

CITY OF DAYTONA BEACH

S. BEACH STREET - LIVE OAK AVE. TO BETHUNE POINT WRF

FORCEMAIN IMPROVEMENTS

PROJECT NO. 6361-3



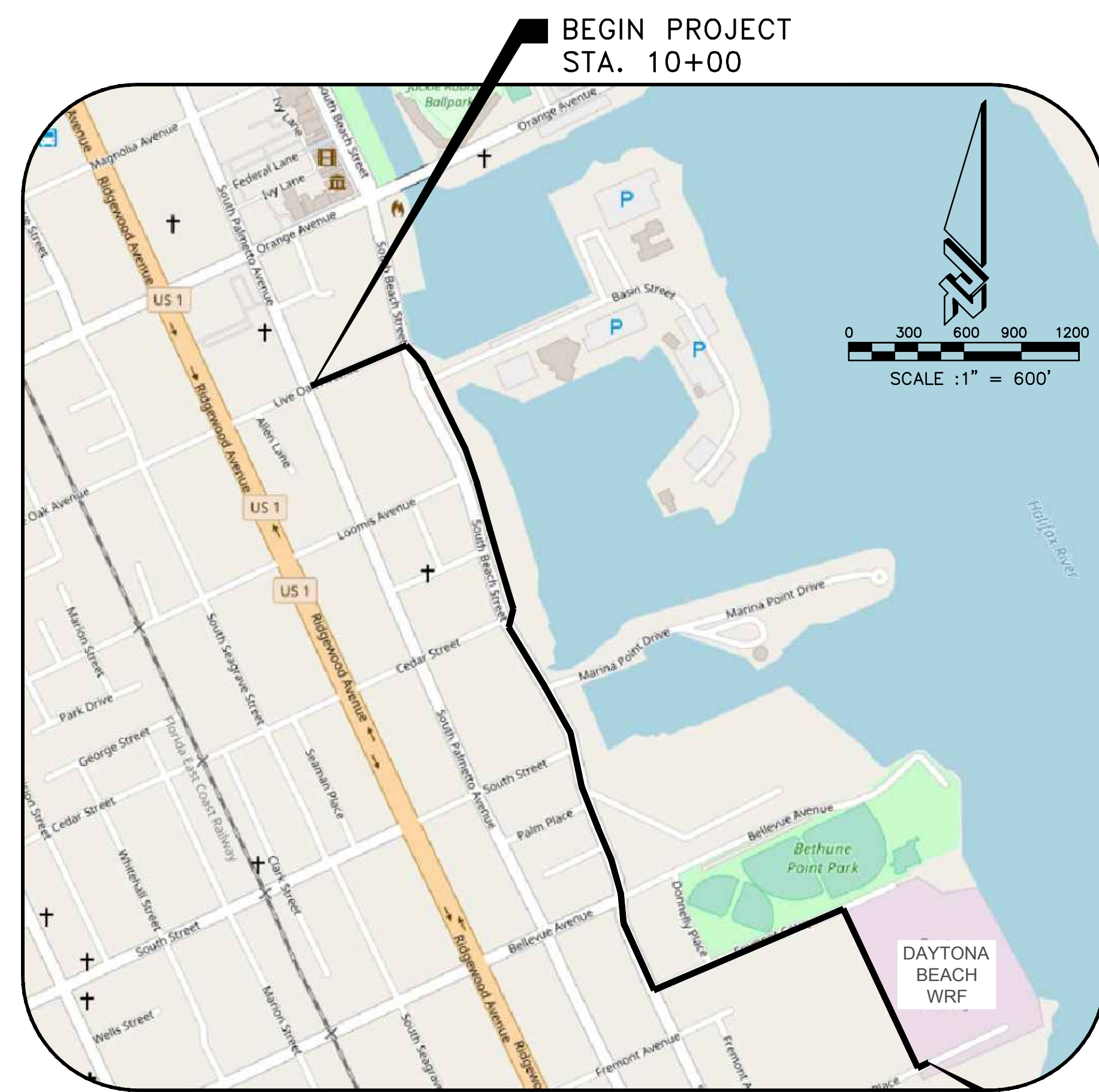
CIVIL ENGINEERING
LANDSCAPE ARCHITECTURE
ENVIRONMENTAL
PLANNING
TRANSPORTATION



**THE CITY OF
DAYTONA BEACH**
UTILITIES ENGINEERING DIVISION

CITY MANAGER:
JAMES CHISHOLM

UTILITIES DIRECTOR:
SHANNON PONITZ



LOCATION MAP

LENGTH OF PROJECT = 6,206

ZEV COHEN & ASSOCIATES, INC.
CIVIL ENGINEERS • LANDSCAPE ARCHITECTS
PLANNERS • TRANSPORTATION • ENVIRONMENTAL
WWW.ZEVCOHEN.COM

ORMOND BEACH
300 INTERCHANGE BLVD ORMOND BEACH, FL 32174
(386) 677-2482 FAX (386) 677-2505

COMPONENTS OF CONTRACT PLANS:
UTILITY PLANS
INDEX OF SHEETS

SHEET NO.	DESCRIPTION
1	COVER SHEET
2	GENERAL NOTES
3	TYPICAL CROSS SECTIONS
4	SUMMARY OF QUANTITIES
5	OVERALL PLAN
6-18	PLAN AND PROFILE SHEETS
19-20	MAINTENANCE OF TRAFFIC
21-25	CONSTRUCTION DETAILS
1-11	TOPOGRAPHIC SURVEY

CITY BID NO. 19263

PROJECT NO. 6361-3

- GOVERNING STANDARDS AND SPECIFICATIONS:
- A. AMERICAN WATER WORKS ASSOCIATION
 - B. AMERICAN NATIONAL STANDARDS INSTITUTE
 - C. AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS (A.A.S.H.T.O.)
 - D. CITY OF DAYTONA BEACH UTILITIES STANDARD DETAILS DATED 2018.
 - E. FLORIDA DEPARTMENT OF TRANSPORTATION, DESIGN STANDARDS DATED 2018. STANDARD SPECIFICATIONS FOR ROAD & BRIDGE CONSTRUCTION DATED 2000 AS AMENDED BY CONTRACT DOCUMENTS.
 - F. MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS AND HIGHWAYS CURRENT EDITION (MUTCD)

THE SCALE OF THESE PLANS MAY HAVE CHANGED DUE TO REPRODUCTION.



UTILITY PLANS
ENGINEER OF RECORD:

