASE VALVE
— W — W — W — W —	WATER MAIN IN CASING	— W — W — WV — W — W —	WATER VALVE
⊞	FIRE HYDRANT ASSEMBLY (INCLUDES VALVE & TEE)	— W — W — WM — W — W —	WATER METER
— W — W — W — W —	WATER SERVICE LINE	— W — W — W — W — W —	WATER REDUCER
▨	OPEN CUT & REPAIR		

**GREELEY AND HANSEN**  
 5252 SUMMERLIN COMMONS WAY, SUITE 104  
 FORT MYERS, FLORIDA 33907  
 CERTIFICATE OF AUTHORIZATION NO. 37


DESIGNED	BRG	P.E. NAME:	GARY C. FERRANTE	P.E. NO.
DRAWN	RAM	P.E. NAME:		
CHECKED	GCF	DATE:		

LEE COUNTY UTILITIES DEPARTMENT  
 PAGE PARK WATER MAIN IMPROVEMENTS PHASE 1  
 GENERAL  
 LEGEND

FILE: 05208\_G04  
 DWG. **G4** 4 OF 32  
 DATE MAY 2017

UNDERGROUND UTILITIES LOCATION INFORMATION					
POINT NUMBER	NORTHING	EASTING	DESCRIPTION AS WRITTEN ON STAKE BY EARTHVIEW, LLC	GROUND ELEVATION	ELEVATION ON TOP OF UNDERGROUND UTILITY
8107	816885.5	700651.8	46" TOP 6-8" UNKNOWN	12.7'	8.9'
8109	816922.8	700681.7	12" 3/4" GAL METAL W.S.	12.2'	11.2'
8111	816938.2	700687.4	31" STEEL WM 6" BLACK	13.0'	10.4'
8113	816928.1	700700.3	41" TOP 6-8", 6" WM	12.2'	8.8'
8115	817059.1	701213.7	25" TOP 8" STEEL WM	13.0'	10.9'
8117	817015.3	701274.0	20" TOP 6" STEEL WM	12.8'	11.1'
8119	817068.5	701419.8	32" TOP 1" BLK COMM	13.2'	10.5'
8121	817070.9	701420.5	28" TOP ORG COMM	13.0'	10.7'
8123	817070.1	701432.3	20" TOP CONCRETE POUR ENCASEMENT	13.0'	11.3'
8125	817073.9	701438.9	20" TOP BLUE PVC PIPE 1"	12.6'	11.0'
8127	817004.1	701812.4	43" TOC BLK COM	13.1'	9.5'
8129	817002.8	701812.7	32" TOCK BLK COMM	13.2'	10.5'
8131	816978.6	701838.4	18" TOC BLK COMM	13.0'	11.5'
8133	817016.3	701899.4	40" TOP W.M. 6"	13.5'	10.2'
8135	817015.9	701899.6	30" TOC COMM BLACK 1"	13.7'	11.2'
8137	817013.8	701899.3	15" TOC COMM BLK	13.5'	12.2'
8139	817012.3	701899.9	31" TOC BLK COMM	13.5'	10.9'
8141	817011.6	701900.2	23" TOC 1 1/4" COMM	13.4'	11.5'
8143	816968.1	702252.0	WM 37" TOP BLUE 8" PVC	14.0'	10.9'
8145	816723.0	702420.4	12" TOP 3/4" PVC W/S	14.0'	13.0'
8147	816694.0	702423.6	29" TOC 1" BLACK COMM	13.6'	11.2'
8149	816693.2	702426.5	27" TOC 1 1/4" BLACK COMM	13.7'	11.4'
8151	816694.1	702432.3	20" TOP 6" CAST WM	13.9'	12.3'
8153	816591.1	702505.7	20" TOP 1" BLACK COM CABLE	14.1'	12.4'
8155	816549.1	703028.1	COMM 23" TOC BLACK 1" CABLE	13.9'	12.0'
8157	816543.6	703042.5	BLACK CABLE TOC 37" 1" COMM	13.9'	10.8'
8159	816525.8	703053.6	31" TOP SLEEVE STEEL 1" COMM	14.0'	11.4'
8161	816513.0	703048.1	30" TOC BLACK 1" CABLE	13.8'	11.3'
8163	816511.7	703051.7	18" TOP 1" BLACK 1" CABLE	13.9'	12.4'
8165	816513.4	703054.9	14" TOP 8" PVC WHT WM	14.0'	12.9'
8167	816513.5	703056.5	28" TOP STEEL CASING	14.0'	11.7'
8170	816521.0	703097.5	COMM TOP 19"	13.7'	12.1'
8172	816525.3	703098.2	COMM TOP 17"	13.8'	12.4'
8174	816525.8	703098.4	COMM TOP 19"	13.8'	12.3'
8176	816526.0	703098.4	32" TOP SLEEVE STEEL TOC COMM CASING	13.8'	11.2'
8178	816542.3	703753.4	28" TOP 3-2 GRAY PVC TRAFFIC SIG	14.5'	12.2'
8180	816547.5	704014.2	33" TOP 22" RCP STORM DRAIN	14.9'	12.1'
8182	816553.2	704058.2	20" TOP 2" PVC GRAY COMM	16.1'	14.4'
8184	816556.8	704062.1	19" TOC 2" GRAY PVC/COMM	16.4'	14.8'
8187	816614.2	704084.0	7'3" TOP YELLOW GAS LINE	15.4'	8.1'
8189	816613.5	704076.7	9' TOP S.S. 8" PVC	14.3'	5.3'
8191	816613.3	704068.3	21" TOP 2 1/2" BLK PVC COMM	15.0'	13.3'
8195	816583.4	703209.9	33" TOP 1" ORANGE COMM	13.3'	10.5'
8376	817635.5	704059.5	102" TOP GREEN PVC S.S.	15.5'	7.0'
8396	816585.0	704181.9	6' TOP BLUE PVC W.M.	16.0'	10.0'
8398	816585.1	704183.0	4' TOP GRAY 2" PVC	15.8'	11.8'
8400	816585.3	704186.6	11' TOP 24" GREEN PVC S.S.	15.7'	4.7'
8402	817498.8	704167.3	6' TOP BLUE PVC W.M.	13.5'	7.5'
8404	817499.3	704171.6	6' TOP 24" GREEN PCV S.S.	12.9'	6.9'
8412	817542.8	704170.6	102" TOP 24" GREEN PVC S.S.	15.3'	13.3'
8414	817601.2	704210.5	5 1/2' TOP BLUE PVC F.H.	15.4'	9.9'
8416	817628.6	704169.1	5 1/2' TOP BLUE PVC W.M.	14.2'	8.7'
8487	816550.0	700012.2	54" TOP COMM	12.2'	7.7'
8488	816549.7	700015.6	37" TOP 1-1/2-2" UNKOWN	12.2'	9.1'
8489	816540.9	700023.7	40" TOP 4" STEEL UNKOWN	12.1'	8.8'
8490	816538.8	700037.8	36" TOP COM. CABLE	12.2'	9.2'
8491	816539.4	700039.3	33" TOP COM. CABLE	12.3'	9.5'
8492	816526.2	700047.8	31" TOP 1.25" PVC COMM	12.5'	9.9'
8493	816544.0	700045.3	23" TOP COM CABLE	12.5'	10.6'
8494	816544.2	700046.1	48" TOP COM CABLE	12.5'	8.5'
8495	816533.9	700053.2	20" TOP 2" BLUE PVC W.M.	12.5'	10.9'
8505	816557.4	700108.7	4'5" COMCABLE	12.5'	8.1'
8506	816572.8	700104.1	45" TOP WTR SERV. 3/4" - 1"	12.4'	8.7'
8507	816575.8	700109.0	43" TOP WTR SERV. 3/4" - 1"	12.5'	8.9'

PROJECT CONTROL POINT INFORMATION				
POINT NUMBER	DESCRIPTION	NORTHING	EASTING	ELEVATION
CP1	SET 5/8" IRON ROD & CAP STAMPED "EF GAINES REF PT LS 4576"	816558.34	699714.57	12.3'
CP2	SET PK NAIL & DISK STAMPED "EF GAINES REF PT LS 4576"	816567.54	700085.08	12.8'
CP3	SET PK NAIL & DISK STAMPED "EF GAINES REF PT LS 4576"	817098.44	700992.22	12.6'
CP4	SET PK NAIL & DISK STAMPED "EF GAINES REF PT LS 4576"	817048.02	701282.82	13.1'
CP5	SET PK NAIL & DISK STAMPED "EF GAINES REF PT LS 4576"	817057.88	701862.50	12.8'
CP6	SET PK NAIL & DISK STAMPED "EF GAINES REF PT LS 4576"	817026.66	702189.60	13.8'
CP7	SET PK NAIL & DISK STAMPED "EF GAINES REF PT LS 4576"	816630.98	702482.88	14.6'
CP8	SET PK NAIL & DISK STAMPED "EF GAINES REF PT LS 4576"	816538.00	703035.89	13.9'
CP9	SET PK NAIL & DISK STAMPED "EF GAINES REF PT LS 4576"	816505.09	703526.64	16.3'
CP10	SET 5/8" IRON ROD & CAP STAMPED "EF GAINES REF PT LS 4576"	816486.18	704079.04	15.7'
CP11	SET 5/8" IRON ROD & CAP STAMPED "EF GAINES REF PT LS 4576"	816910.64	704062.68	15.8'
CP12	SET 5/8" IRON ROD & CAP STAMPED "EF GAINES REF PT LS 4576"	817511.14	704075.42	15.9'
CP13	SET 5/8" IRON ROD & CAP STAMPED "EF GAINES REF PT LS 4576"	817875.60	704072.71	16.1'

 **GREELEY AND HANSEN**  
 5252 SUMMERLIN COMMONS WAY, SUITE 104  
 FORT MYERS, FLORIDA 33907  
 CERTIFICATE OF AUTHORIZATION NO. 37

DESIGNED BRG  
 DRAWN RAM  
 CHECKED GCF

NO.	DATE	APPD	REVISION

P.E. NAME: GARY C. FERRANTE P.E. NO. 65011  
 P.E. NAME: \_\_\_\_\_  
 DATE: \_\_\_\_\_

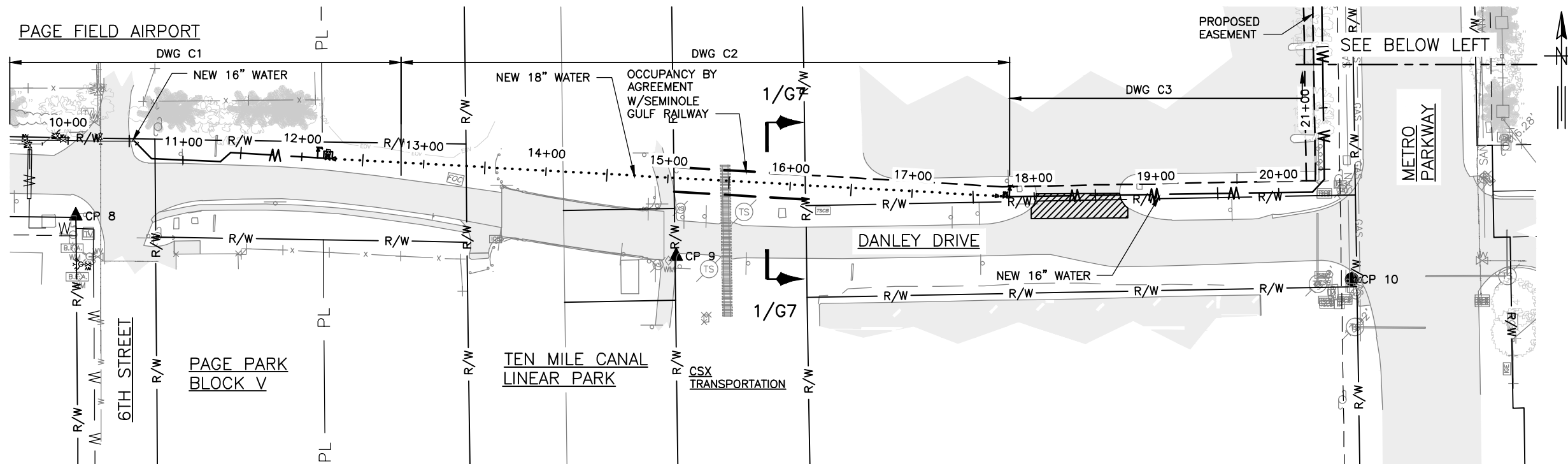
LEE COUNTY UTILITIES DEPARTMENT  
 PAGE PARK WATER MAIN IMPROVEMENTS PHASE 1

GENERAL  
 SUE POINT DESCRIPTIONS

FILE: 05208\_G05

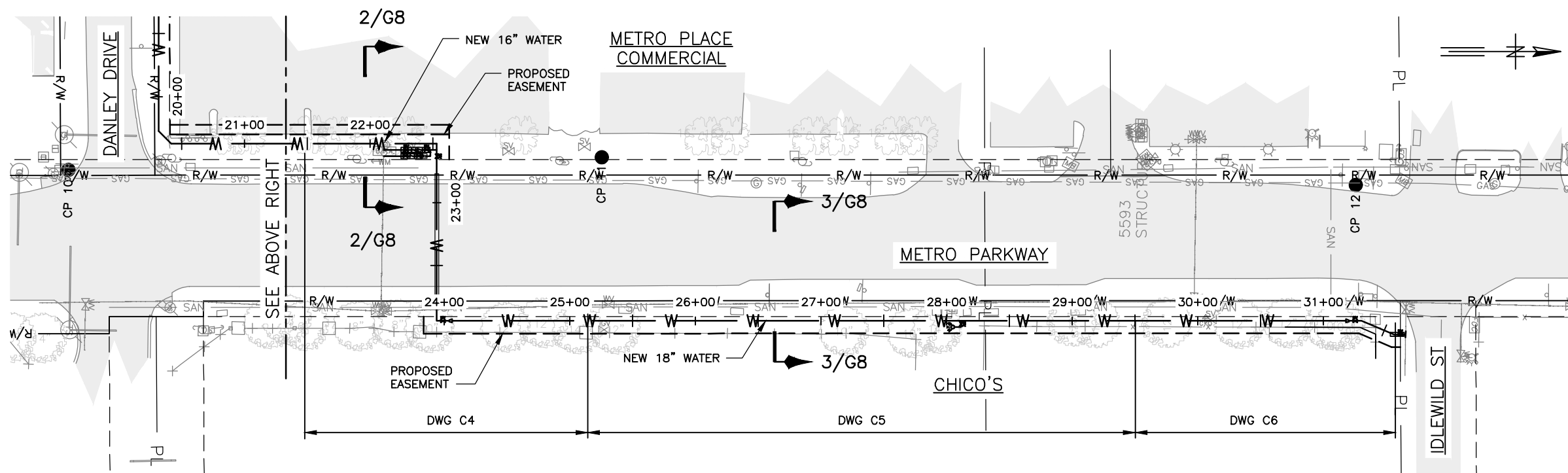
DWG. **G5** 5 OF 32

DATE MAY 2017



**PLAN**

SCALE: 1" = 100'



**PLAN**

SCALE: 1" = 100'

**GREELEY AND HANSEN**  
 5252 SUMMERLIN COMMONS WAY, SUITE 104  
 FORT MYERS, FLORIDA 33907  
 CERTIFICATE OF AUTHORIZATION NO. 37

DESIGNED BRG  
 DRAWN RAM  
 CHECKED GCF

NO.	DATE	APPD	REVISION
P.E. NAME: GARY C. FERRANTE		P.E. NO. 65011	
P.E. NAME:			
DATE:			

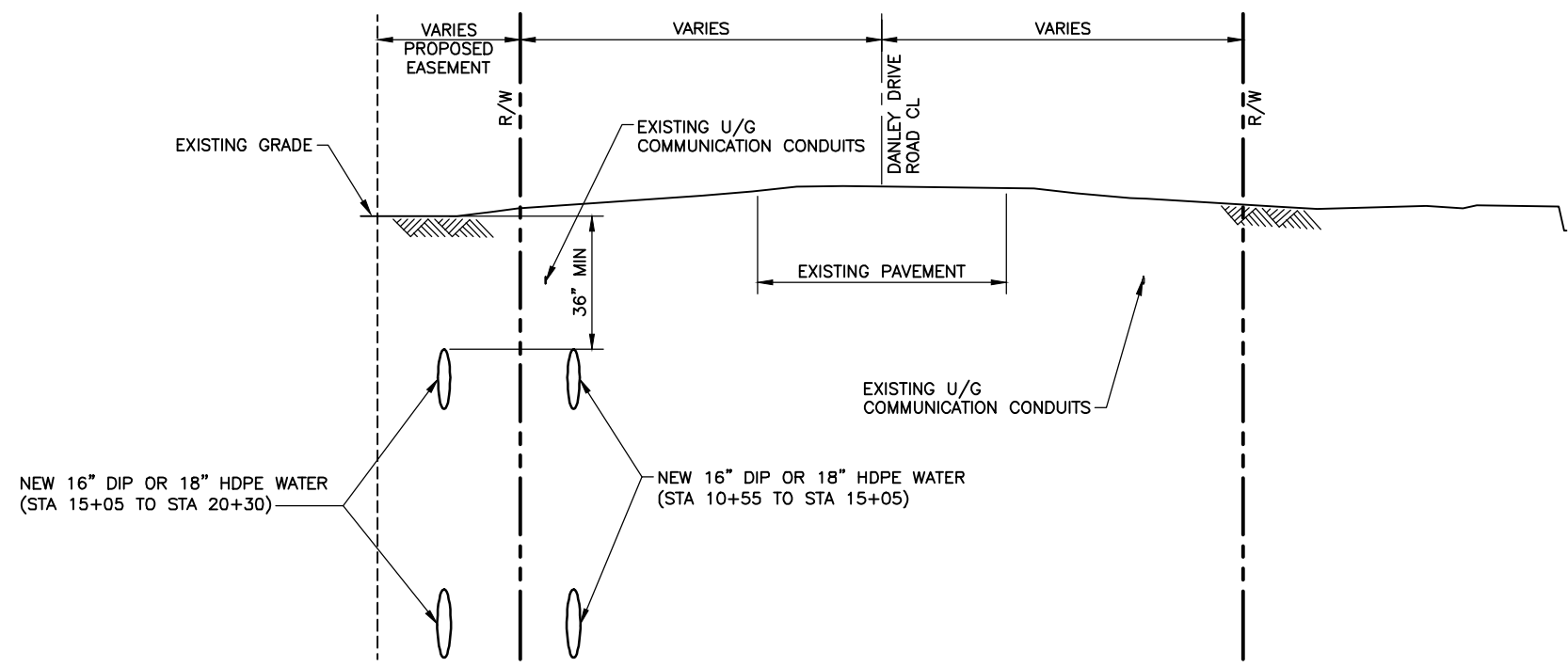
LEE COUNTY UTILITIES DEPARTMENT  
 PAGE PARK WATER MAIN IMPROVEMENTS PHASE 1

GENERAL  
 KEY MAP

FILE: 05208\_G06

DWG. **G6** 6 OF 32

DATE MAY 2017



TYPICAL SECTION 1/G6  
NOT TO SCALE

**GREELEY AND HANSEN**  
5252 SUMMERLIN COMMONS WAY, SUITE 104  
FORT MYERS, FLORIDA 33907  
CERTIFICATE OF AUTHORIZATION NO. 37



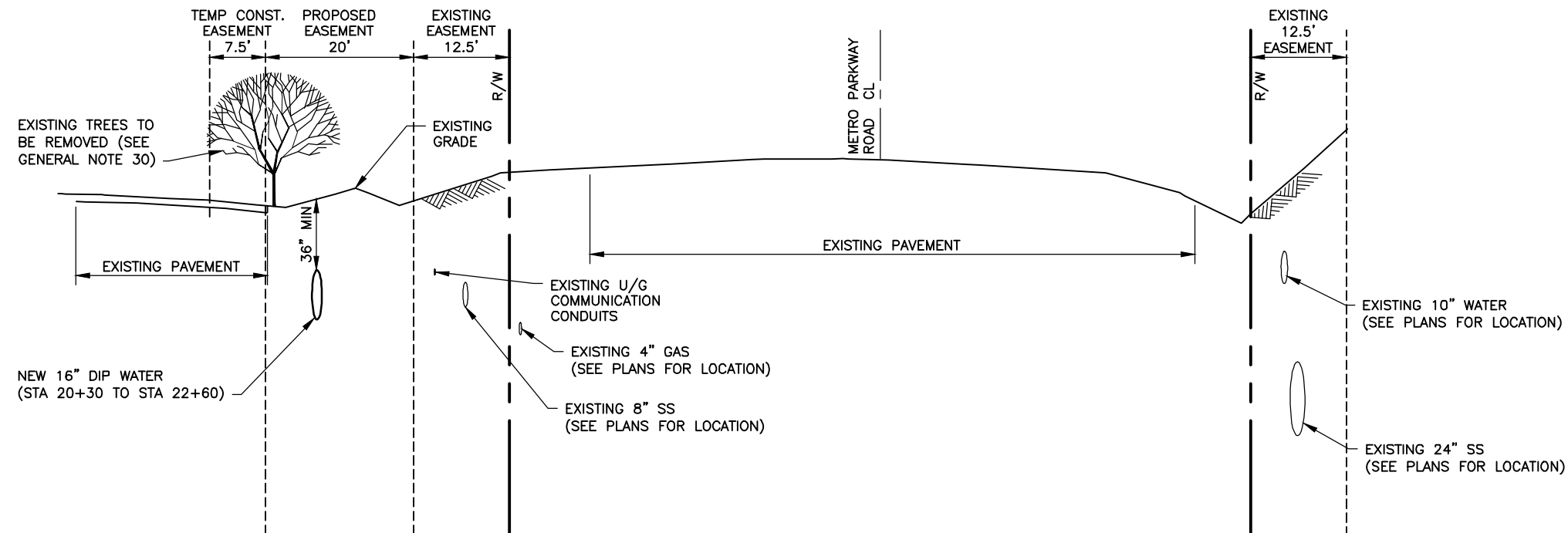
DESIGNED	BRG
DRAWN	RAM
CHECKED	GCF

NO.	DATE	APPD	REVISION
P.E. NAME: GARY C. FERRANTE		P.E. NO. 65011	
P.E. NAME: _____		_____	
DATE: _____		_____	

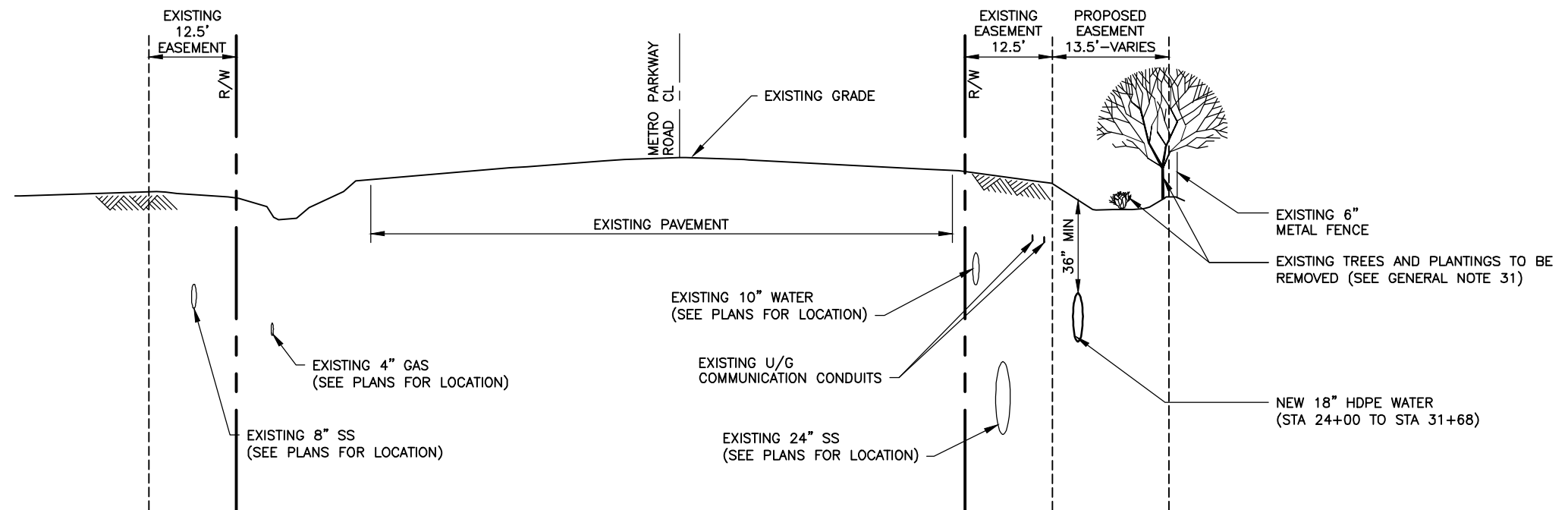
LEE COUNTY UTILITIES DEPARTMENT  
PAGE PARK WATER MAIN IMPROVEMENTS PHASE 1  
GENERAL  
TYPICAL SECTIONS

FILE: 05208\_G07  
DWG. **G7** 7 OF 32  
DATE MAY 2017





TYPICAL SECTION 2/G6  
NOT TO SCALE



TYPICAL SECTION 3/G6  
NOT TO SCALE

**GREELEY AND HANSEN**  
5252 SUMMERLIN COMMONS WAY, SUITE 104  
FORT MYERS, FLORIDA 33907  
CERTIFICATE OF AUTHORIZATION NO. 37



DESIGNED BRG  
DRAWN RAM  
CHECKED GCF

NO.	DATE	APPD	REVISION
P.E. NAME: GARY C. FERRANTE		P.E. NO. 65011	
P.E. NAME: _____		_____	
DATE: _____		_____	

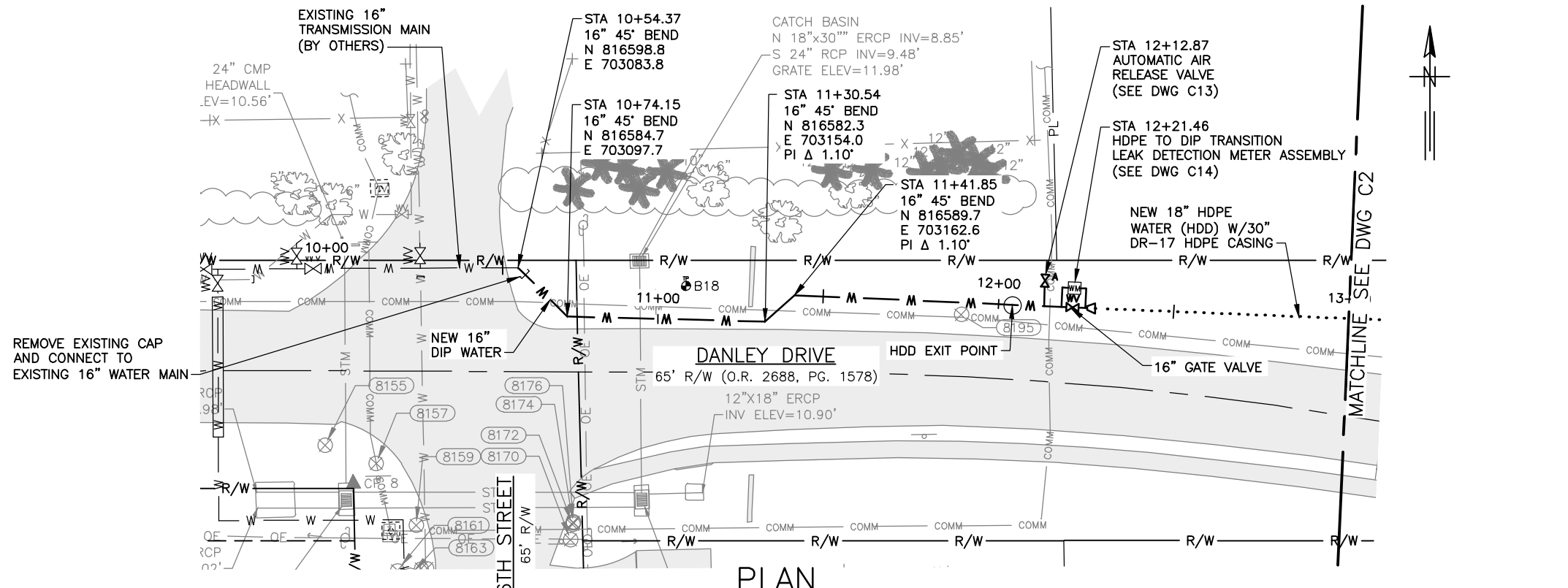
LEE COUNTY UTILITIES DEPARTMENT  
PAGE PARK WATER MAIN IMPROVEMENTS PHASE 1  
PLAN  
TYPICAL SECTIONS

FILE: 05208\_G08

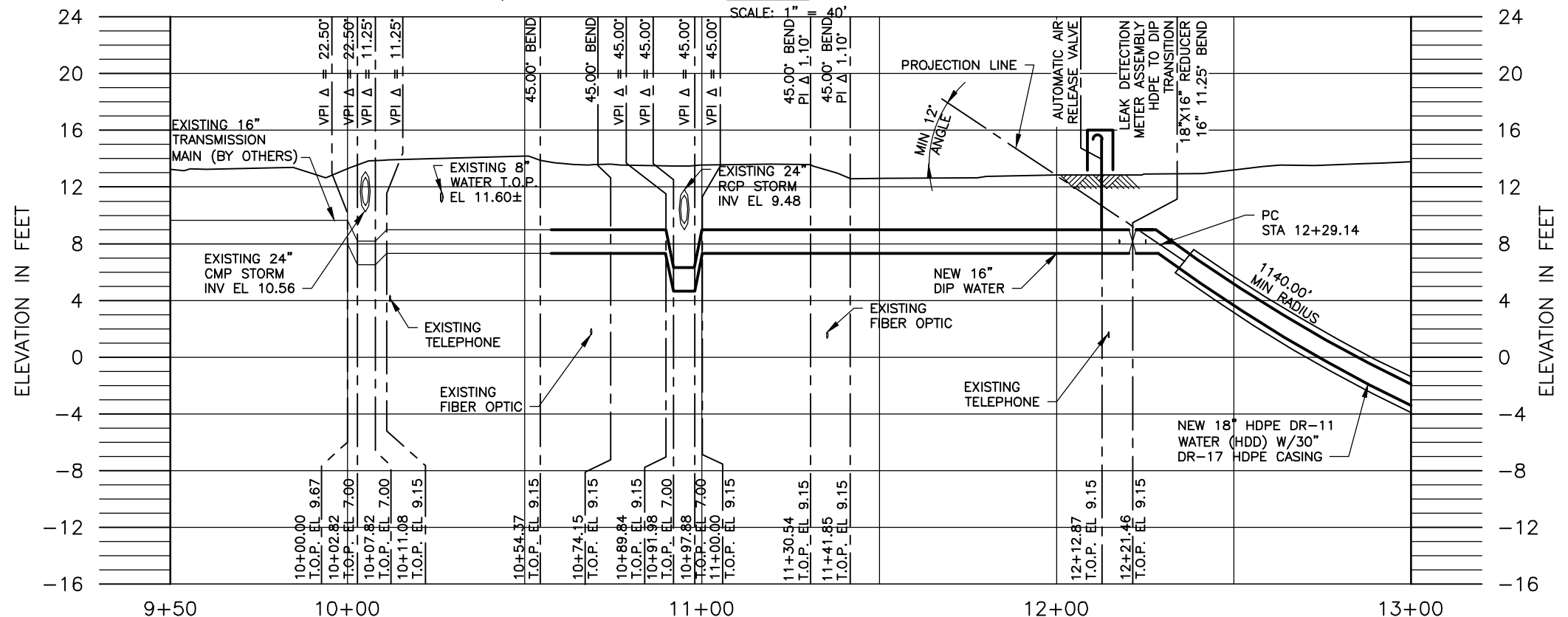
DWG. **G8** 8 OF 32

DATE MAY 2017



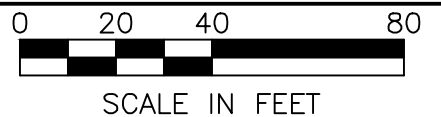


**PLAN**



**PROFILE**

SCALE: 1" = 40' HORIZONTAL  
1" = 8' VERTICAL



DESIGNED	BRG
DRAWN	RAM
CHECKED	GCF

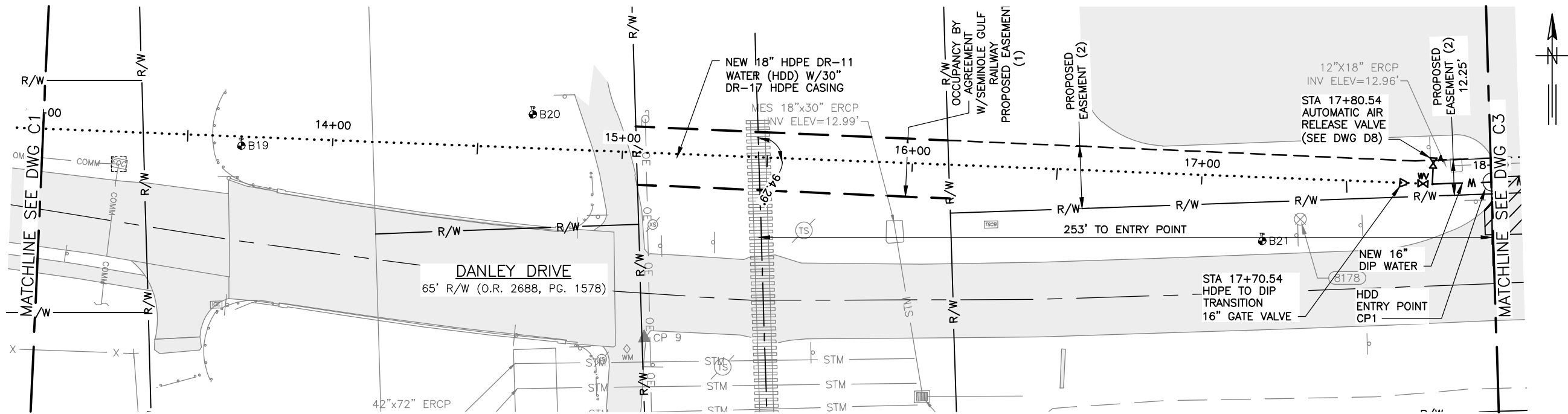
NO.	DATE	APPD	REVISION

P.E. NAME: GARY C. FERRANTE P.E. NO. 65011  
P.E. NAME: \_\_\_\_\_  
DATE: \_\_\_\_\_

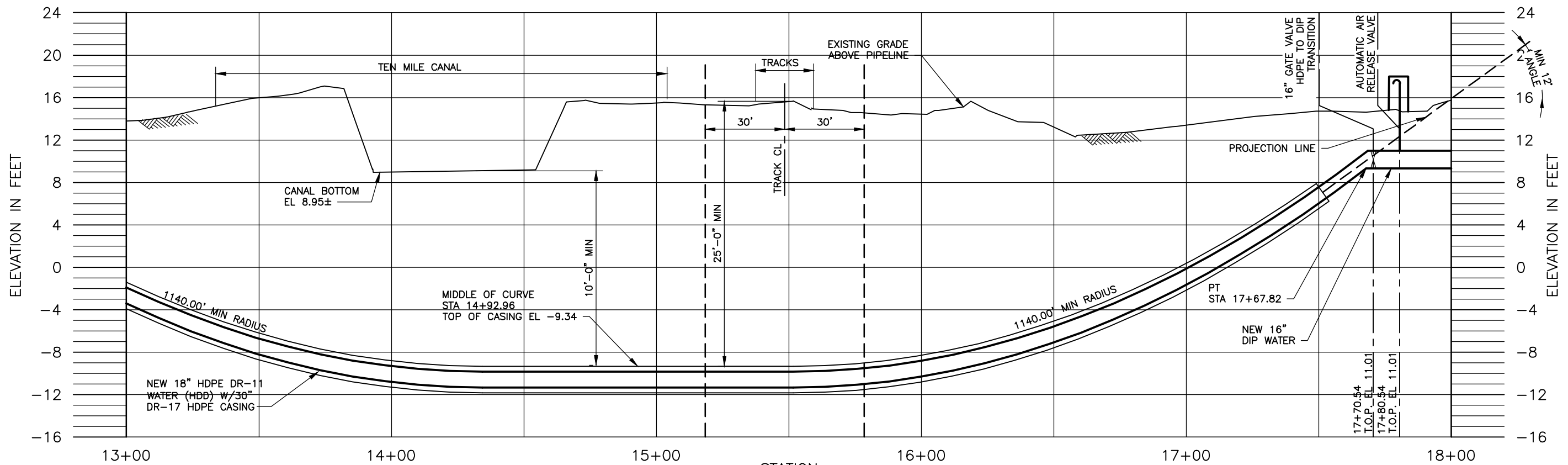
LEE COUNTY UTILITIES DEPARTMENT  
PAGE PARK WATER MAIN IMPROVEMENTS PHASE 1  
CIVIL  
PLAN AND PROFILE  
STA 10+00 TO STA 13+00

FILE: 05208\_C01  
DWG. **C1** 9 OF 32  
DATE MAY 2017

**GREELEY AND HANSEN**  
5252 SUMMERLIN COMMONS WAY, SUITE 104  
FORT MYERS, FLORIDA 33907  
CERTIFICATE OF AUTHORIZATION NO. 37



**PLAN**  
SCALE: 1" = 40'



**PROFILE**  
SCALE: 1" = 40' HORIZONTAL  
1" = 8' VERTICAL

**GREELEY AND HANSEN**  
5252 SUMMERLIN COMMONS WAY, SUITE 104  
FORT MYERS, FLORIDA 33907  
CERTIFICATE OF AUTHORIZATION NO. 37



DESIGNED BRG  
DRAWN RAM  
CHECKED GCF

NO.	DATE	APPD	REVISION

P.E. NAME: GARY C. FERRANTE P.E. NO. 65011  
P.E. NAME: \_\_\_\_\_  
DATE: \_\_\_\_\_

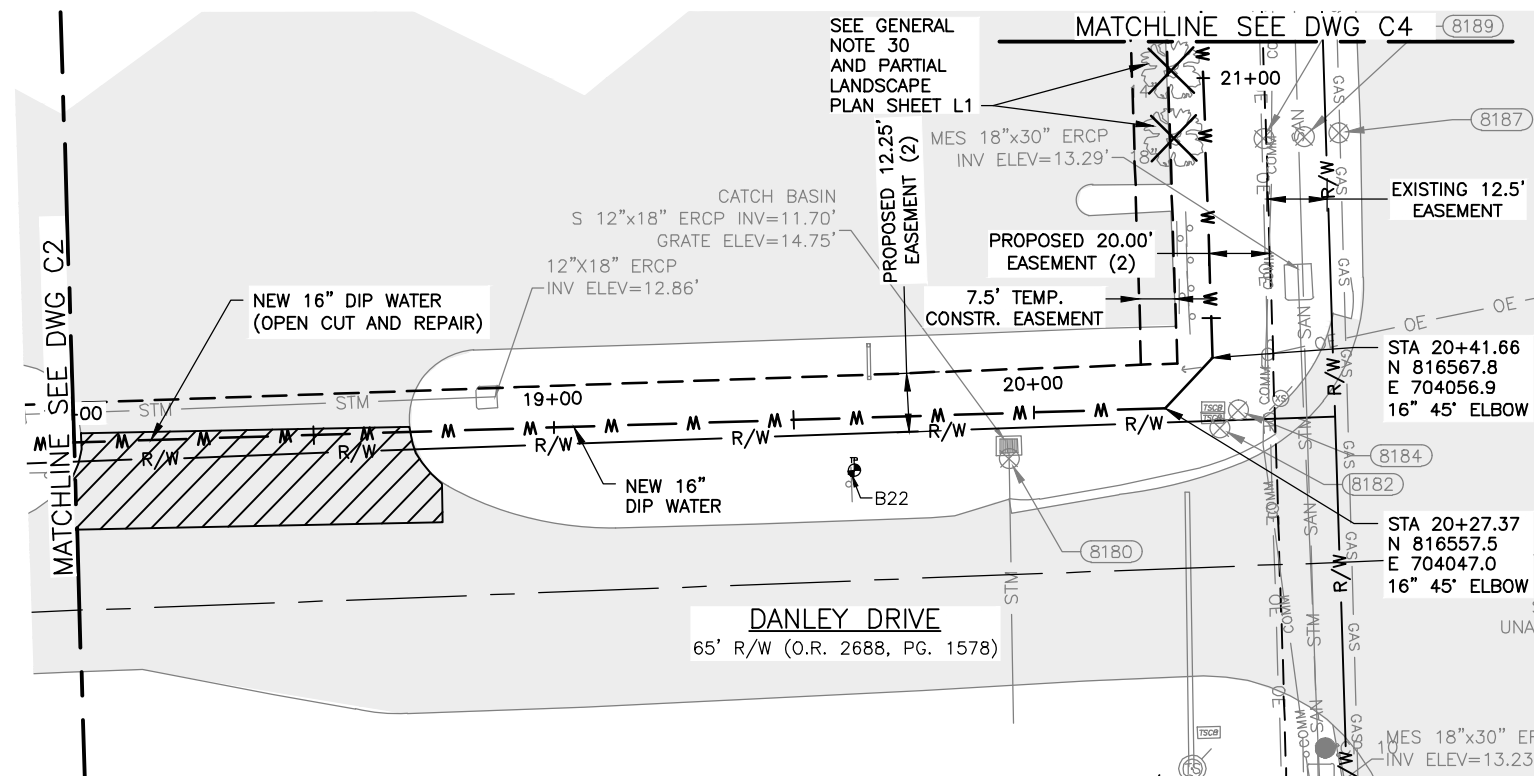
LEE COUNTY UTILITIES DEPARTMENT  
PAGE PARK WATER MAIN IMPROVEMENTS PHASE 1

CIVIL  
PLAN AND PROFILE  
STA 13+00 TO STA 18+00

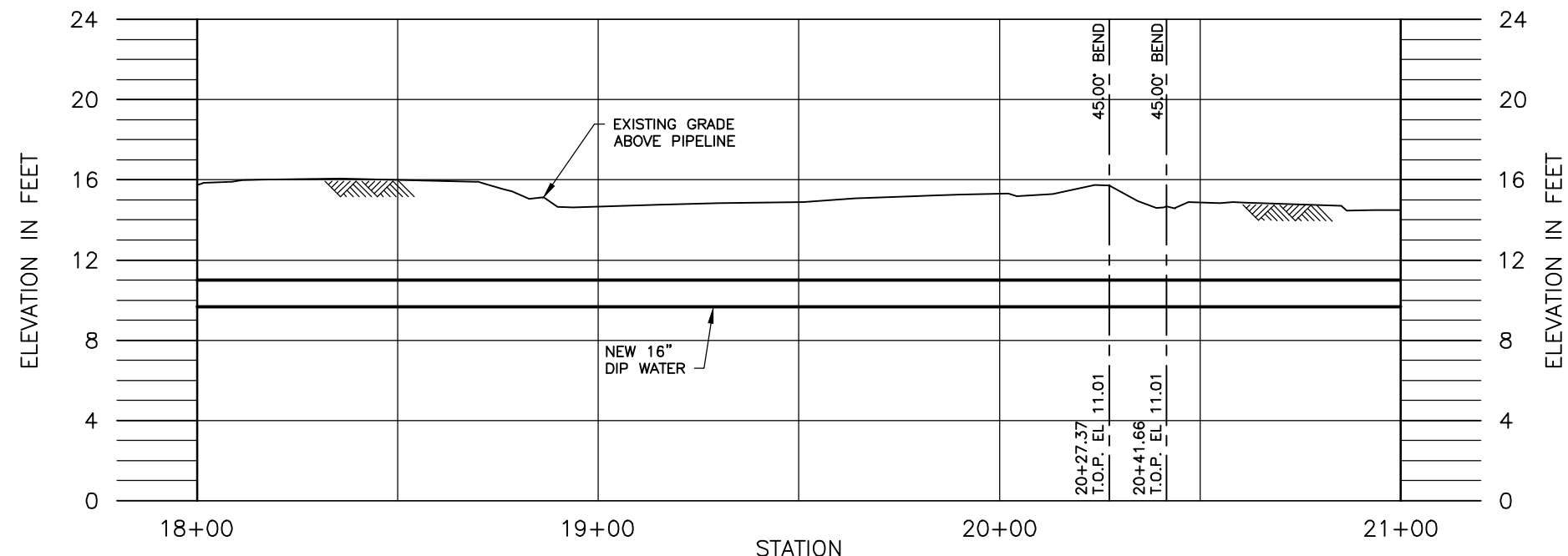
FILE: 05208\_C02

DWG. **C2** 10 OF 32

DATE MAY 2017



**PLAN**  
SCALE: 1" = 40'



**PROFILE**  
SCALE: 1" = 40' HORIZONTAL  
1" = 8' VERTICAL

**GREELEY AND HANSEN**  
5252 SUMMERLIN COMMONS WAY, SUITE 104  
FORT MYERS, FLORIDA 33907  
CERTIFICATE OF AUTHORIZATION NO. 37



DESIGNED BRG  
DRAWN RAM  
CHECKED GCF

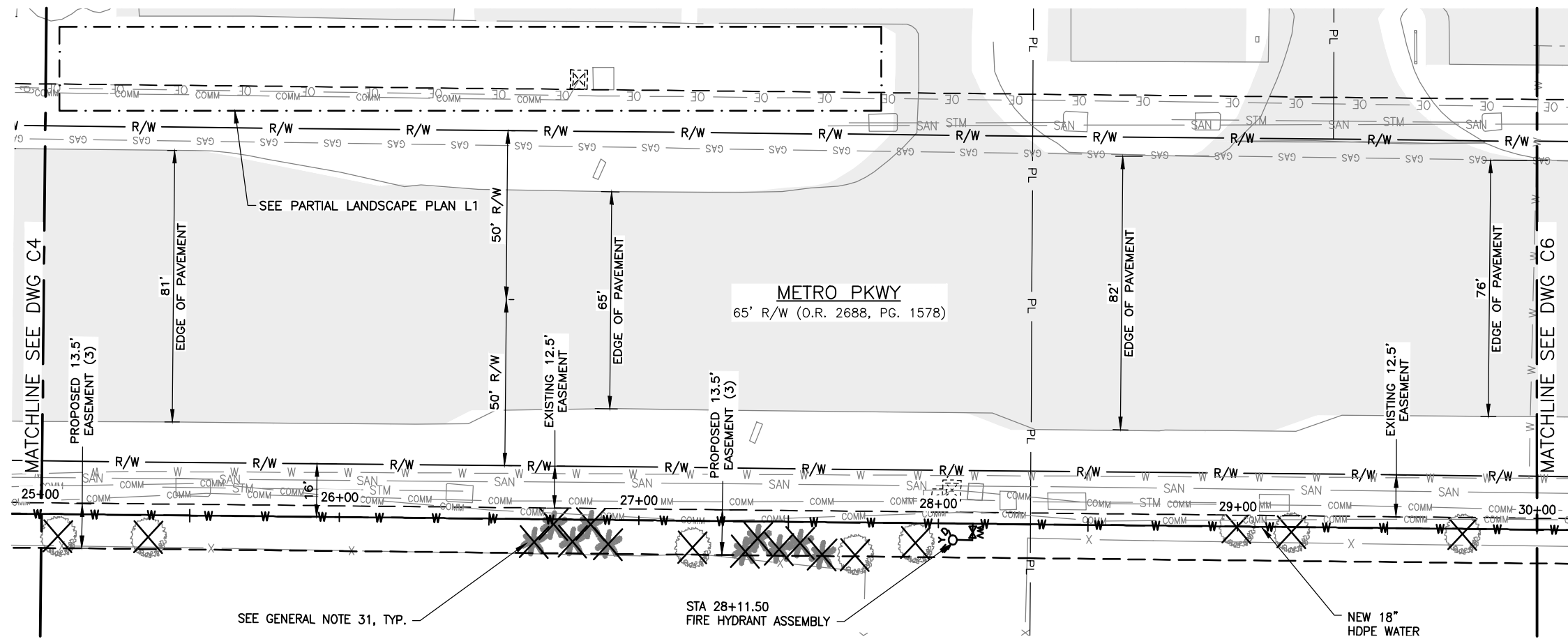
NO.	DATE	APPD	REVISION

P.E. NAME: GARY C. FERRANTE P.E. NO. 65011  
P.E. NAME: \_\_\_\_\_  
DATE: \_\_\_\_\_

LEE COUNTY UTILITIES DEPARTMENT  
PAGE PARK WATER MAIN IMPROVEMENTS PHASE 1  
CIVIL  
PLAN AND PROFILE  
STA 18+00 TO STA 21+00

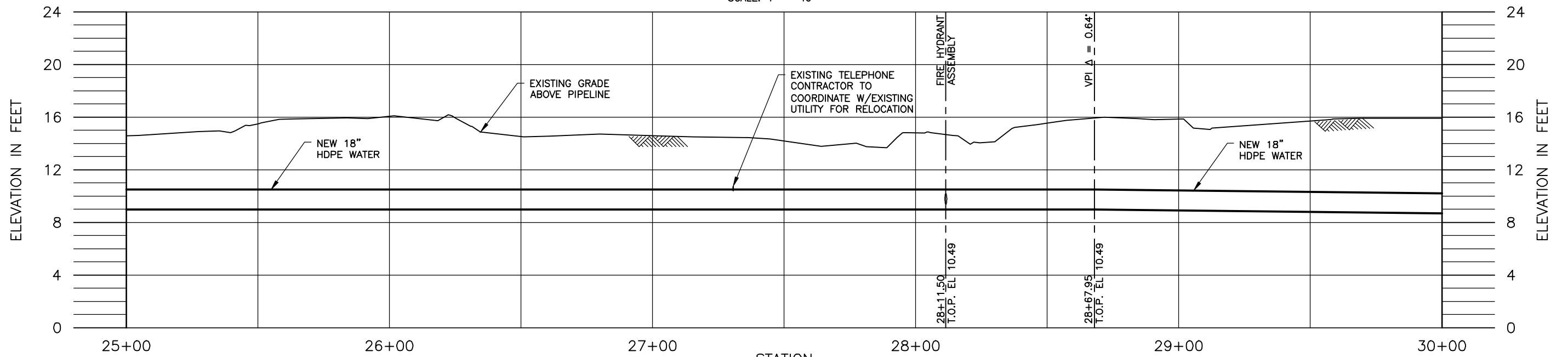
FILE: 05208\_C03  
DWG. **C3** 11 OF 32  
DATE MAY 2017





**PLAN**

SCALE: 1" = 40'



**PROFILE**

SCALE: 1" = 40' HORIZONTAL  
1" = 8' VERTICAL

**GREELEY AND HANSEN**  
5252 SUMMERLIN COMMONS WAY, SUITE 104  
FORT MYERS, FLORIDA 33907  
CERTIFICATE OF AUTHORIZATION NO. 37



DESIGNED BRG  
DRAWN RAM  
CHECKED GCF

NO.	DATE	APPD	REVISION
P.E. NAME: GARY C. FERRANTE		P.E. NO. 65011	
P.E. NAME: _____		DATE: _____	

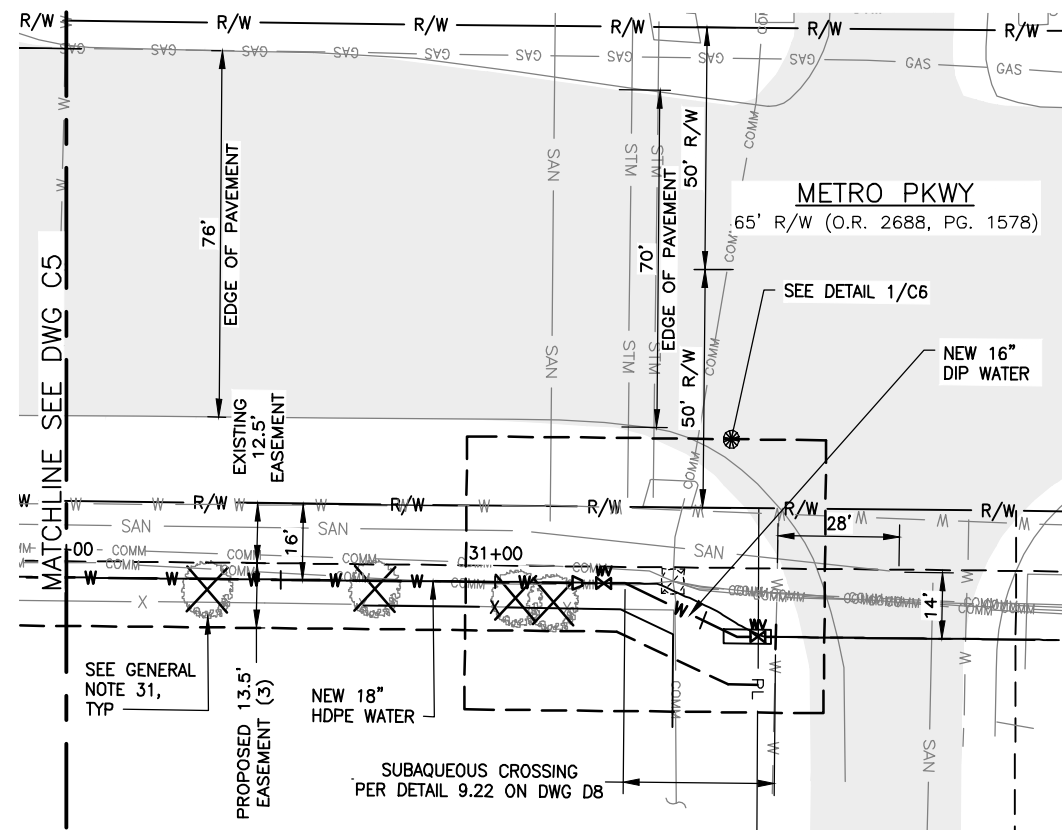
LEE COUNTY UTILITIES DEPARTMENT  
PAGE PARK WATER MAIN IMPROVEMENTS PHASE 1

CIVIL  
PLAN AND PROFILE  
STA 25+00 TO STA 30+00

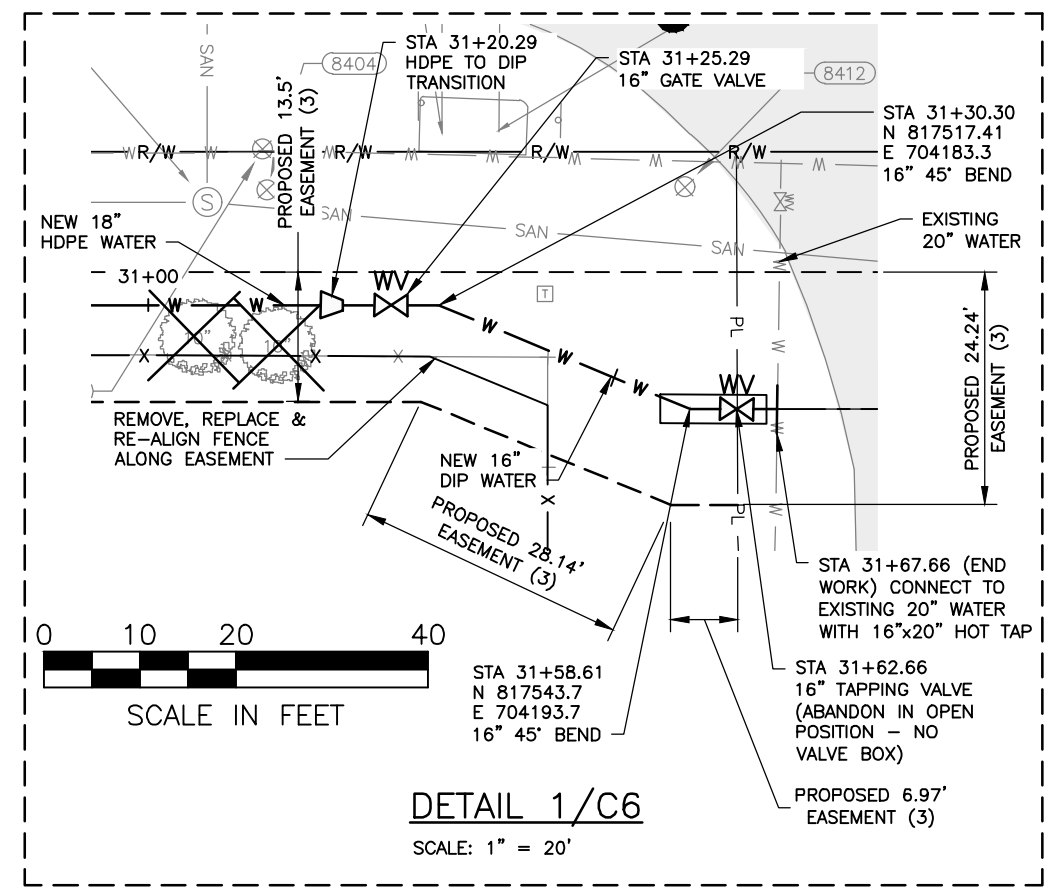
FILE: 05208\_C05

DWG. **C5** 13 OF 32

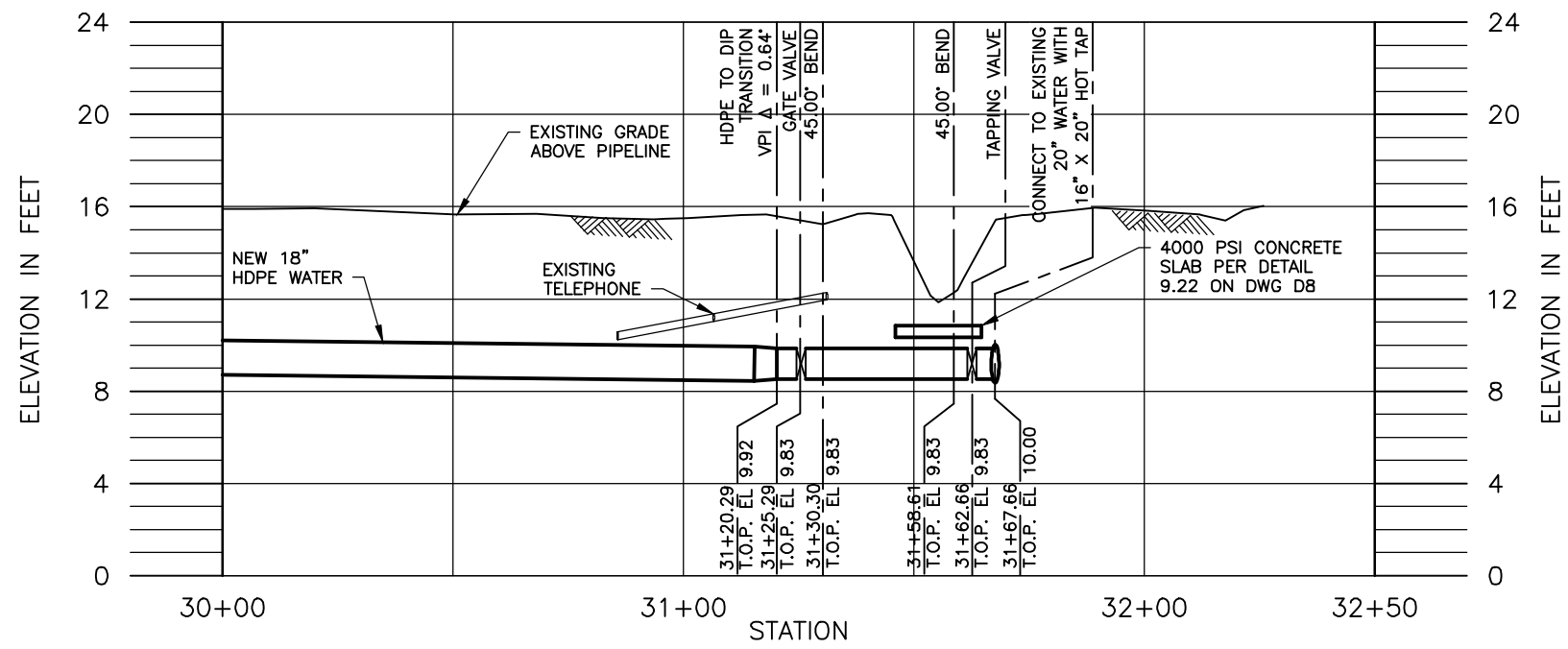
DATE MAY 2017



**PLAN**  
SCALE: 1" = 40'



**DETAIL 1/C6**  
SCALE: 1" = 20'



**PROFILE**  
SCALE: 1" = 40' HORIZONTAL  
1" = 8' VERTICAL

**GREELEY AND HANSEN**  
5252 SUMMERLIN COMMONS WAY, SUITE 104  
FORT MYERS, FLORIDA 33907  
CERTIFICATE OF AUTHORIZATION NO. 37



DESIGNED BRG  
DRAWN RAM  
CHECKED GCF

NO.	DATE	APPD	REVISION

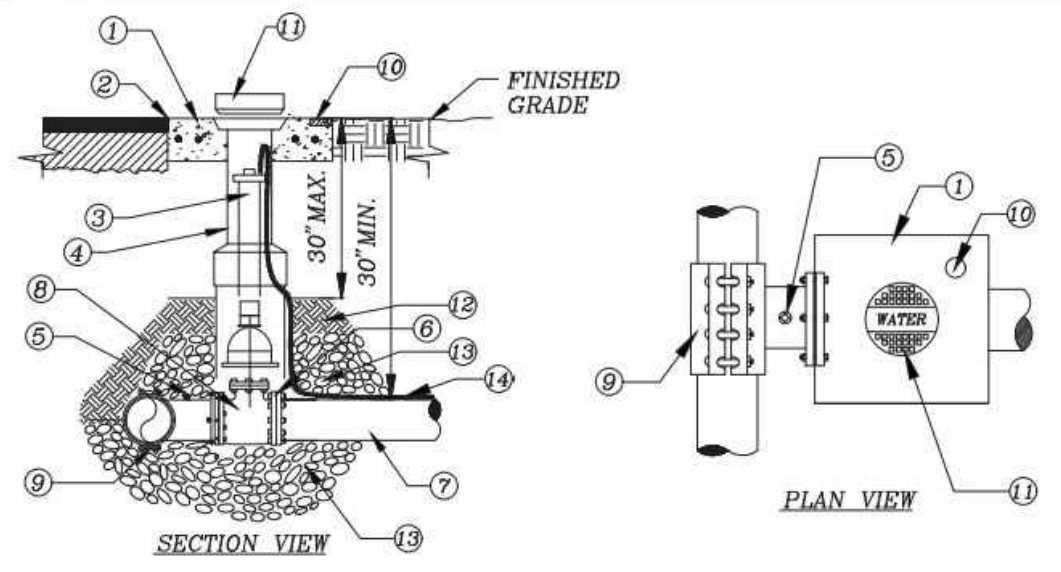
P.E. NAME: GARY C. FERRANTE P.E. NO. 65011  
P.E. NAME: \_\_\_\_\_  
DATE: \_\_\_\_\_

LEE COUNTY UTILITIES DEPARTMENT  
PAGE PARK WATER MAIN IMPROVEMENTS PHASE 1  
CIVIL  
PLAN AND PROFILE  
STA 30+00 TO STA 32+50

FILE: 05208\_C06  
DWG. **C6** 14 OF 32  
DATE MAY 2017

## STANDARD DETAIL NO. 6.1 LEE COUNTY UTILITIES TAPPING SLEEVE AND VALVE

N.T.S.

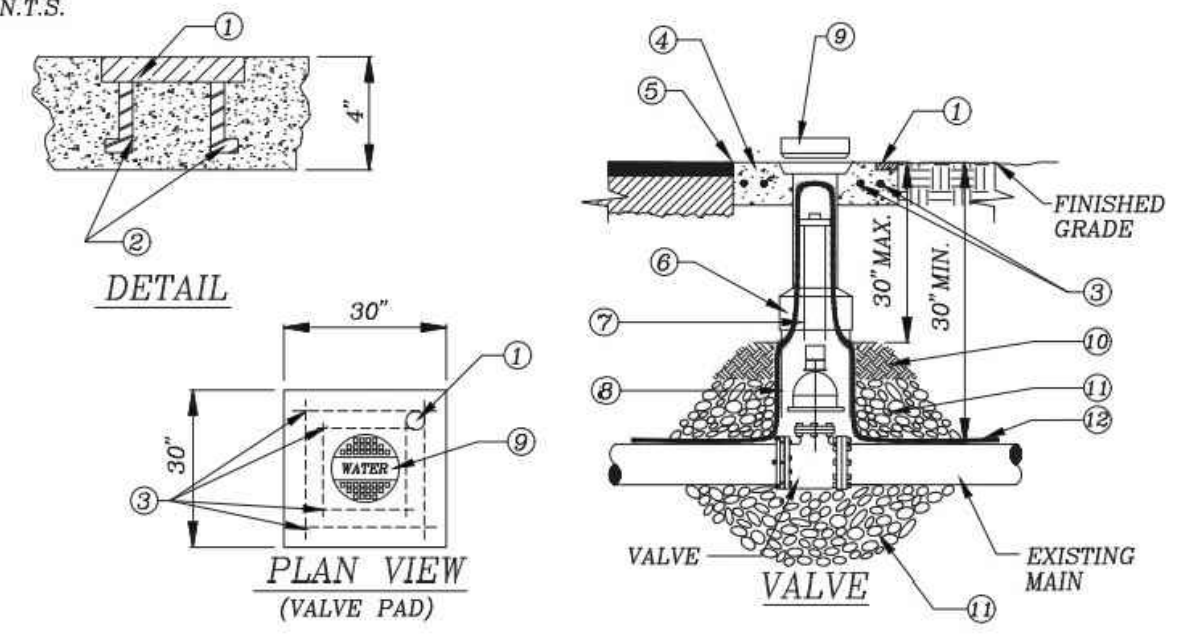


- ① CONCRETE PAD (SEE VALVE INSTALLATION DETAIL)
- ② SET TOP OF BOX FLUSH WITH FINISHED GRADE
- ③ EXTENSION STEM IF TOP OF OPERATING NUT IS MORE THAN 30" BELOW FINISH GRADE
- ④ VALVE BOX (SEE VALVE INSTALLATION DETAIL)
- ⑤ OUTLET FOR TESTING
- ⑥ MJ RESTRAINED
- ⑦ MAIN SIZE VARIES
- ⑧ TAPPING VALVE (SEE VALVE INSTALLATION DETAIL)
- ⑨ LCU APPROVED ALL STAINLESS STEEL PRESSURE RATED TAPPING SLEEVE. FOR SIZE ON SIZE TAPS A FLANGED TAPPING SLEEVE IS REQUIRED. SPRING LOADED TAPPING SLEEVE IS REQUIRED WHEN CONNECTING TO HDPE (SEE APPROVED MATERIAL LIST).
- ⑩ BRASS PLATE (SEE VALVE INSTALLATION DETAIL)
- ⑪ CAST IRON DROP COVER MARKED "WATER", "SEWER", OR "REUSE"
- ⑫ COMPACTED SUITABLE EARTH BACKFILL
- ⑬ 3/4" GRANULAR MATERIAL #57 STONE
- ⑭ 12 GAUGE DOUBLE INSULATED COPPER LOCATING WIRE (SEE LCU STANDARD DETAIL)

REV: 12/10/2015

## STANDARD DETAIL NO. 6.2 LEE COUNTY UTILITIES VALVE INSTALLATION

N.T.S.



- ① BRASS PLATE: SIZE OF VALVE, VALVE TYPE  
No. OF TURNS & DIRECTION TO OPEN  
VALVE M.F.G. & YEAR INSTALL  
SYSTEM "WATER" OR "SEWER" OR "REUSE" OR "FIRE"
- ② ANCHOR
- ③ EIGHT (8) #4 BARS OVERLAP EACH CORNER BY 2"
- ④ 30" SQ X 4" THK. CONC. PAD SURROUNDING BOX, MIN. 3,000 P.S.I. POURED IN PLACE
- ⑤ SET TOP OF BOX FLUSH WITH FINISHED GRADE
- ⑥ HEAVY DUTY TRAFFIC BEARING CAST IRON VALVE BOX, ADJUSTABLE SCREW TYPE, 5 1/4" DIAMETER SHAFT THAT IS LCU APPROVED
- ⑦ EXTENSION STEM WITH 2" OPERATING NUT AS REQUIRED, IF NUT IS MORE THAN 30" BELOW FINISH GRADE
- ⑧ RISER NOT TO BEAR ON VALVE OR PIPE
- ⑨ CAST IRON DROP COVER MARKED "WATER" OR "SEWER" OR "REUSE" OR "FIRE"
- ⑩ COMPACTED SUITABLE EARTH BACKFILL
- ⑪ 3/4" GRANULAR MATERIAL #57 STONE
- ⑫ 12 GAUGE DOUBLE INSULATED COPPER LOCATING WIRE (SEE LCU STANDARD DETAIL)

REV: 12/10/2015

**GREELEY AND HANSEN**  
5252 SUMMERLIN COMMONS WAY, SUITE 104  
FORT MYERS, FLORIDA 33907  
CERTIFICATE OF AUTHORIZATION NO. 37

NO.	DATE	APPD	REVISION
DESIGNED	BRG	P.E. NAME: GARY C. FERRANTE	P.E. NO. 65011
DRAWN	RAM	P.E. NAME: _____	DATE: _____
CHECKED	GCF		

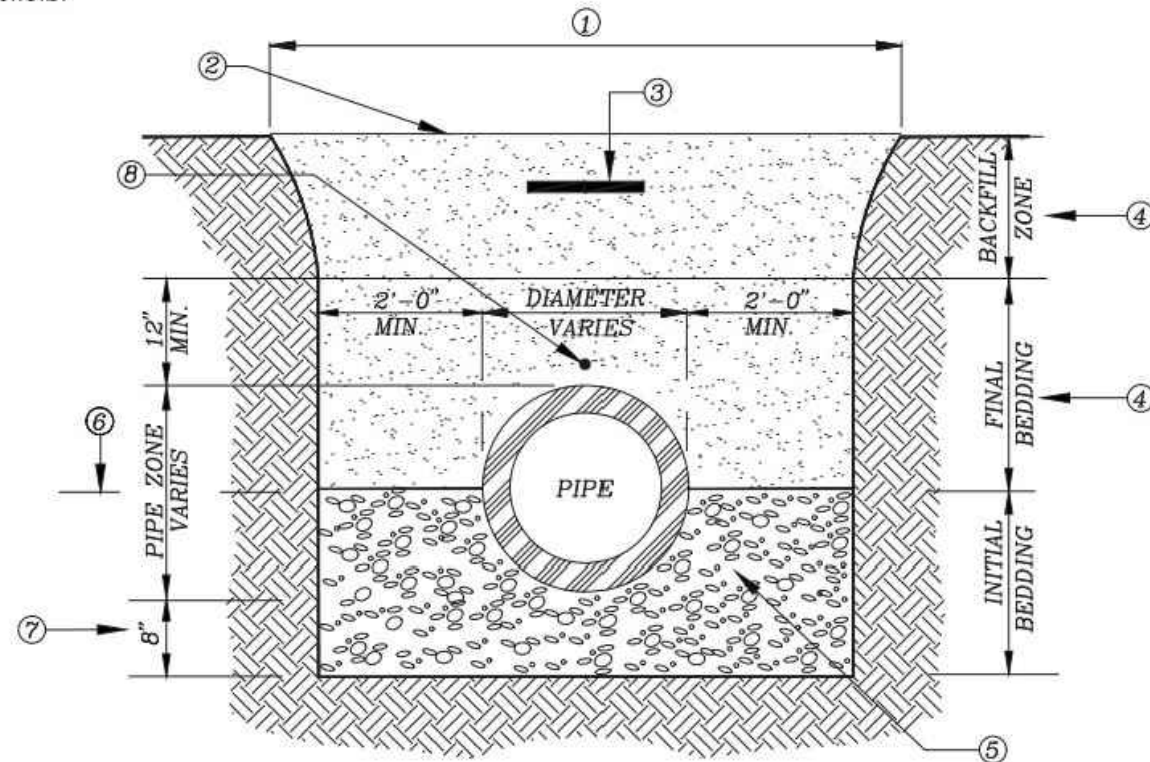
LEE COUNTY UTILITIES DEPARTMENT  
PAGE PARK WATER MAIN IMPROVEMENTS PHASE 1  
CIVIL  
STANDARD DETAILS

FILE: 05208\_C07  
DWG. **C7** 15 OF 32  
DATE MAY 2017



# STANDARD DETAIL NO. 6.5 LEE COUNTY UTILITIES TRENCH CROSS SECTION

N.T.S.

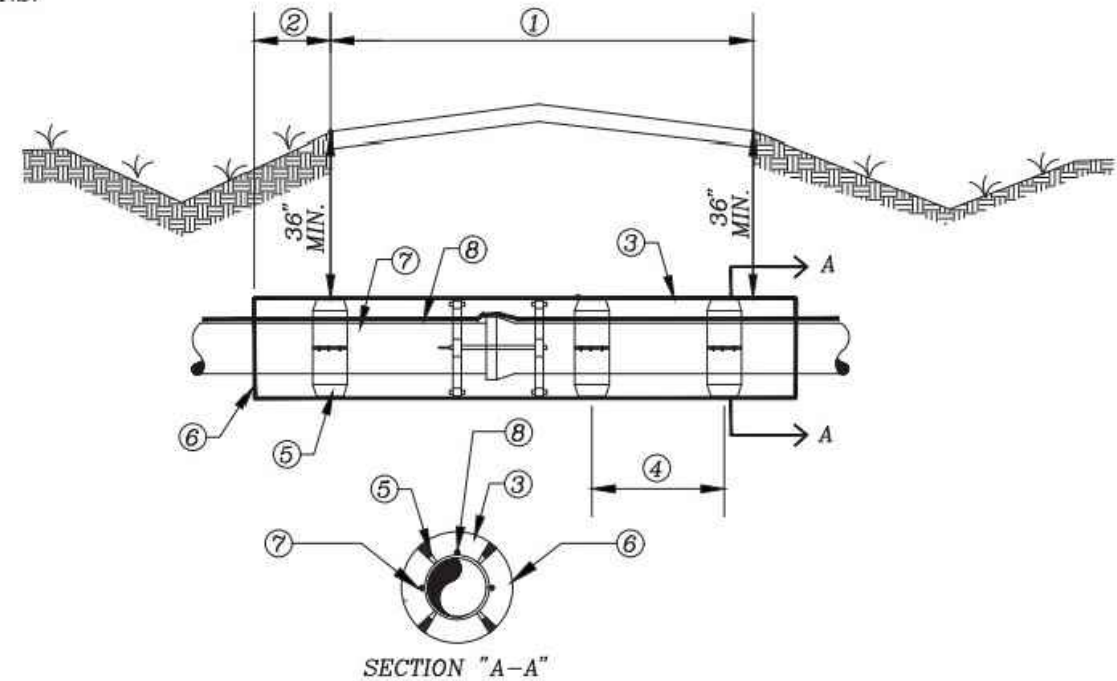


- |  |  |
|--|--|
| ① EXCAVATED TRENCH   | ⑥ SPRING LINE  |
| ② FINISHED GRADE   | ⑦ STANDARD 8" MIN TRENCH UNDERCUT AND BACKFILL WITH #57 STONE COMPACTED IN 6" LIFTS  |
| ③ MARKING TAPE 12" DEPTH MAX.  | ADDITIONAL UNDERCUT AND CRUSHED ROCK BEDDING FOUNDATION WHEN DIRECTED BY L.C.U. THE CONTRACTOR IS TO REMOVE UNSTABLE MATERIAL FROM THE TRENCH FOUNDATION. THEN INSTALL STABILIZED CRUSHED ROCK BACKFILL WITH #57 STONE COMPACTED IN 6" LIFTS |
| ④ MATERIALS CLEAN DRY SAND, FINE LIME ROCK OR PIT SHELL MECHANICALLY COMPACTED IN 6" LIFTS TO AT LEAST 95% OF MAX. DENSITY, OR 98% IF UNDER PAVED AREA OF ROADWAY. | ⑧ LOCATING WIRE IS REQUIRED FOR ALL PRESSURIZED PIPELINES.   |
| ⑤ #57 STONE LOCATED UNDER PIPE OR EXISTING UNDISTURBED SUITABLE MATERIAL   |  |

REV: 12/10/2015

# STANDARD DETAIL NO. 6.6 LEE COUNTY UTILITIES JACK AND BORE

N.T.S.



- SECTION "A-A"
- ① LIMITS OF PAVEMENT
  - ② EXTEND CASING 4' MIN. BEYOND E.O.P. AND/OR BACK OF CURB FOR L.C.D.O.T. MAINTAINED R.O.W. AND 8' MIN. FOR F.D.O.T. MAINTAINED R.O.W.
  - ③ STEEL CASING PIPE CONFORMING TO ASTM A-139
  - ④ 7'O.C. MAX OR AS PER MANUFACTURER'S RECOMMENDATION
  - ⑤ L.C.U. APPROVED CASING SPACERS
  - ⑥ SEAL CASING ENDS WITH: 8" WALL OF BRICK MASONRY WITH WEEP HOLE INSTALLED NEAR BOTTOM, OR APPROVED EQUAL
  - ⑦ ALL JOINTS OF THE CARRIER PIPE SHALL HAVE BELL RESTRAINTS
  - ⑧ 12 GAUGE DOUBLE INSULATED COPPER WIRE (SEE LCU STANDARD DETAIL)

REV: 12/10/2015

**GREELEY AND HANSEN**  
5252 SUMMERLIN COMMONS WAY, SUITE 104  
FORT MYERS, FLORIDA 33907  
CERTIFICATE OF AUTHORIZATION NO. 37

DESIGNED BRG  
DRAWN RAM  
CHECKED GCF

NO.	DATE	APPD	REVISION

P.E. NAME: GARY C. FERRANTE P.E. NO. 65011  
P.E. NAME: \_\_\_\_\_  
DATE: \_\_\_\_\_

LEE COUNTY UTILITIES DEPARTMENT  
PAGE PARK WATER MAIN IMPROVEMENTS PHASE 1

CIVIL

STANDARD DETAILS

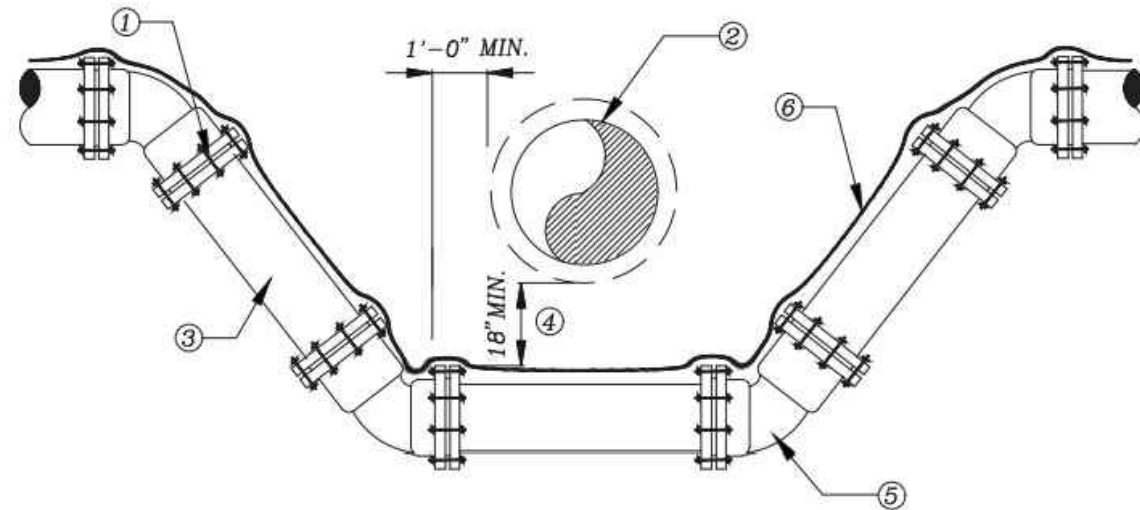
FILE: 05208\_C08

DWG. **C8** 16 OF 32

DATE MAY 2017

**STANDARD DETAIL NO. 6.10**  
**LEE COUNTY UTILITIES**  
**WATER PRESSURE LINE VERTICAL OFFSET**  
**W/ DUCTILE IRON MJ FITTINGS & PIPE**

N.T.S.



- ① LCU APPROVED JOINT RESTRAINT FOR D.I., M.J. PIPE AND FITTINGS PLACED IN ACCORDANCE WITH JOINT RESTRAINT SCHEDULE. (SEE DETAIL 6.12)
- ② CONFLICT PIPE
- ③ LCU APPROVED DUCTILE IRON PIPING PRESSURE CLASS 350
- ④ 18" MIN. UNLESS OTHERWISE APPROVED BY LCU
- ⑤ 45° MECHANICAL JOINT FITTING, TYPICAL
- ⑥ 12 GAUGE DOUBLE INSULATED COPPER WIRE (SEE LCU STANDARD DETAIL)

REV: 12/10/2015

**STANDARD DETAIL NO. 6.12**  
**LEE COUNTY UTILITIES**  
**RESTRAINED LENGTH SCHEDULE**

N.T.S.

**DUCTILE IRON PIPE**

PIPE SIZE (Inches)	MINIMUM RESTRAINED PIPE LENGTH (FEET)					
	HORIZONTAL BENDS				DEAD END	HORIZONTAL TEE
	90°	45°	22-1/2'	11-1/4'		
4	17	7	4	2	29	6
6	23	10	5	2	40	17
8	29	12	6	3	53	29
10	35	14	7	4	63	38
12	41	17	8	4	74	49
16	51	21	11	5	94	68
24	69	29	14	7	131	105
30	81	34	17	8	156	129

**PVC PIPE**

PIPE SIZE (Inches)	MINIMUM RESTRAINED PIPE LENGTH (FEET)					
	HORIZONTAL BENDS				DEAD END	HORIZONTAL TEE
	90°	45°	22-1/2'	11-1/4'		
4	20	8	4	2	45	8
6	29	12	6	3	63	25
8	36	15	8	4	83	43
10	44	18	9	5	99	58
12	51	21	11	5	116	74
16	63	26	13	7	149	103
24	87	36	18	9	208	158
30	102	42	21	10	248	194

A COMPLETE JOINT RESTRAINING SCHEDULE FOR ALL ENCOUNTERED VERTICAL & HORIZONTAL BENDS, VERTICAL OFFSETS, TEES, AND DEAD ENDS SHALL BE THE RESPONSIBILITY OF THE DESIGN ENGINEER.

LENGTH FIGURES BASED ON FOLLOWING:

Pressure = 150 psi, FS = 1.5, trench type = 3, 30" cover on Bare pipe, Soil type = GP & SP

REV: 12/10/2015

**GREELEY AND HANSEN**  
 5252 SUMMERLIN COMMONS WAY, SUITE 104  
 FORT MYERS, FLORIDA 33907  
 CERTIFICATE OF AUTHORIZATION NO. 37

DESIGNED BRG  
 DRAWN RAM  
 CHECKED GCF

NO.	DATE	APPD	REVISION

P.E. NAME: GARY C. FERRANTE P.E. NO. 65011  
 P.E. NAME: \_\_\_\_\_  
 DATE: \_\_\_\_\_

LEE COUNTY UTILITIES DEPARTMENT  
 PAGE PARK WATER MAIN IMPROVEMENTS PHASE 1

CIVIL

STANDARD DETAILS

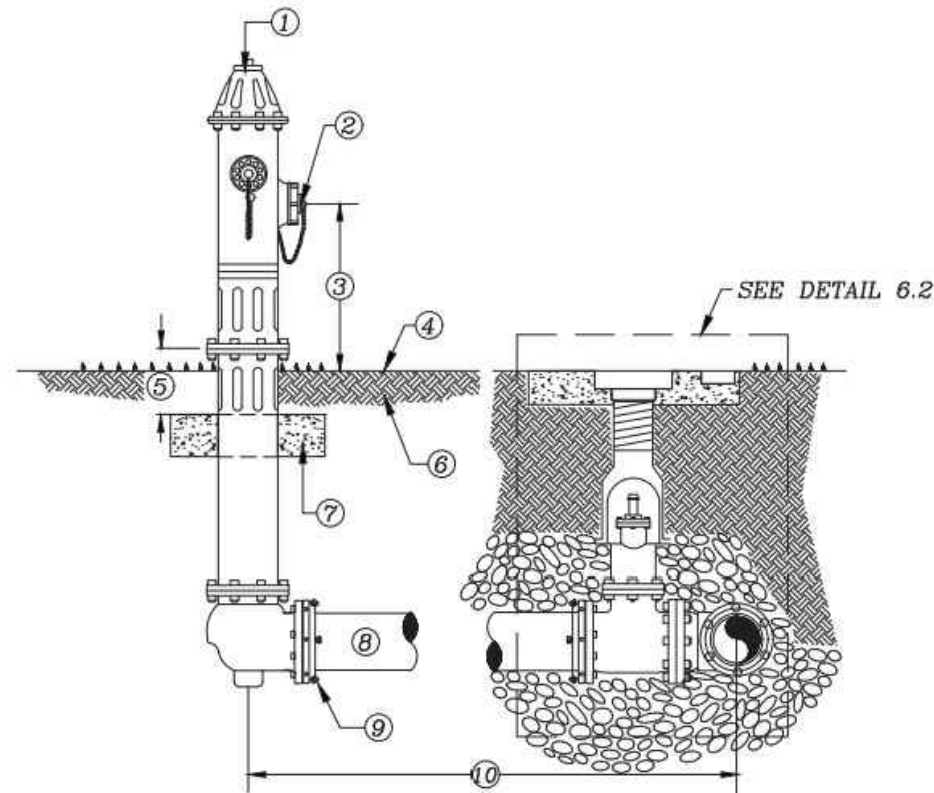
FILE: 05208\_C09

DWG. **C9** 17 OF 32

DATE MAY 2017

# STANDARD DETAIL NO. 6.24 LEE COUNTY UTILITIES FIRE HYDRANT ASSEMBLY

N.T.S.

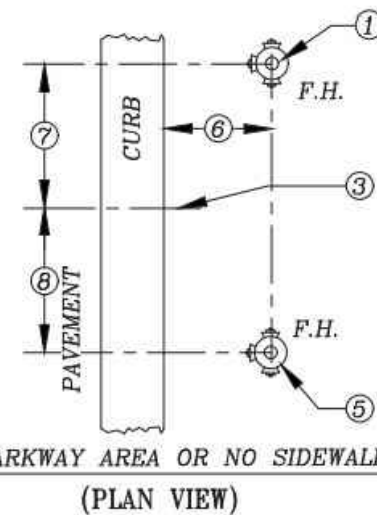
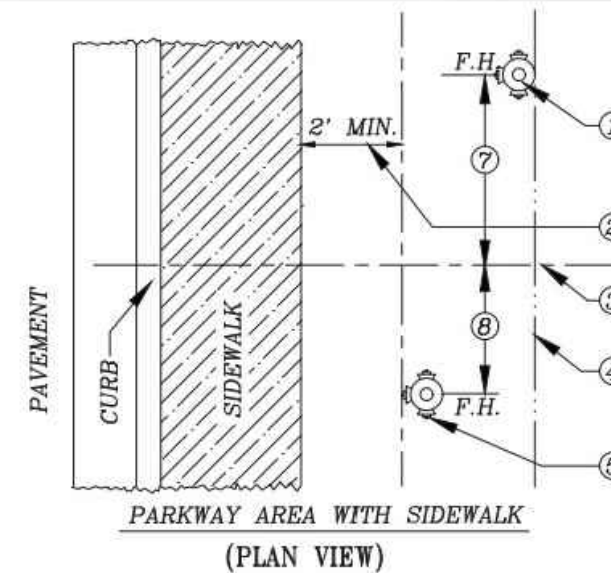


- |  |  |
|--|--|
| <ul style="list-style-type: none"> <li>① FIRE HYDRANT: STANDARD A.W.W.A. SAFETY YELLOW (SEE APPROVED MATERIAL LIST)</li> <li>② PUMPER CONNECTION FACING AS PER FIRE DISTRICT RECOMMENDATION</li> <li>③ 18" MIN. - 24" MAX.</li> <li>④ FINISHED GRADE</li> <li>⑤ 6" MIN. CLEARANCE</li> </ul> | <ul style="list-style-type: none"> <li>⑥ COMPACTED FILL</li> <li>⑦ 30" X 30" X 4" CONCRETE BREAK AWAY CONCRETE PAD, 3000 P.S.I.</li> <li>⑧ PIPE TO BE D.I.P., PRESSURE CLASS 350</li> <li>⑨ RESTRAINED JOINTS, FROM HYDRANT TO WATER MAIN</li> <li>⑩ VARIABLE DISTANCE, IF GREATER THAN 100' A VALVE SHALL BE INSTALLED AT HYDRANT BASE</li> </ul> |
|--|--|

REV: 12/10/2015

# STANDARD DETAIL NO. 6.25 LEE COUNTY UTILITIES FIRE HYDRANT LOCATIONS/CLEARANCE

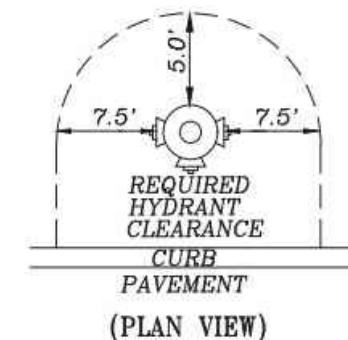
N.T.S.



- ① PREFERRED LOCATION
- ② F.H. TO BE LOCATED 2' MINIMUM FROM EDGE OF SIDEWALK
- ③ P.T. OR P.C. OF CURB RETURN
- ④ PROPERTY LINE RIGHT-OF-WAY OR LIMIT OF EASEMENT
- ⑤ ACCEPTABLE LOCATION WITH CURB RADIUS OF 20' OR MORE
- ⑥ BETWEEN 2'-0" MIN. AND 6'-0" MAX.
- ⑦ 6'-0"
- ⑧ 4'-0"

**NOTES**

1. OBSTRUCTIONS SUCH AS UTILITY POLES, STREET SIGNS, IRRIGATION BOXES, FENCES, ETC. SHALL NOT BE PLACED BETWEEN CURB AND HYDRANT.
2. SOME LOCATIONS APPLY AT EITHER END OF CURB RETURNS.
3. DIMENSION SHOWN ON CONSTRUCTION DRAWINGS SUPERCEDE LOCATIONS SHOWN HERE.



REV: 12/10/2015

**GREELEY AND HANSEN**  
5252 SUMMERLIN COMMONS WAY, SUITE 104  
FORT MYERS, FLORIDA 33907  
CERTIFICATE OF AUTHORIZATION NO. 37

DESIGNED BRG  
DRAWN RAM  
CHECKED GCF

NO.	DATE	APPD	REVISION
P.E. NAME: GARY C. FERRANTE		P.E. NO. 65011	
P.E. NAME: _____			
DATE: _____			

LEE COUNTY UTILITIES DEPARTMENT  
PAGE PARK WATER MAIN IMPROVEMENTS PHASE 1

CIVIL

STANDARD DETAILS

FILE: 05208\_C10

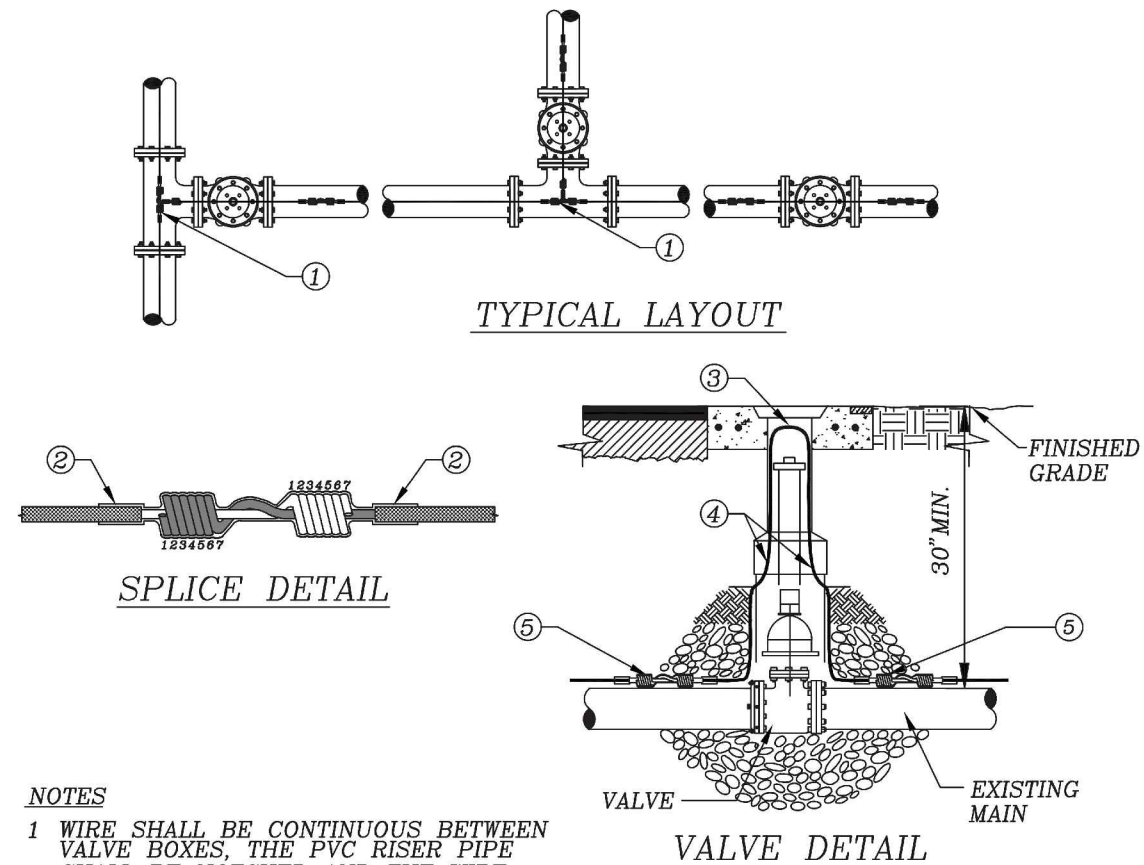
DWG. **C10** 18 OF 32

DATE MAY 2017



## STANDARD DETAIL NO. 6.3 LEE COUNTY UTILITIES LOCATING WIRE FOR PRESSURE MAINS

N.T.S.



**NOTES**

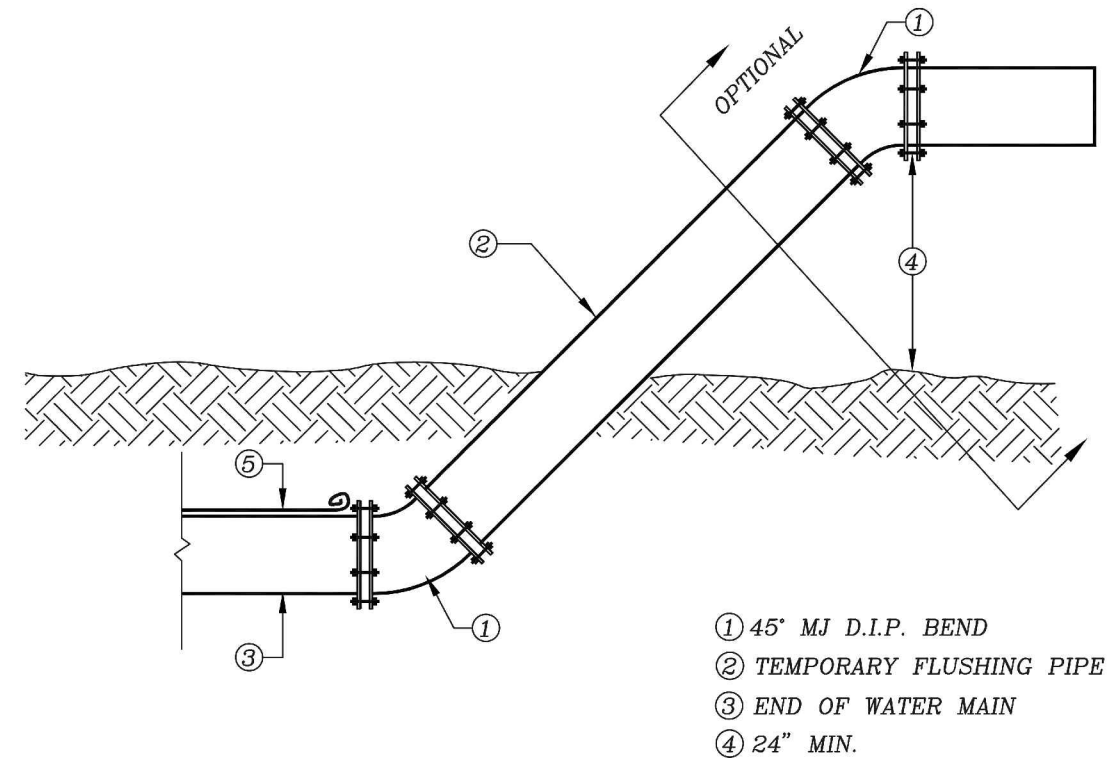
- 1 WIRE SHALL BE CONTINUOUS BETWEEN VALVE BOXES, THE PVC RISER PIPE SHALL BE NOTCHED AND THE WIRE ATTACHED TO THE RISER PIPE TO ALLOW FOR THE WIRE TO FIT INSIDE THE CAST IRON VALVE BOX WITHOUT SHEARING THE WIRE.
- 2 LOCATING WIRE SHALL BE LAID ON TOP OF THE MAIN, AND SHALL BE TAPED TO IT AT 10' INTERVALS AND TAPED AT ALL FITTINGS. TAPE SHALL BE 10 MIL POLYETHYLENE.
- 3 CONTRACTOR SHALL CONDUCT A CONTINUITY TEST ON ALL LOCATING WIRE SPLICES, PRIOR TO SCHEDULING THE OFFICIAL FINAL INSPECTION WITH LCU.
- 4 ALL SPLICES SHALL UTILIZE A DIRECT BURY WATERPROOF SPLICE KIT. (SEE APPROVED MATERIAL LIST)

- ① SPLICE RUN TOGETHER, KEEP CLEAR OF FITTING, TYPICAL
- ② COVER SPLICE WITH 2 WRAPS OF 10 MIL. POLYETHYLENE TAPE
- ③ 6" LOOP OF BARE WIRE, 9" MAX. DEPTH TO TOP OF BARE WIRE
- ④ 12 GAUGE DOUBLE INSULATED COPPER LOCATING WIRE
- ⑤ SPLICE (SEE DETAIL THIS SHEET)

REV: 12/10/2015

## STANDARD DETAIL NO. 6.13 LEE COUNTY UTILITIES WATER MAIN FLUSHING DETAIL

N.T.S.



**NOTES:**

1. FLUSHING DETAIL TO BE USED ON WATER LINES 8" DIAMETER OR GREATER.
2. FLUSHING PIPE SHALL BE THE SAME DIAMETER AS WATER MAIN.
3. CONTRACTOR SHALL PROVIDE ADEQUATE DRAINAGE FOR FLUSHED WATER.
4. PROVIDE M.J. CAP IF ASSEMBLY IS LEFT IN PLACE UNATTENDED.
5. 12 GAUGE DOUBLE INSULATED COPPER LOCATING WIRE (SEE LCU STANDARD DETAIL)

REV: 12/10/2015

**GREELEY AND HANSEN**  
5252 SUMMERLIN COMMONS WAY, SUITE 104  
FORT MYERS, FLORIDA 33907  
CERTIFICATE OF AUTHORIZATION NO. 37

DESIGNED BRG  
DRAWN RAM  
CHECKED GCF

NO.	DATE	APPD	REVISION
P.E. NAME: GARY C, FERRANTE		P.E. NO. 65011	
P.E. NAME: _____		DATE: _____	

LEE COUNTY UTILITIES DEPARTMENT  
PAGE PARK WATER MAIN IMPROVEMENTS PHASE 1

CIVIL

STANDARD DETAILS

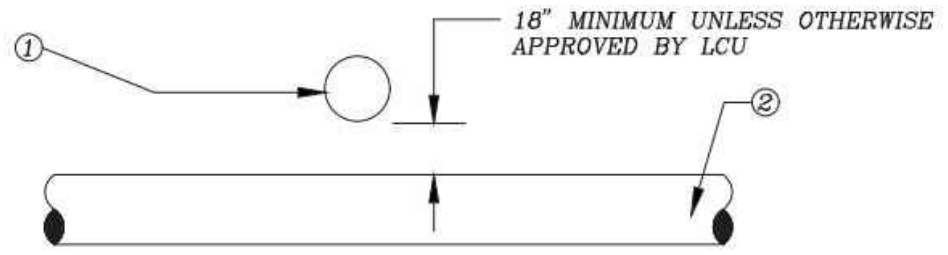
FILE: 05208\_C11

DWG. **C11** 19 OF 32

DATE MAY 2017

## STANDARD DETAIL NO. 6.8 LEE COUNTY UTILITIES WATER AND SEWER CROSSING DETAIL

N.T.S.

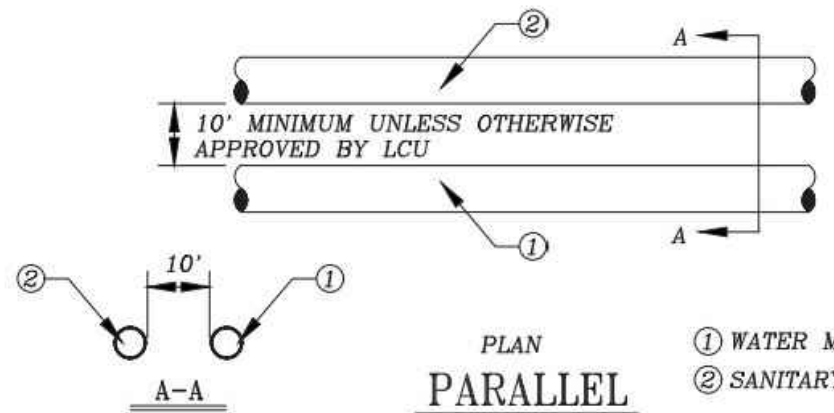


SECTION  
CROSSINGS

- ① WATER MAIN
- ② SANITARY SEWER MAIN

NOTE: IF LESS THAN 18" CLEARANCE  
ENCASE WATER MAIN IN  
STEEL CASING

N.T.S.



PLAN  
PARALLEL

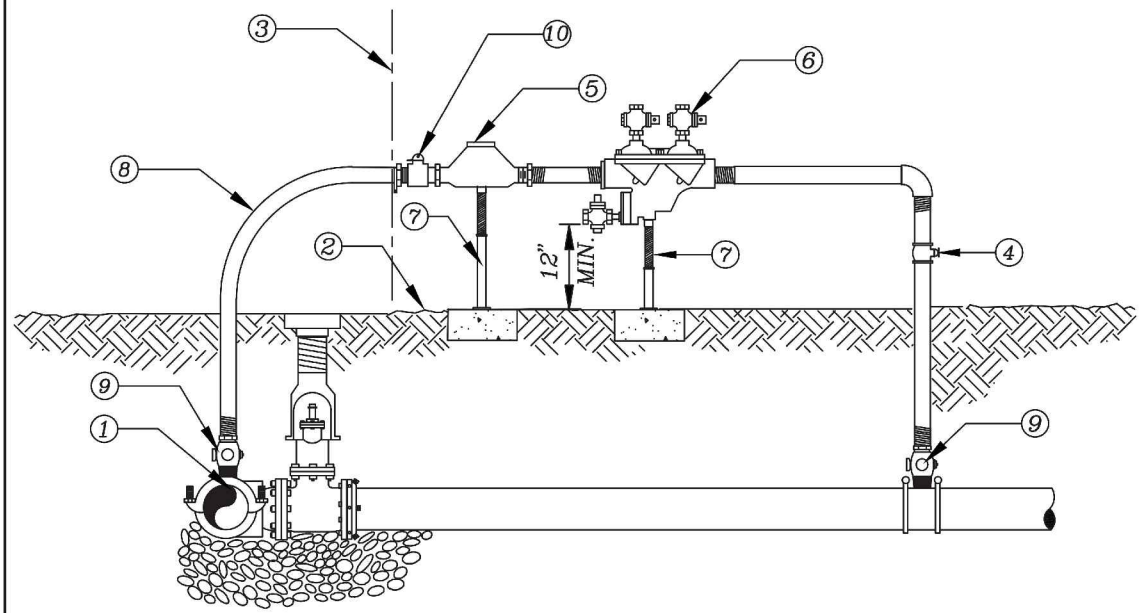
- ① WATER MAIN
- ② SANITARY SEWER MAIN

NOTE: IF LESS THAN 10' CLEARANCE  
ENCASE WATER MAIN IN  
STEEL CASING

REV: 12/10/2015

## STANDARD DETAIL NO. 6.15 LEE COUNTY UTILITIES TEMPORARY CONSTRUCTION JUMPER WITH METER

N.T.S.



NOTES:

CONTRACTOR/CUSTOMER SHALL APPLY AT LEE COUNTY UTILITIES FOR TEMPORARY WATER SERVICE FIVE DAYS PRIOR TO REQUIRED SERVICE DATE. THE METER ONLY WILL BE FURNISHED BY LEE COUNTY UTILITIES. ALL FITTINGS, PIPING, VALVES AND MATERIALS SHALL BE FURNISHED AND INSTALLED BY THE CONTRACTOR/CUSTOMER. THE APPROVED BACKFLOW PREVENTION DEVICE SHALL BE TESTED AND CERTIFIED BY LEE COUNTY UTILITIES APPROVED CERTIFIED BACKFLOW PREVENTION TECHNICIAN (FURNISHED BY CONTRACTOR/CUSTOMER) AT TIME OF METER INSTALLATION. CONTRACTOR/CUSTOMER SHALL PROTECT THE ASSEMBLY FROM DAMAGE. TEMPORARY CONSTRUCTION JUMPER/METER ASSEMBLY SHALL NOT BE REMOVED UNTIL CERTIFICATION AND CLEARANCE FOR SERVICE FORM HAS BEEN RECEIVED BY LEE COUNTY UTILITIES. WHEN THE NEW SYSTEM IS ACCEPTED, THE TEMPORARY CONSTRUCTION JUMPER METER ASSEMBLY MUST BE COMPLETELY REMOVED DOWN TO CORP STOPS.

- ① TAPPING SLEEVE AND VALVE TO BE FULLY RESTRAINED ON EXISTING MAIN (SEE LCU STANDARD DETAIL)
- ② GRADE
- ③ PROPERTY LINE AND/OR RIGHT OF WAY LINE
- ④ BRONZE BALL VALVE
- ⑤ METER FURNISHED BY LEE COUNTY UTILITIES
- ⑥ REDUCED PRESSURE BACKFLOW PREVENTER
- ⑦ PIPE STAND (SEE LCU STANDARD DETAIL)
- ⑧ 2" DIA. HDPE DR9
- ⑨ 2" DIA. CORPORATION STOP
- ⑩ 2" DIA. CURB STOP

REV: 12/10/2015

**GREELEY AND HANSEN**  
5252 SUMMERLIN COMMONS WAY, SUITE 104  
FORT MYERS, FLORIDA 33907  
CERTIFICATE OF AUTHORIZATION NO. 37

DESIGNED	BRG
DRAWN	RAM
CHECKED	GCF

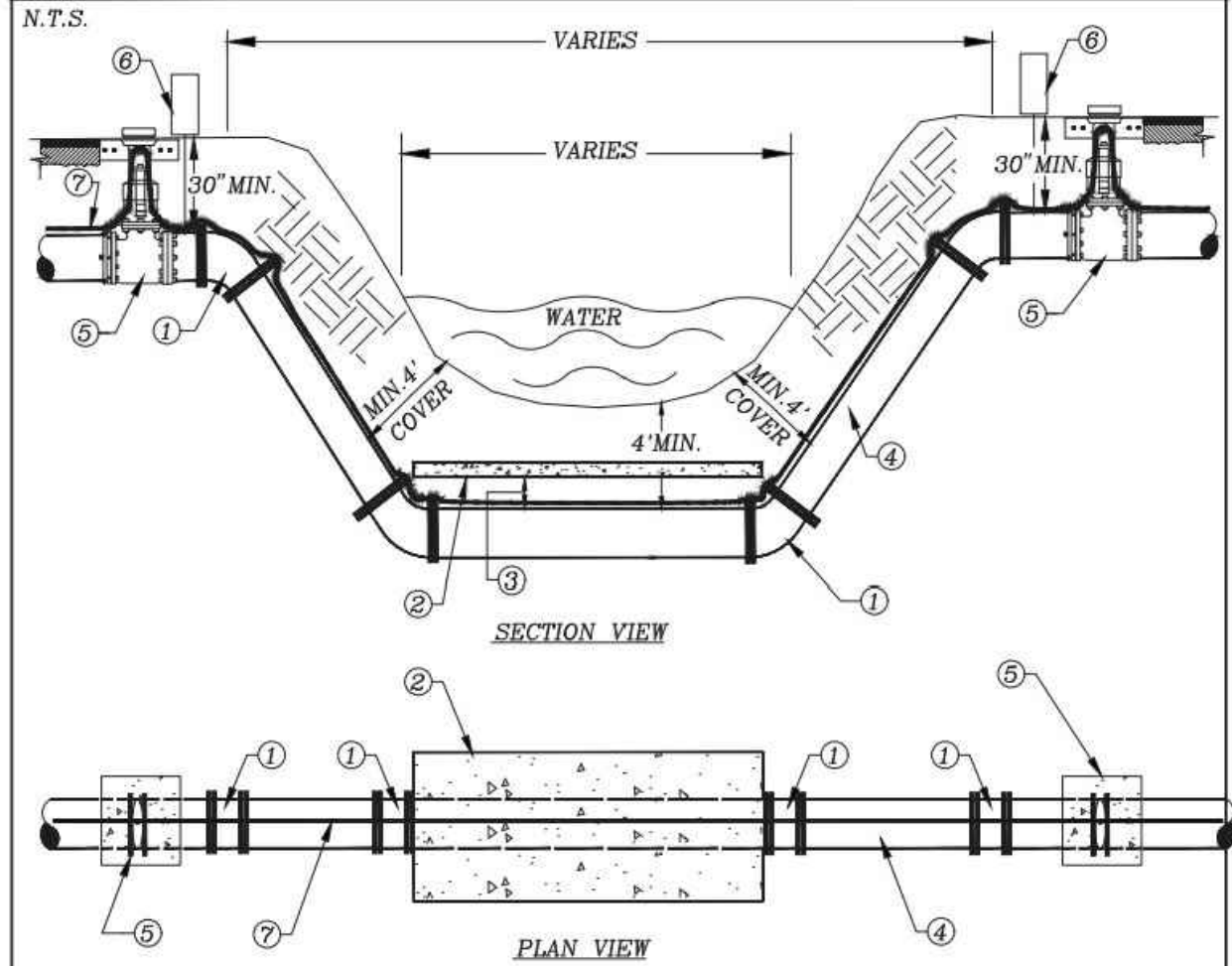
NO.	DATE	APPD	REVISION
P.E. NAME: GARY C. FERRANTE		P.E. NO. 65011	
P.E. NAME: _____		DATE: _____	

LEE COUNTY UTILITIES DEPARTMENT  
PAGE PARK WATER MAIN IMPROVEMENTS PHASE 1  
CIVIL  
STANDARD DETAILS

FILE: 05208\_C12  
DWG. **C12** 20 OF 32  
DATE MAY 2017



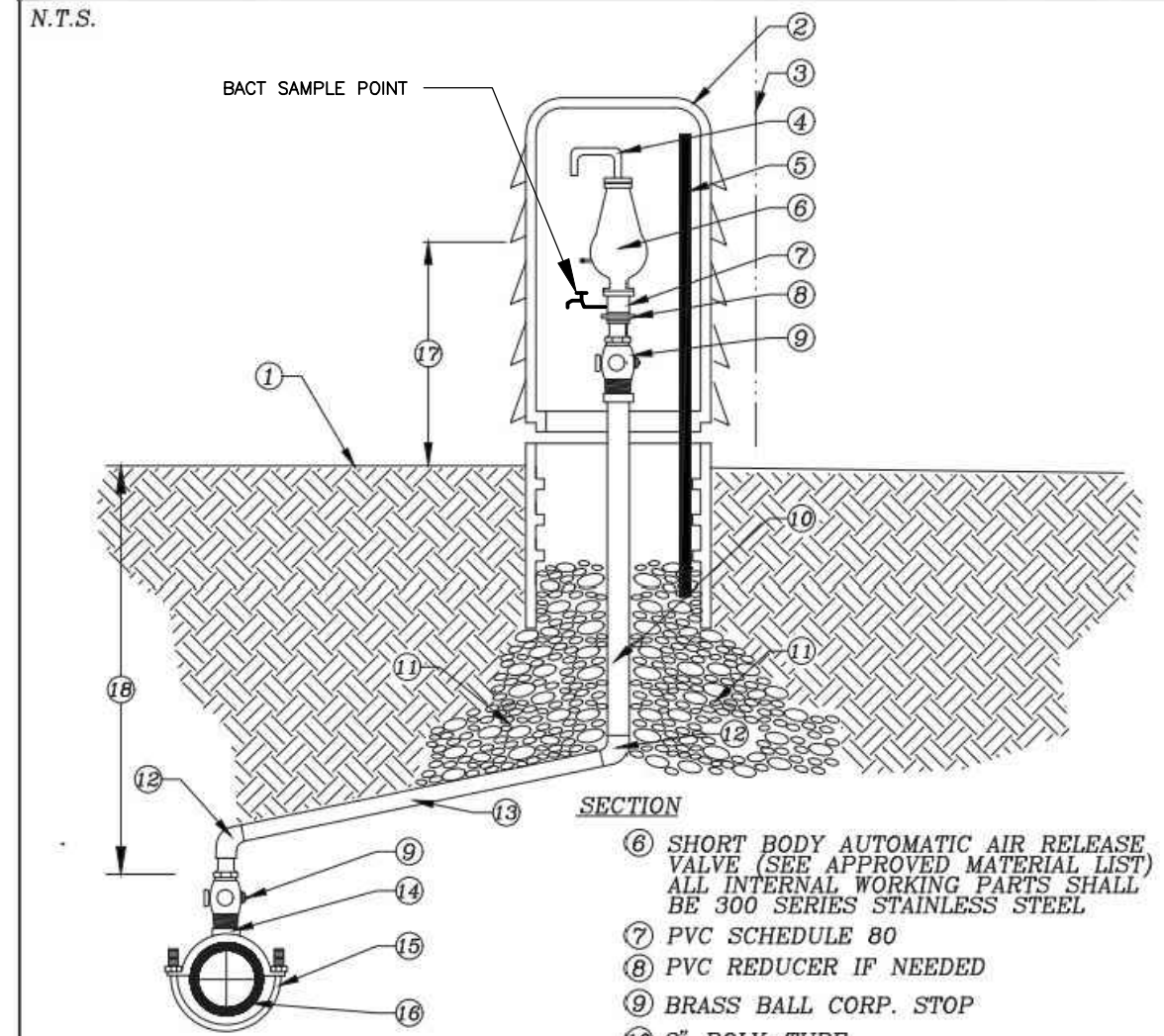
## STANDARD DETAIL NO. 6.9 LEE COUNTY UTILITIES SUBAQUEOUS CROSSING



- ① 45° M.J. ELBOW RESTRAINED
- ② 2,500 MIN. P.S.I. CONCRETE PROTECTIVE PAD 4' WIDE MIN. X 4" THICK X OVERALL LENGTH OF PIPELINE CROSSING
- ③ 6" MIN. COMPACTED MATERIAL OR #57 STONE
- ④ USE PVC C-900 DR 14 MIN. FOR ALL SEWAGE FORCE MAINS. USE PRESSURE CLASS 350 DIP FOR ALL WATER MAINS
- ⑤ GATE VALVE OR PLUG VALVE INSTALLATION PER LCU STANDARD DETAIL
- ⑥ AIR RELEASE VALVE (SEE APPROVED MATERIAL LIST)
- ⑦ 12 GAUGE DOUBLE INSULATED COPPER LOCATING WIRE (SEE LCU STANDARD DETAIL)

REV: 12/10/2015

## STANDARD DETAIL NO. 6.4 LEE COUNTY UTILITIES AUTOMATIC AIR RELEASE VALVE



- ① FINISHED GRADE
- ② PEDESTAL HOUSING (SEE APPROVED MATERIAL LIST)  
COLORS: BLUE-WATER, GREEN-SEWER, PANTONE-REUSE
- ③ EDGE OF RIGHT-OF-WAY
- ④ PVC STREET ELL
- ⑤ S.S. POST WITH S.S. HARDWARE AND S.S. LOCKING HASP WITH BRASS LOCK
- ⑥ SHORT BODY AUTOMATIC AIR RELEASE VALVE (SEE APPROVED MATERIAL LIST) ALL INTERNAL WORKING PARTS SHALL BE 300 SERIES STAINLESS STEEL
- ⑦ PVC SCHEDULE 80
- ⑧ PVC REDUCER IF NEEDED
- ⑨ BRASS BALL CORP. STOP
- ⑩ 2" POLY-TUBE
- ⑪ 3/4" GRANULAR MATERIAL, #57 STONE
- ⑫ 2" BRASS FITTING IF NECESSARY
- ⑬ 1% MIN. SLOPE UP, 2" POLY-TUBE
- ⑭ TAP AT CROWN OF PIPE
- ⑮ 2" DOUBLE STRAP TAPPING SADDLE (SEE APPROVED MATERIAL LIST)
- ⑯ EXISTING PRESSURE MAIN
- ⑰ 24"
- ⑱ 30" MIN.

REV: 12/10/2015

**GREELEY AND HANSEN**  
5252 SUMMERLIN COMMONS WAY, SUITE 104  
FORT MYERS, FLORIDA 33907  
CERTIFICATE OF AUTHORIZATION NO. 37

DESIGNED BRG  
DRAWN RAM  
CHECKED GCF

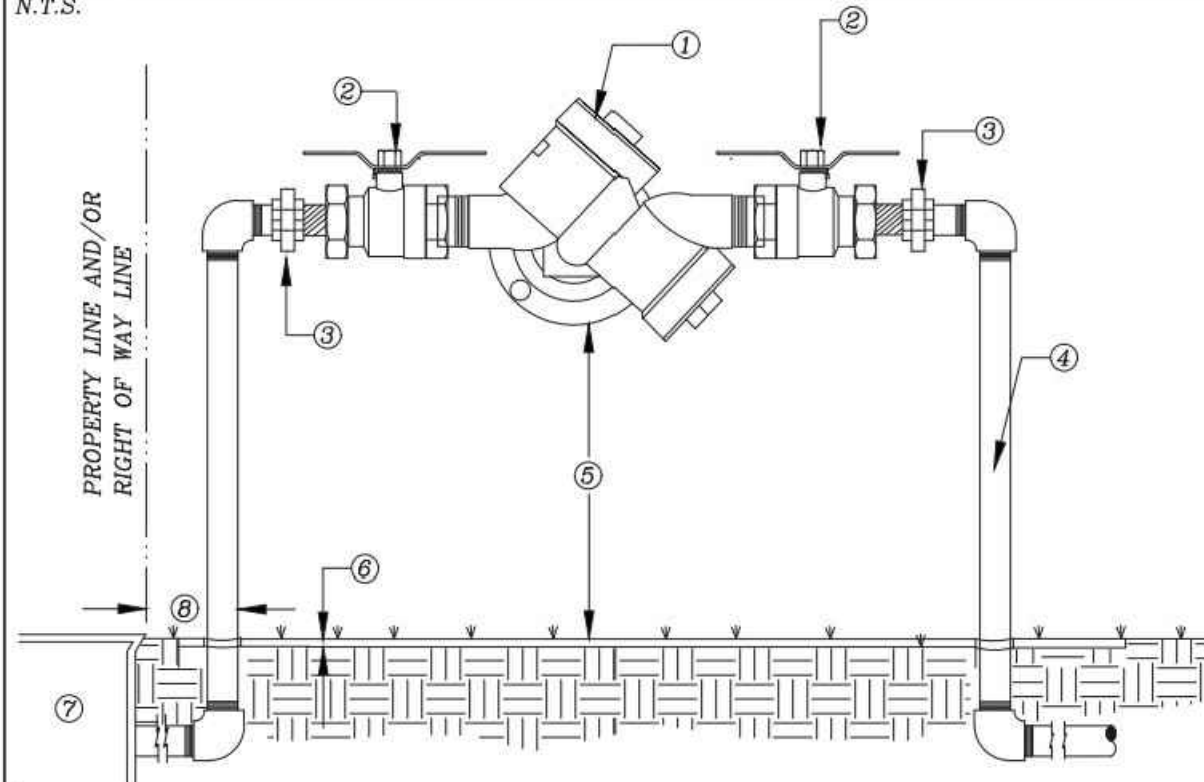
NO.	DATE	APPD	REVISION
P.E. NAME: GARY C. FERRANTE		P.E. NO. 65011	
P.E. NAME: _____		DATE: _____	

LEE COUNTY UTILITIES DEPARTMENT  
PAGE PARK WATER MAIN IMPROVEMENTS PHASE 1  
CIVIL  
STANDARD DETAILS

FILE: 05208\_C13  
DWG. **C13** 21 OF 32  
DATE MAY 2017

**STANDARD DETAIL NO. 6.19**  
**LEE COUNTY UTILITIES**  
**3/4" TO 2" CROSS CONNECTION CONTROL ASSEMBLY**

N.T.S.



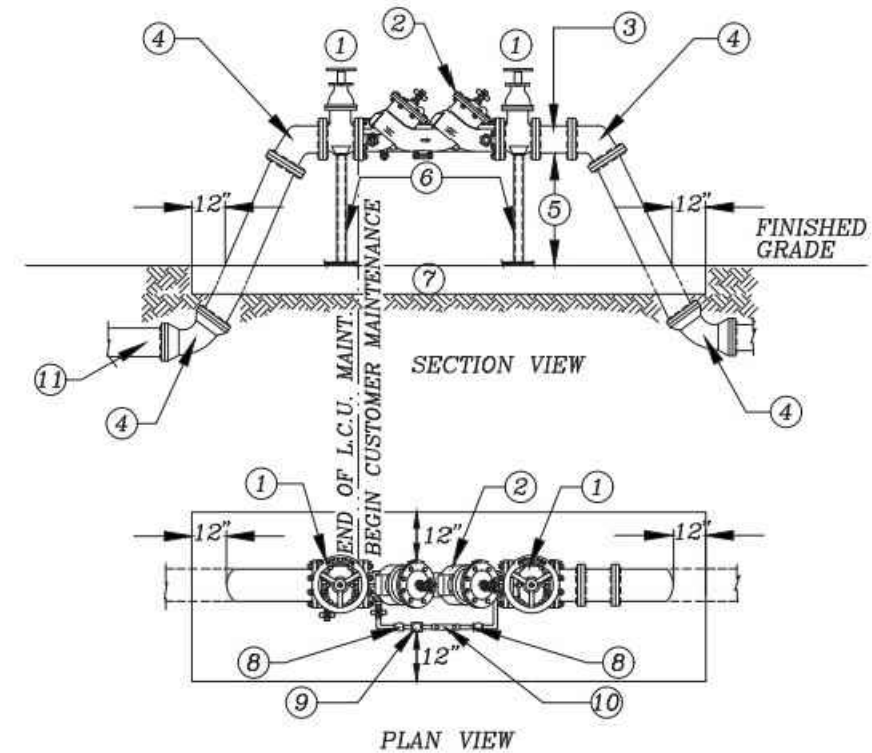
- ① LCU APPROVED REDUCED PRESSURE BACKFLOW PREVENTION DEVICE (SEE APPROVED MATERIAL LIST)
- ② FULL FLOW BRONZE BALL VALVE
- ③ UNION
- ④ ALL PIPING AND FITTINGS SHALL BE BRASS OR COPPER
- ⑤ 12" MIN. - 24" MAX. UNLESS OTHERWISE APPROVED BY LCU
- ⑥ FINISHED GRADE
- ⑦ METER BOX
- ⑧ 2' MAXIMUM

**NOTES:** 1. UNIONS REQUIRED  
 2. INITIAL AND ANNUAL DEVICE TESTING REQUIRED

REV: 12/10/2015

**STANDARD DETAIL NO. 6.21**  
**LEE COUNTY UTILITIES**  
**2-1/2" OR LARGER CROSS CONNECTION CONTROL ASSEMBLY**

N.T.S.



- ① OS & Y GATE VALVE
- ② L.C.U. APPROVED REDUCED PRESSURE PRINCIPLE OR DOUBLE CHECK VALVE ASSEMBLY
- ③ 24" LONG FLANGE X PLAIN END SPOOL PIECE W/ UNIFLANGE ON PLAIN END LINE UP
- ④ 45° OR 90° ELBOW M.J. W/ RETAINER GLANDS ABOVE GROUND FITTINGS TO BE FLANGED
- ⑤ 18" MIN. TO 24" MAX. FROM FINISH GRADE TO LOWEST POINT ALL FITTINGS
- ⑥ HOT DIPPED GALVANIZED OR S.S. ADJUSTABLE PIPE STANDS (SEE LCU STANDARD DETAIL)
- ⑦ 4" THICK CONCRETE PAD 3000 P.S.I. MIN.
- ⑧ RESILIENT SEATED FULL FLOW VALVE
- ⑨ LOW FLOW BYPASS METER
- ⑩ REDUCED PRESSURE BACKFLOW PREVENTION DEVICE
- ⑪ D.I.P. TO POINT OF CONNECTION

**NOTES:** 1. PAINT IN ACCORDANCE WITH LCU STANDARDS  
 2. ALL PIPING BETWEEN THE BELOW GROUND 45° OR 90° BENDS AND THROUGH THE ASSEMBLY SHALL BE DIP, PRESSURE CLASS 350 ABOVE GROUND DIP SHALL BE FLANGED

REV: 12/10/2015

**GREELEY AND HANSEN**  
 5252 SUMMERLIN COMMONS WAY, SUITE 104  
 FORT MYERS, FLORIDA 33907  
 CERTIFICATE OF AUTHORIZATION NO. 37

DESIGNED BRG  
 DRAWN RAM  
 CHECKED GCF

NO.	DATE	APPD	REVISION

P.E. NAME: GARY C. FERRANTE P.E. NO. 65011  
 P.E. NAME: \_\_\_\_\_  
 DATE: \_\_\_\_\_

LEE COUNTY UTILITIES DEPARTMENT  
 PAGE PARK WATER MAIN IMPROVEMENTS PHASE 1

CIVIL

STANDARD DETAILS

FILE: 05208\_C14

DWG. **C14** 22 OF 32

DATE MAY 2017

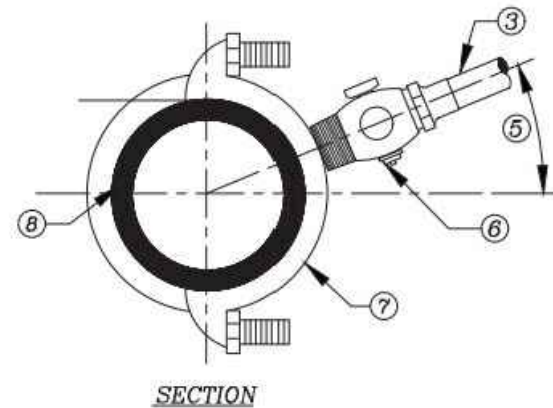
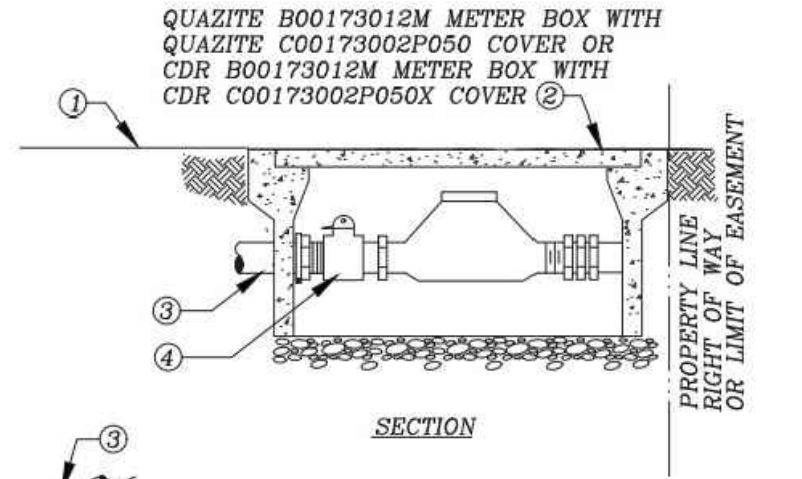


# STANDARD DETAIL NO. 6.17

## LEE COUNTY UTILITIES

### WATER SERVICE INSTALLATION 1-1/2" THROUGH 2"

N.T.S.



- ① FINISHED GRADE
- ② METER BOX WITH COVER TO BE LOCATED INSIDE R.O.W. @ PROPERTY LINE & CLEAR OF DRIVEWAYS.
- ③ POLYETHYLENE TUBING, PE 3408, 200PSI, SDR9, BLUE (SEE APPROVED MATERIAL LIST) WITH LOCATING WIRE
- ④ STRAIGHT CURB STOP WITH PADLOCK WINGS CONNECTED TO LEE COUNTY WATER METER (SEE APPROVED MATERIAL LIST)
- ⑤ MIN. 22 1/2" NOT TO EXCEED 45°
- ⑥ BALL CORPORATION STOP (SEE APPROVED MATERIAL LIST)
- ⑦ DOUBLE STRAP SERVICE SADDLE PROVIDE SPRING LOADED TAPPING SADDLE WHEN TAPPING HDPE (SEE APPROVED MATERIAL LIST)
- ⑧ WATER MAIN

**NOTE:**

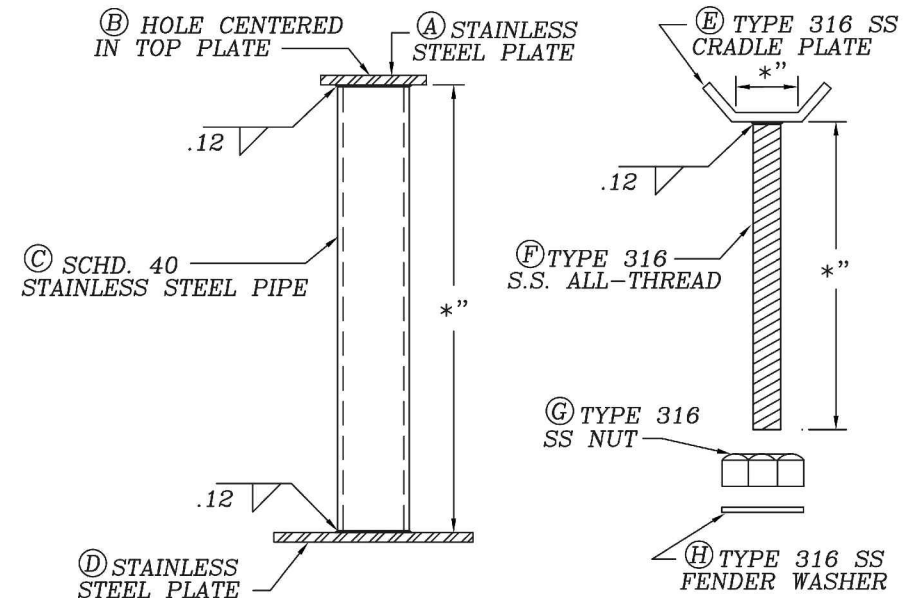
1. TUBING UNDER ROADWAY SHALL BE ENCASED IN 4" P.V.C. PIPE SCHEDULE 40 MINIMUM AND EXTEND 4 FEET BEYOND THE EDGES OF PAVEMENT OR BACK OF CURB.

REV: 12/10/2015

# STANDARD DETAIL NO. 6.22

## LEE COUNTY UTILITIES

### PIPING SUPPORT



\*" LENGTH VARIES DEPENDING ON OBJECT BEING SUPPORTED  
SEE TABLE THIS SHEET FOR DIMENSIONS A THRU H

PIPING SUPPORT

PIPING SUPPORT DIMENSIONS			
	FOR 3/4" & 1"	FOR 1-1/2" TO 3"	FOR 4" & LARGER
Ⓐ	1/4" x 3" x 3"	1/4" x 3-1/4" x 3-1/4"	1/4" x 5" x 5"
Ⓑ	1.0"	1.0"	1-1/2"
Ⓒ	2.0"	2-1/2"	4"
Ⓓ	1/4" x 6" x 6"	1/4" x 8" x 8"	1/4" x 10" x 10"
Ⓔ	1/4" x 2" X 4"	1/2" x 2" X 4"	1/2" x 4" x 6"
Ⓕ	3/4"	7/8"	1-1/4"
Ⓖ	3/4"	7/8"	1-1/4"
Ⓗ	1.0"	1.0"	1-1/2"

**NOTE:** 1. HOT DIPPED GALVANIZED STEEL MAY BE USED IN PLACE OF STAINLESS STEEL.

REV: 12/10/2015

**GREELEY AND HANSEN**  
5252 SUMMERLIN COMMONS WAY, SUITE 104  
FORT MYERS, FLORIDA 33907  
CERTIFICATE OF AUTHORIZATION NO. 37

DESIGNED BRG  
DRAWN RAM  
CHECKED GCF

NO.	DATE	APPD	REVISION

P.E. NAME: GARY C. FERRANTE P.E. NO. 65011  
P.E. NAME: \_\_\_\_\_  
DATE: \_\_\_\_\_

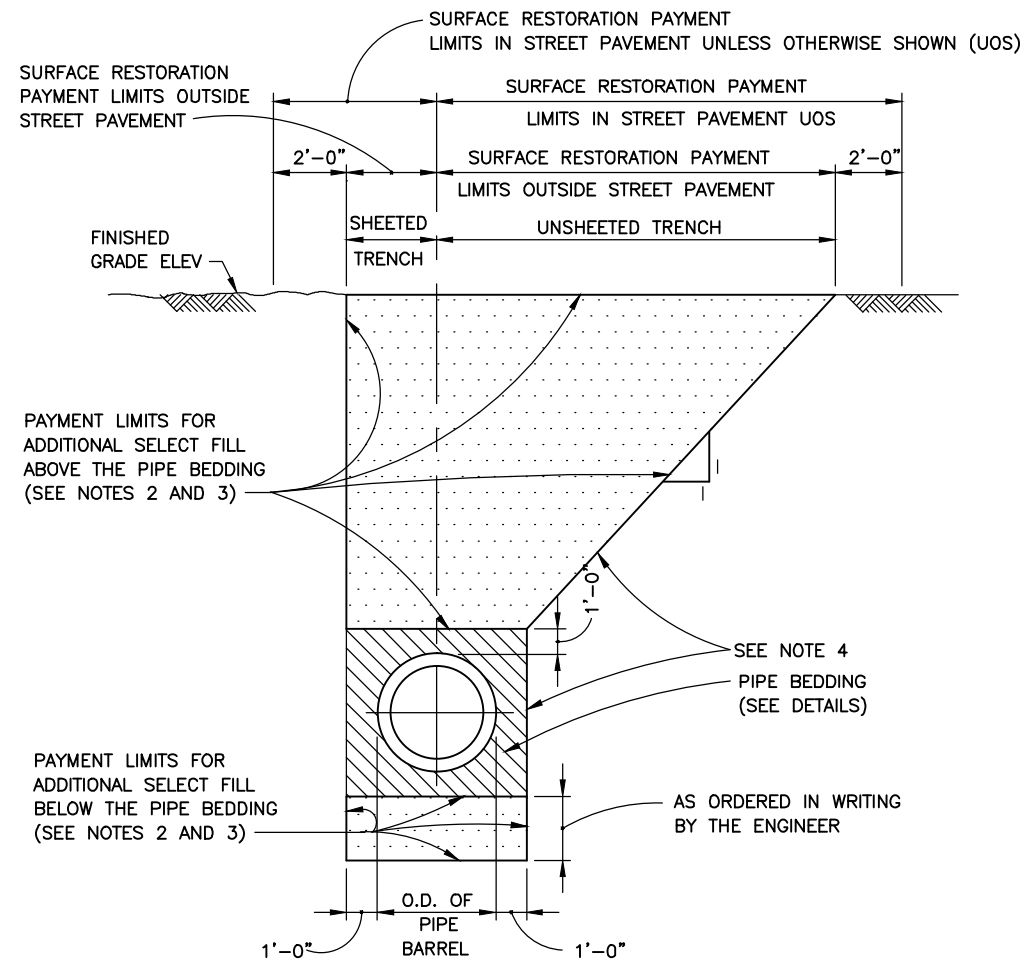
LEE COUNTY UTILITIES DEPARTMENT  
PAGE PARK WATER MAIN IMPROVEMENTS PHASE 1

CIVIL  
  
SPECIAL DETAILS

FILE: 05208\_C15

DWG. **C15** 23 OF 32

DATE MAY 2017

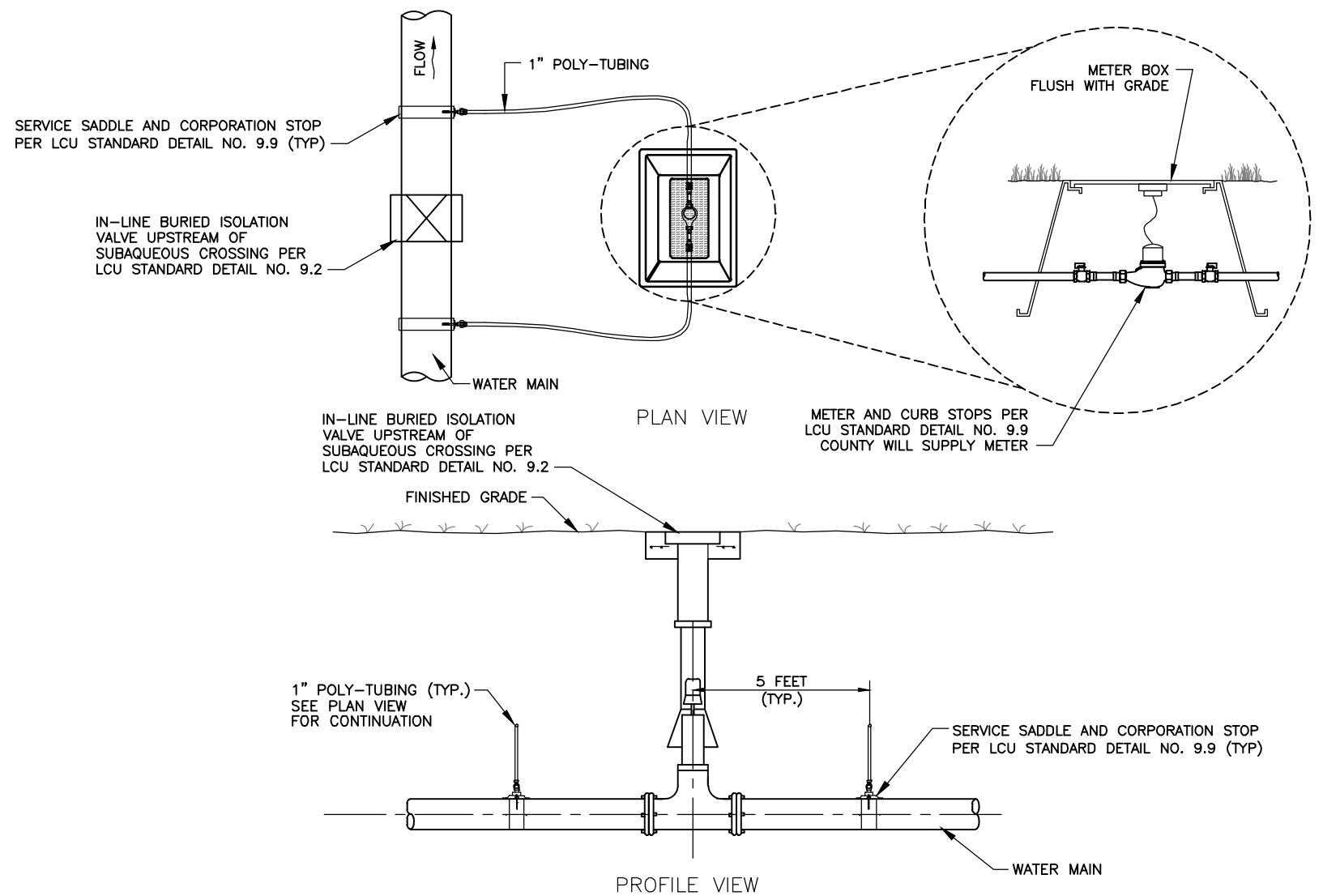


**PAYMENT LIMITS FOR SURFACE RESTORATION AND ADDITIONAL SELECT FILL FOR TRENCH STABILIZATION**

NOT TO SCALE

**NOTES FOR PAYMENT**

1. PAYMENT FOR SURFACE RESTORATION WILL BE MADE FOR THE ACTUAL QUANTITIES, AS DETERMINED BY THE ENGINEER, OF SURFACE RESTORED WITHIN THE PAYMENT LIMITS SHOWN.
2. PAYMENT FOR ADDITIONAL SAND OR CRUSHED STONE FOR TRENCH STABILIZATION, ORDERED IN WRITING BY THE ENGINEER, WILL BE MADE FOR THE ACTUAL COMPACTED VOLUME, AS DETERMINED BY THE ENGINEER, OF SAND OR CRUSHED STONE PLACED WITHIN THE PAYMENT LIMITS SHOWN. CRUSHED STONE SHALL BE COMPLETELY ENVELOPED IN NON-WOVEN FILTER FABRIC CONFORMING TO FDOT TYPE D-3 PER FDOT SPECIFICATION SECTION 985 AND FDOT STANDARD INDEX NO. 199.
3. CONTRACTOR SHALL USE ALL SURPLUS SAND, APPROVED AS SUITABLE, FROM EXCAVATIONS IN THIS CONTRACT PRIOR TO SUPPLYING SAND FROM OTHER SOURCES. PAYMENT FOR ADDITIONAL SAND WILL BE MADE ONLY FOR SAND SUPPLIED FROM SOURCES OTHER THAN EXCAVATIONS IN THIS CONTRACT. SEE SPECIFICATIONS FOR MATERIAL REQUIREMENTS.
4. DETAIL IS FOR DELINEATION OF PAYMENT LIMITS ONLY AND IS NOT TO BE INTERPRETED AS DELINEATING, OR INFLUENCING IN ANY MANNER, THE TRENCH CONFIGURATION, WHICH IS SUBJECT TO OSHA REGULATIONS.



**LEAKAGE DETECTION METER ASSEMBLY FOR POTABLE WATER MAIN SUBAQUEOUS CROSSINGS**

NOT TO SCALE

**GREELEY AND HANSEN**  
5252 SUMMERLIN COMMONS WAY, SUITE 104  
FORT MYERS, FLORIDA 33907  
CERTIFICATE OF AUTHORIZATION NO. 37

DESIGNED BRG  
DRAWN RAM  
CHECKED GCF

NO.	DATE	APPD	REVISION
P.E. NAME: GARY C. FERRANTE		P.E. NO. 65011	
P.E. NAME: _____		_____	
DATE: _____		_____	

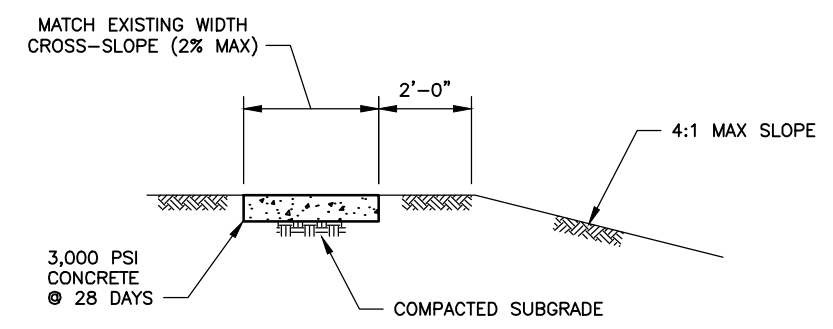
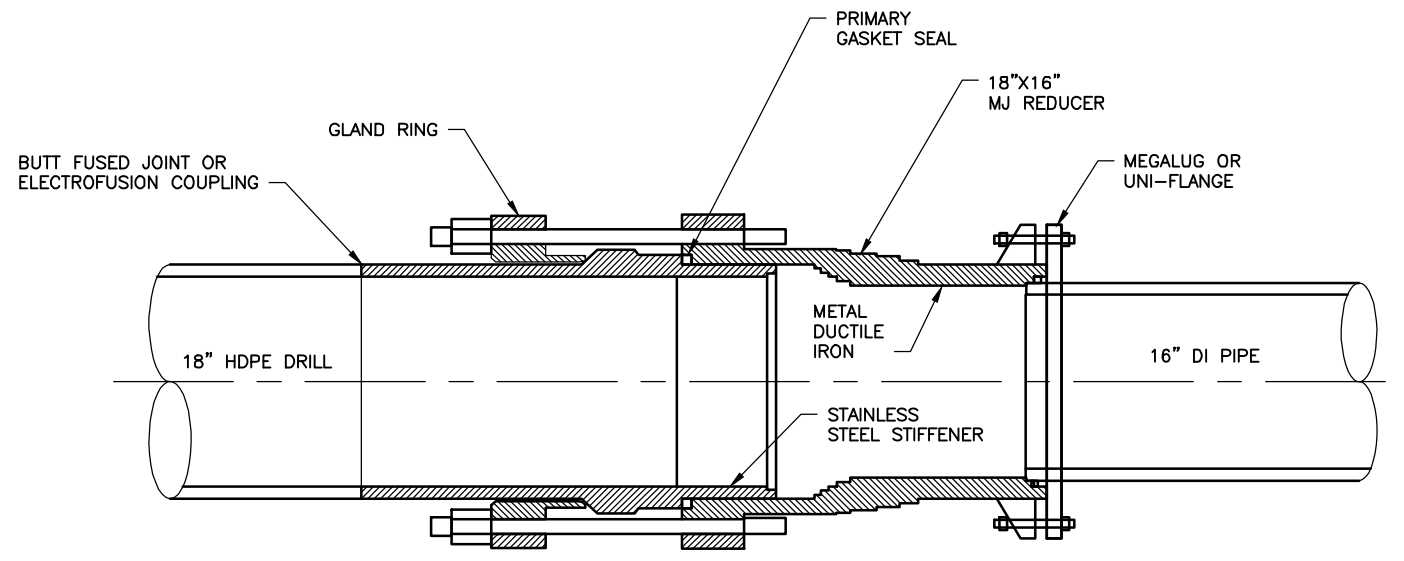
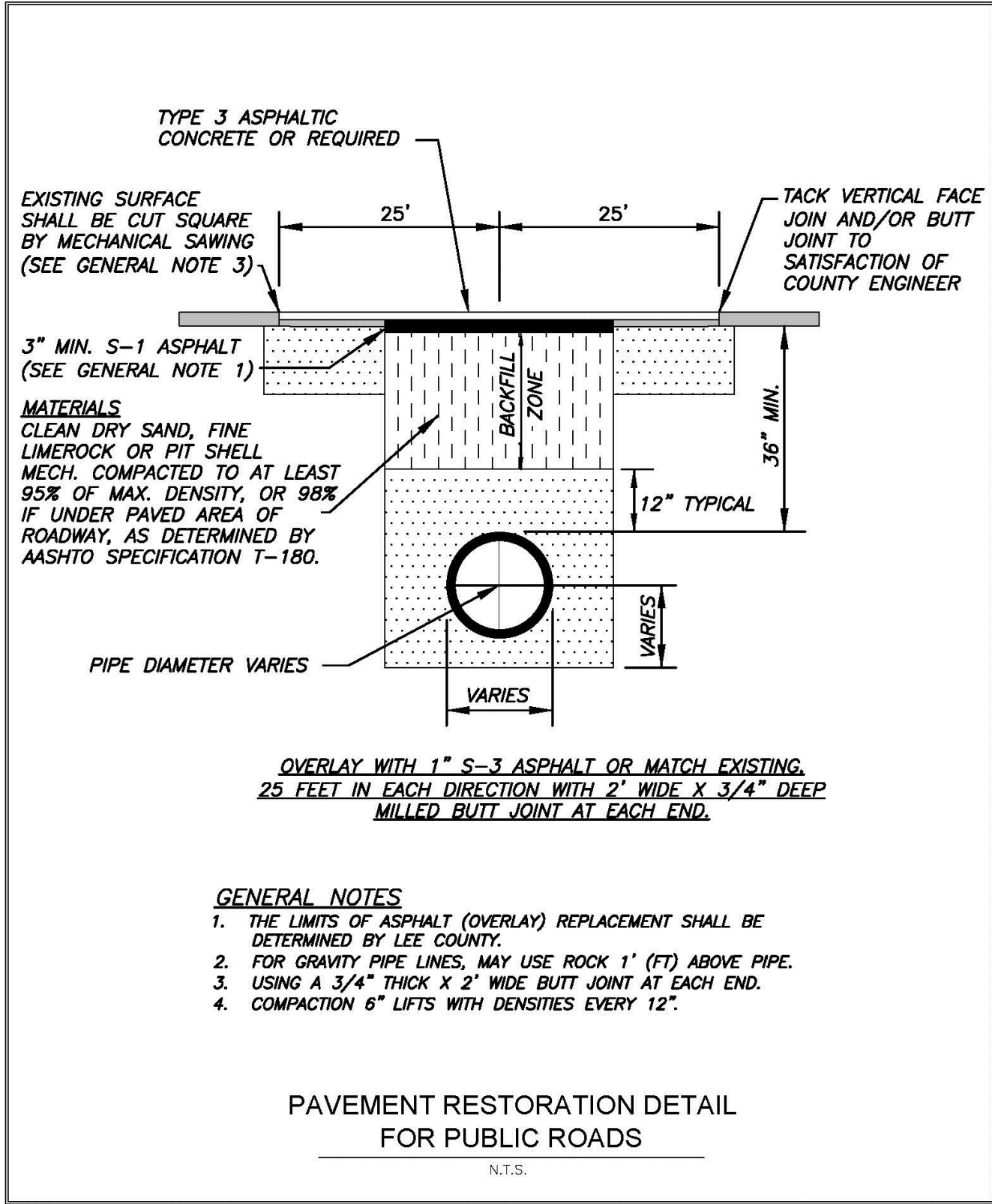
LEE COUNTY UTILITIES DEPARTMENT  
PAGE PARK WATER MAIN IMPROVEMENTS PHASE 1

CIVIL  
  
SPECIAL DETAILS

FILE: 05208\_C16

DWG. **C16** 24 OF 32

DATE MAY 2017



**GREELEY AND HANSEN**  
5252 SUMMERLIN COMMONS WAY, SUITE 104  
FORT MYERS, FLORIDA 33907  
CERTIFICATE OF AUTHORIZATION NO. 37

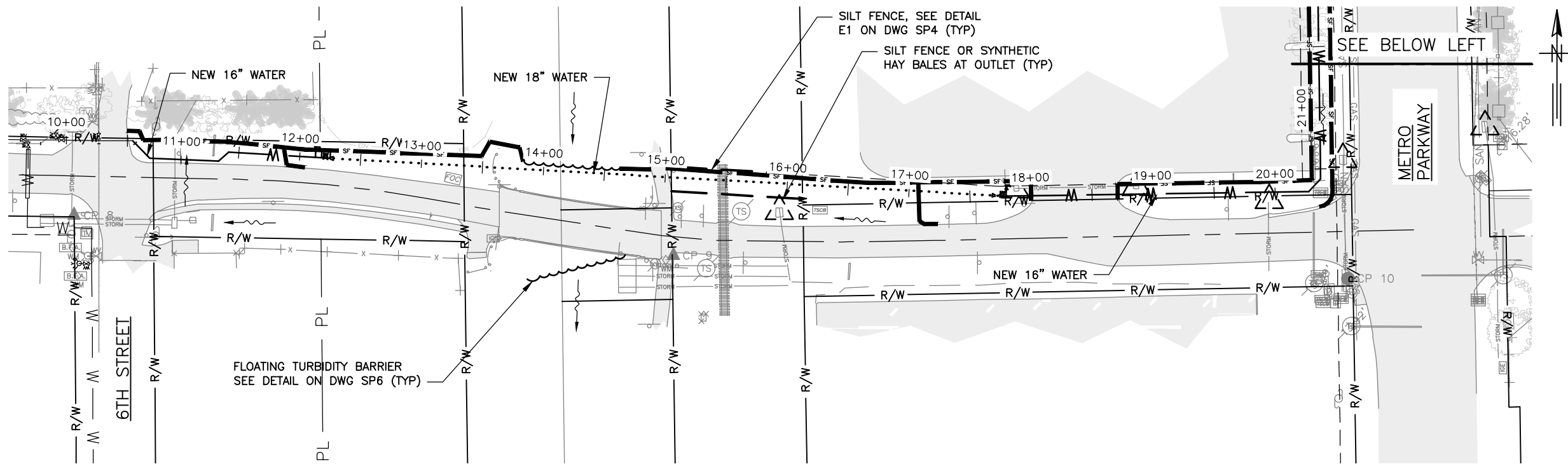
DESIGNED BRG  
DRAWN RAM  
CHECKED GCF

NO.	DATE	APPD	REVISION

P.E. NAME: GARY C. FERRANTE P.E. NO. 65011  
P.E. NAME: \_\_\_\_\_  
DATE: \_\_\_\_\_

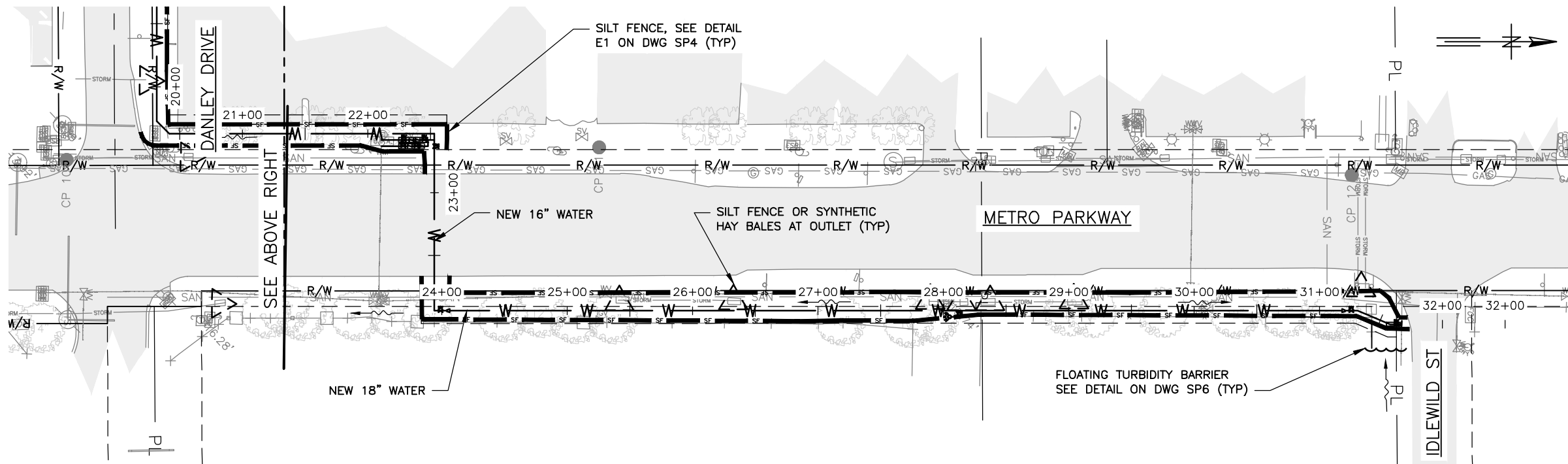
LEE COUNTY UTILITIES DEPARTMENT  
PAGE PARK WATER MAIN IMPROVEMENTS PHASE 1  
CIVIL  
SPECIAL DETAILS

FILE: 05208\_C17  
DWG. **C17** 25 OF 32  
DATE MAY 2017



**PLAN**

SCALE: 1" = 100'



**PLAN**

SCALE: 1" = 100'

**LEGEND**

- 20+00 WATER MAIN AND STATION MARKER
- SF SILT FENCE
- FLOATING TURBIDITY BARRIER
- WATER MAIN (HDD)
- FLOW ARROW
- FB BYPASS FILTER BAG
- BYPASS PUMP
- SILT FENCE OR SYNTHETIC HAY BALES AT OUTLET

**GREELEY AND HANSEN**  
 5252 SUMMERLIN COMMONS WAY, SUITE 104  
 FORT MYERS, FLORIDA 33907  
 CERTIFICATE OF AUTHORIZATION NO. 37

DESIGNED BRG  
 DRAWN RAM  
 CHECKED GCF

NO.	DATE	APPD	REVISION
P.E. NAME: GARY C. FERRANTE		P.E. NO. 65011	
P.E. NAME:			
DATE:			

LEE COUNTY UTILITIES DEPARTMENT  
 PAGE PARK WATER MAIN IMPROVEMENTS PHASE 1

CIVIL

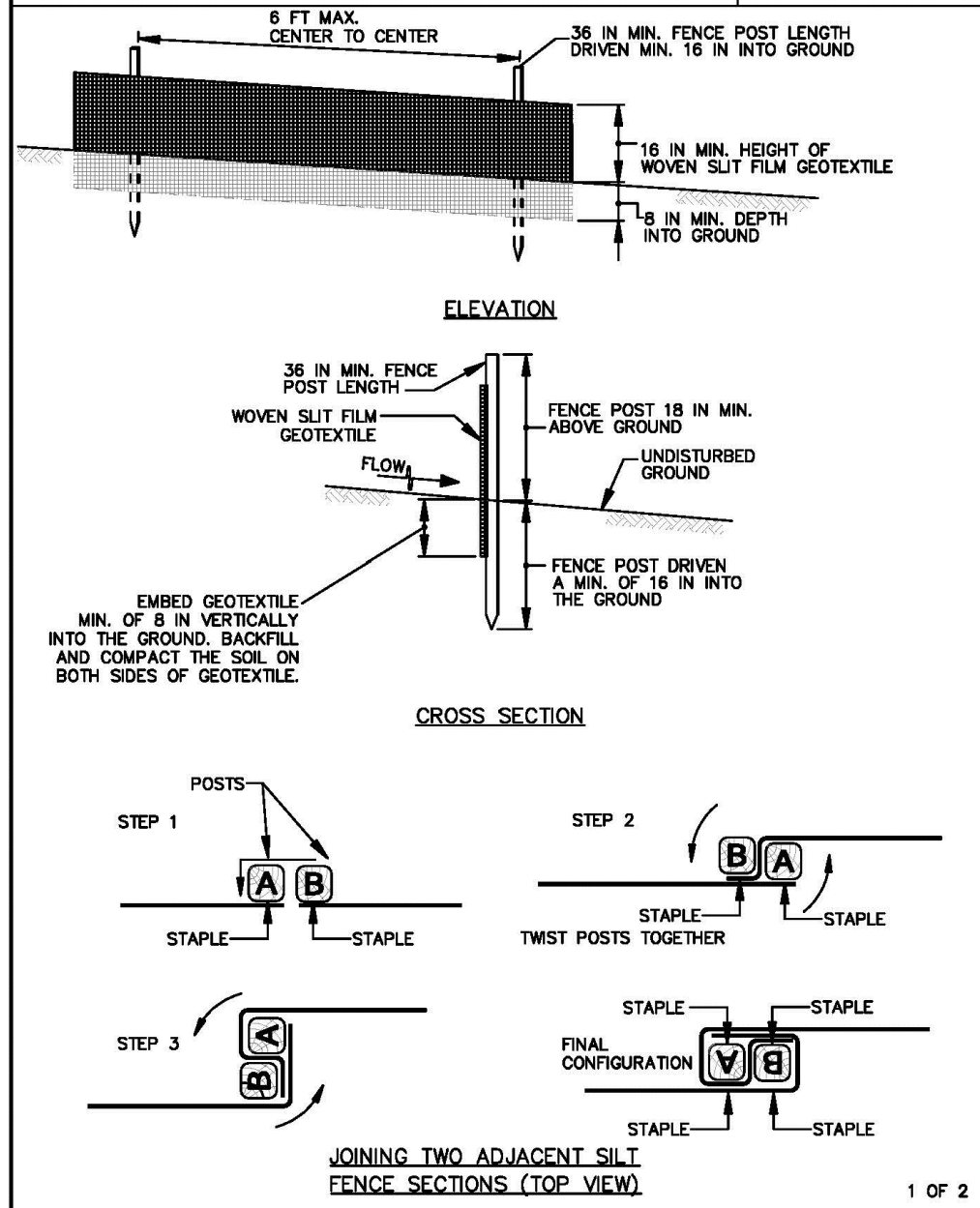
STORMWATER POLLUTION PREVENTION PLAN

FILE: 05208\_C18

DWG. **C18** 26 OF 32

DATE MAY 2017

**DETAIL E-1 SILT FENCE**



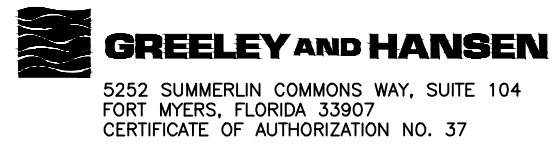
1 OF 2

**DETAIL E-1 SILT FENCE**

**CONSTRUCTION SPECIFICATIONS**

1. USE WOOD POSTS 1 1/4 X 1 1/4 ± 1/8 INCH (MINIMUM) SQUARE CUT OF SOUND QUALITY HARDWOOD. AS AN ALTERNATIVE TO WOODEN POST USE STANDARD "T" OR "U" SECTION STEEL POSTS WEIGHING NOT LESS THAN 1 POUND PER LINEAR FOOT.
2. USE 36 INCH MINIMUM POSTS DRIVEN 16 INCH MINIMUM INTO GROUND NO MORE THAN 6 FEET APART.
3. USE WOVEN SLIT FILM GEOTEXTILE AS SPECIFIED IN SECTION H-1 MATERIALS AND FASTEN GEOTEXTILE SECURELY TO UPSLOPE SIDE OF FENCE POSTS WITH WIRE TIES OR STAPLES AT TOP AND MID-SECTION.
4. PROVIDE MANUFACTURER CERTIFICATION TO THE AUTHORIZED REPRESENTATIVE OF THE INSPECTION/ENFORCEMENT AUTHORITY SHOWING THAT THE GEOTEXTILE USED MEETS THE REQUIREMENTS IN SECTION H-1 MATERIALS.
5. EMBED GEOTEXTILE A MINIMUM OF 8 INCHES VERTICALLY INTO THE GROUND. BACKFILL AND COMPACT THE SOIL ON BOTH SIDES OF FABRIC.
6. WHERE TWO SECTIONS OF GEOTEXTILE ADJOIN: OVERLAP, TWIST, AND STAPLE TO POST IN ACCORDANCE WITH THIS DETAIL.
7. EXTEND BOTH ENDS OF THE SILT FENCE A MINIMUM OF FIVE HORIZONTAL FEET UPSLOPE AT 45 DEGREES TO THE MAIN FENCE ALIGNMENT TO PREVENT RUNOFF FROM GOING AROUND THE ENDS OF THE SILT FENCE.
8. REMOVE ACCUMULATED SEDIMENT AND DEBRIS WHEN BULGES DEVELOP IN SILT FENCE OR WHEN SEDIMENT REACHES 25% OF FENCE HEIGHT. REPLACE GEOTEXTILE IF TORN. IF UNDERMINING OCCURS, REINSTALL FENCE.

2 OF 2



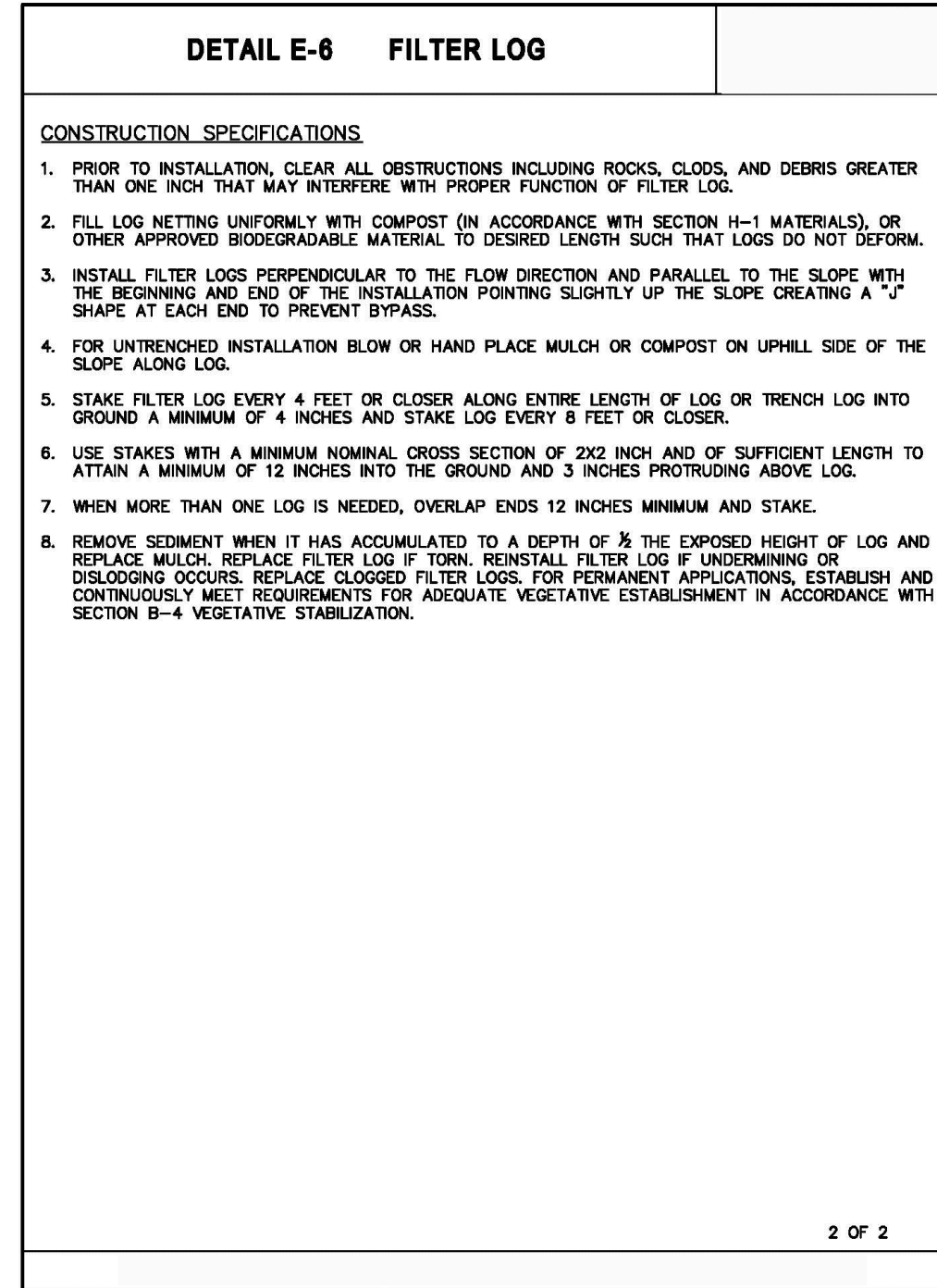
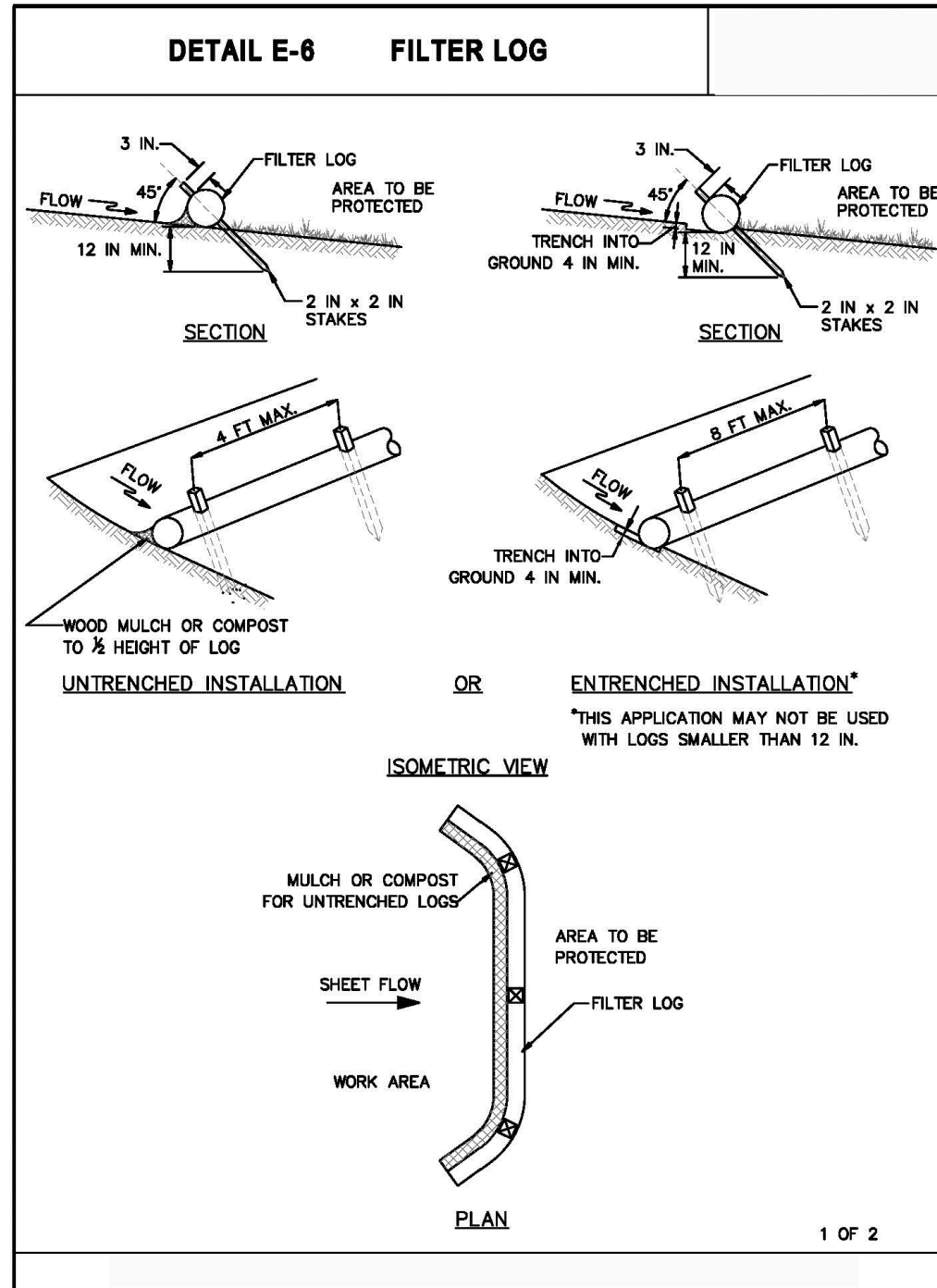
DESIGNED BRG  
 DRAWN RAM  
 CHECKED GCF

NO.	DATE	APPD	REVISION
P.E. NAME: GARY C. FERRANTE		P.E. NO. 65011	
P.E. NAME: _____		_____	
DATE: _____		_____	

LEE COUNTY UTILITIES DEPARTMENT  
 PAGE PARK WATER MAIN IMPROVEMENTS PHASE 1  
 CIVIL  
 STORMWATER POLLUTION PREVENTION DETAILS

FILE: 05208\_C19  
 DWG. **C19** 27 OF 32  
 DATE MAY 2017





**GREELEY AND HANSEN**  
 5252 SUMMERLIN COMMONS WAY, SUITE 104  
 FORT MYERS, FLORIDA 33907  
 CERTIFICATE OF AUTHORIZATION NO. 37

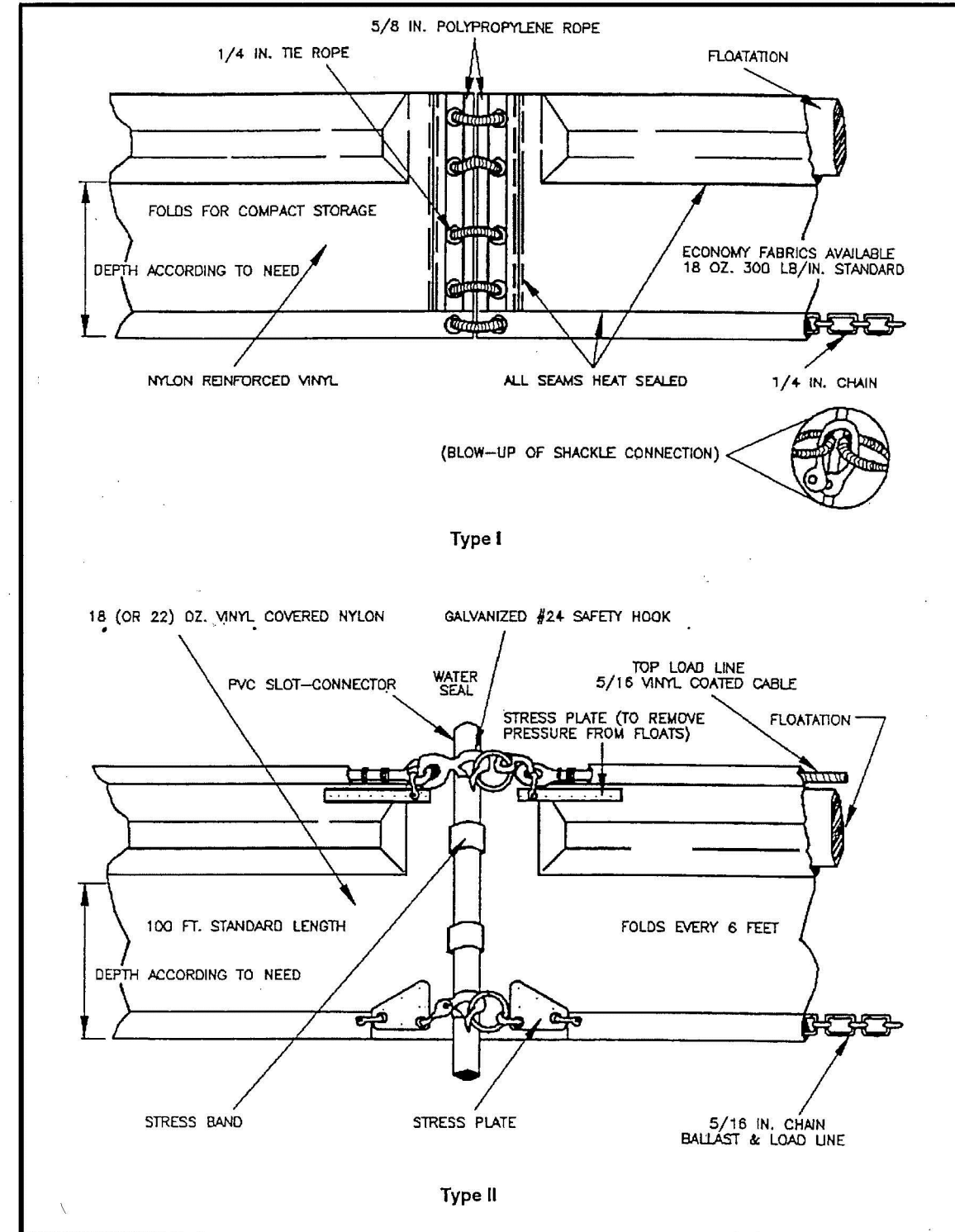
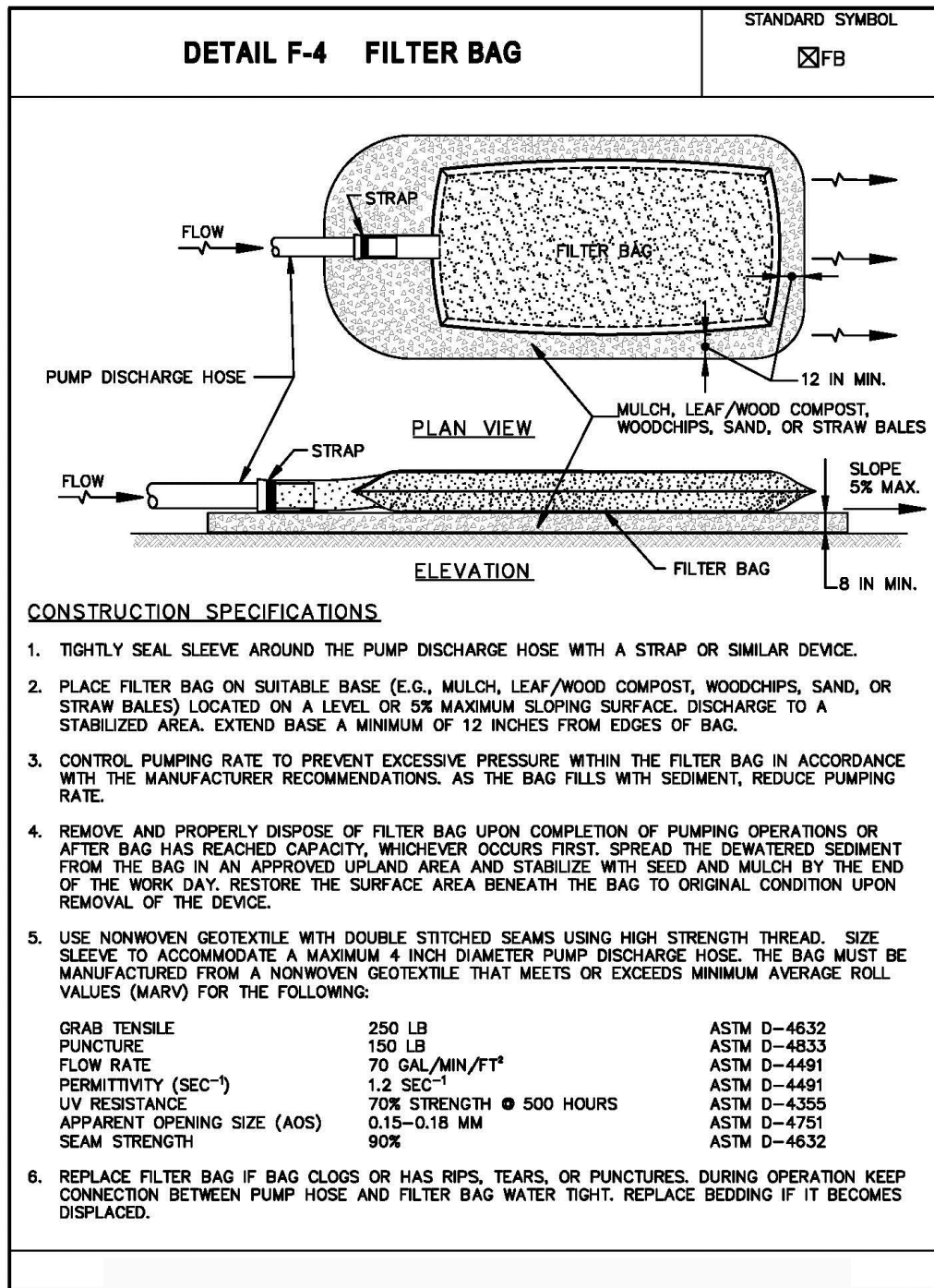
DESIGNED BRG  
 DRAWN RAM  
 CHECKED GCF

NO.	DATE	APPD	REVISION

P.E. NAME: GARY C. FERRANTE P.E. NO. 65011  
 P.E. NAME: \_\_\_\_\_  
 DATE: \_\_\_\_\_

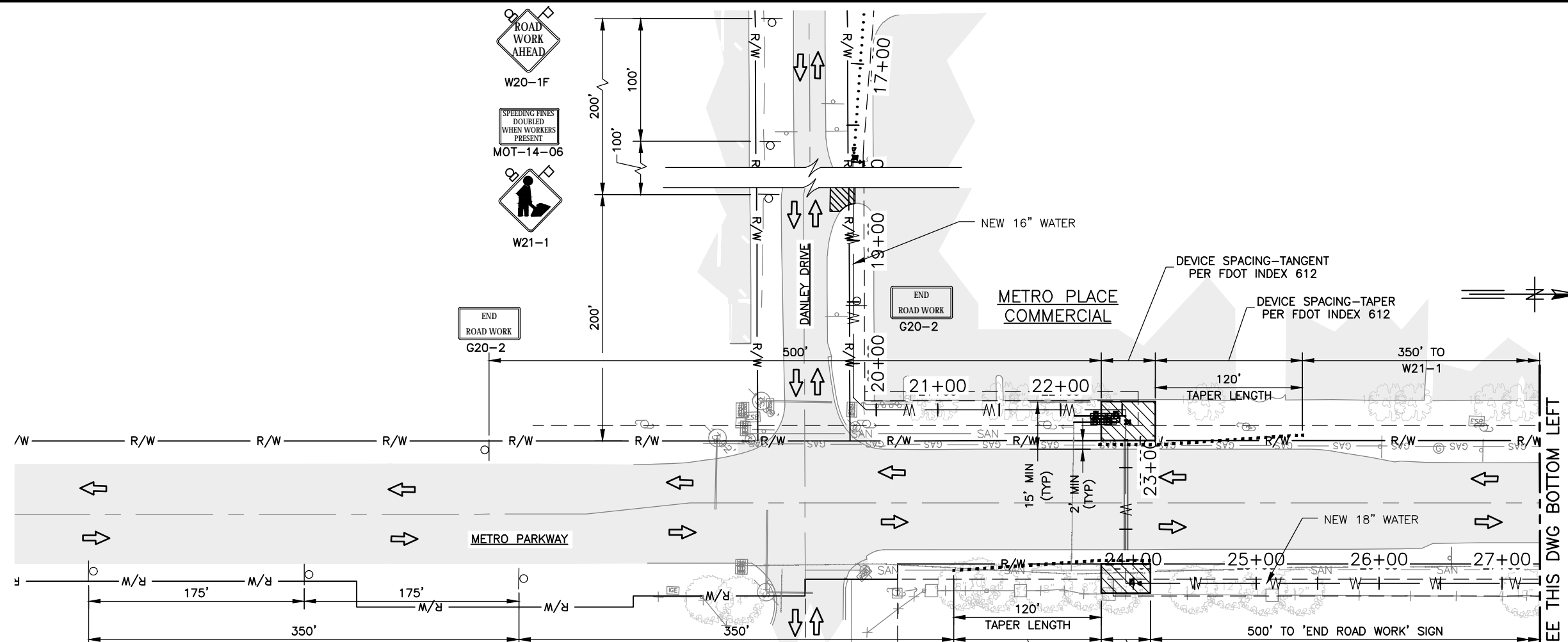
LEE COUNTY UTILITIES DEPARTMENT  
 PAGE PARK WATER MAIN IMPROVEMENTS PHASE 1  
 CIVIL  
 STORMWATER POLLUTION PREVENTION DETAILS

FILE: 05208\_C20  
 DWG. **C20** 28 OF 32  
 DATE MAY 2017



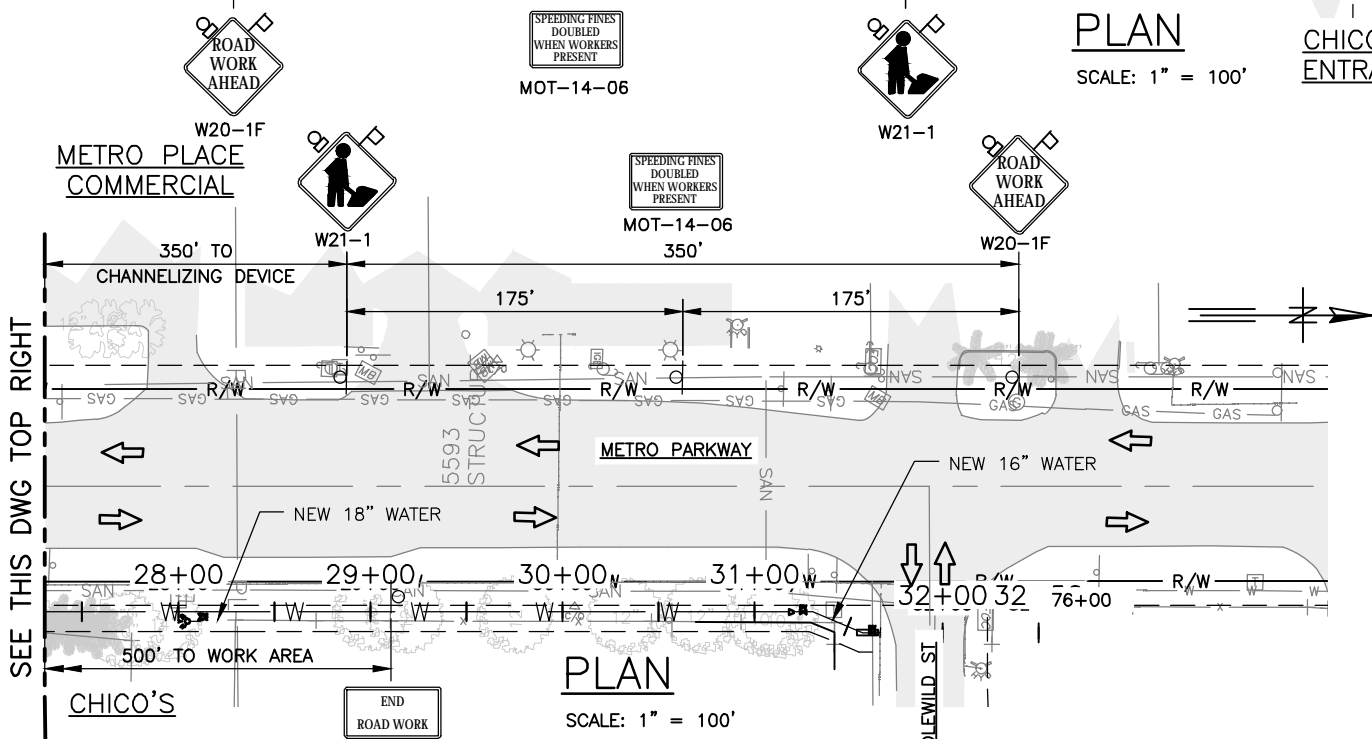
**FLOATING TURBIDITY BARRIER DETAIL**  
SCALE: NOT TO SCALE





**PLAN**

SCALE: 1" = 100'



**PLAN**

SCALE: 1" = 100'

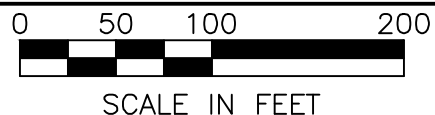
**LEGEND**

- R/W LINE
- PROPERTY LINE
- ROAD CENTERLINE
- EASEMENT
- WATER MAIN AND STATION MARKER
- FIRE HYDRANT ASSEMBLY (INCLUDES VALVE & TEE)
- WORK ZONE SIGN
- CHANNELIZING DEVICE (SEE INDEX NO. 600)
- WORK AREA
- LANE IDENTIFICATION & DIRECTION OF TRAFFIC
- SIGN W/18" X 18" (MIN) ORANGE FLAG AND TYPE 'B' LIGHT

**NOTE:**

- CHANNEL AND SIGNS PER INDEX 600 & 602, SPACING PER INDEX 612 FOR METRO PARKWAY, IDLEWILD STREET & DANLEY DRIVE.

**GREELEY AND HANSEN**  
 5252 SUMMERLIN COMMONS WAY, SUITE 104  
 FORT MYERS, FLORIDA 33907  
 CERTIFICATE OF AUTHORIZATION NO. 37



DESIGNED BRG  
 DRAWN RAM  
 CHECKED GCF

NO.	DATE	APPD	REVISION

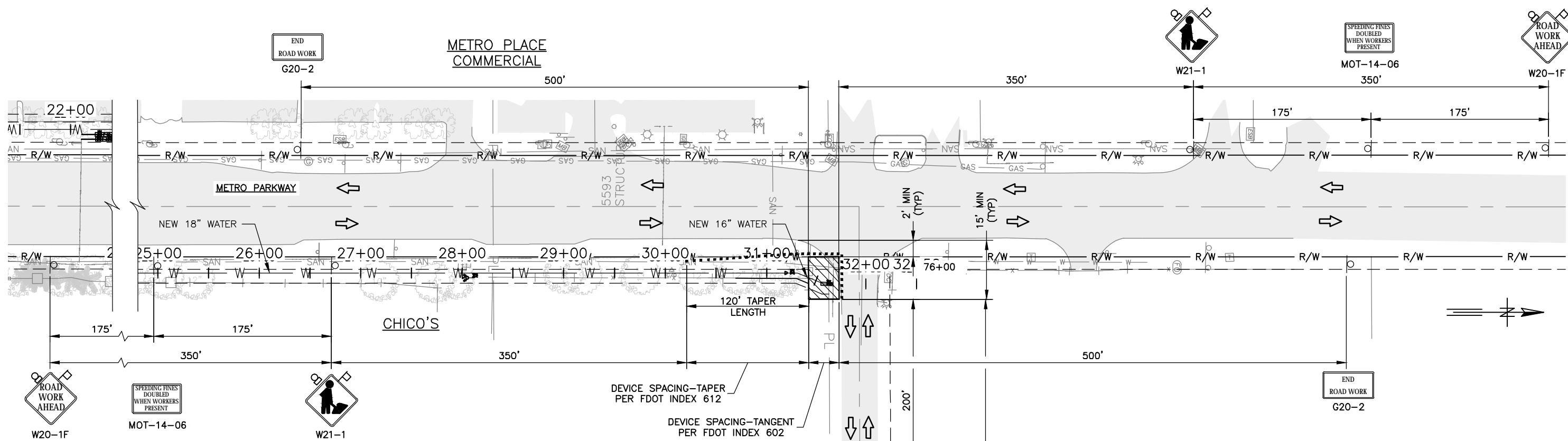
P.E. NAME: GARY C. FERRANTE P.E. NO. 65011  
 P.E. NAME: \_\_\_\_\_  
 DATE: \_\_\_\_\_

LEE COUNTY UTILITIES DEPARTMENT  
 PAGE PARK WATER MAIN IMPROVEMENTS PHASE 1  
 CIVIL  
 MAINTENANCE OF TRAFFIC PLAN 1

FILE: 05208\_C22

DWG. **C22** 30 OF 32

DATE MAY 2017



**PLAN**  
SCALE: 1" = 100'

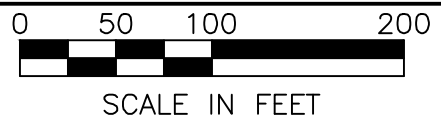
**NOTE:**

1. CHANNEL AND SIGNS PER INDEX 600 & 602, SPACING PER INDEX 612 FOR METRO PARKWAY, IDLEWILD STREET & DANLEY DRIVE.

**LEGEND**

- R/W LINE
- PROPERTY LINE
- ROAD CENTERLINE
- EASEMENT
- WATER MAIN AND STATION MARKER
- FIRE HYDRANT ASSEMBLY (INCLUDES VALVE & TEE)
- WORK ZONE SIGN
- CHANNELIZING DEVICE (SEE INDEX NO. 600)
- WORK AREA
- LANE IDENTIFICATION & DIRECTION OF TRAFFIC
- SIGN W/18" X 18" (MIN) ORANGE FLAG AND TYPE 'B' LIGHT

**GREELEY AND HANSEN**  
5252 SUMMERLIN COMMONS WAY, SUITE 104  
FORT MYERS, FLORIDA 33907  
CERTIFICATE OF AUTHORIZATION NO. 37



DESIGNED	BRG
DRAWN	RAM
CHECKED	GCF

NO.	DATE	APPD	REVISION
P.E. NAME: GARY C. FERRANTE		P.E. NO. 65011	
P.E. NAME: _____		_____	
DATE: _____		_____	

LEE COUNTY UTILITIES DEPARTMENT  
PAGE PARK WATER MAIN IMPROVEMENTS PHASE 1  
CIVIL  
MAINTENANCE OF TRAFFIC PLAN 2

FILE: 05208\_C23  
DWG. **C23** 31 OF 32  
DATE MAY 2017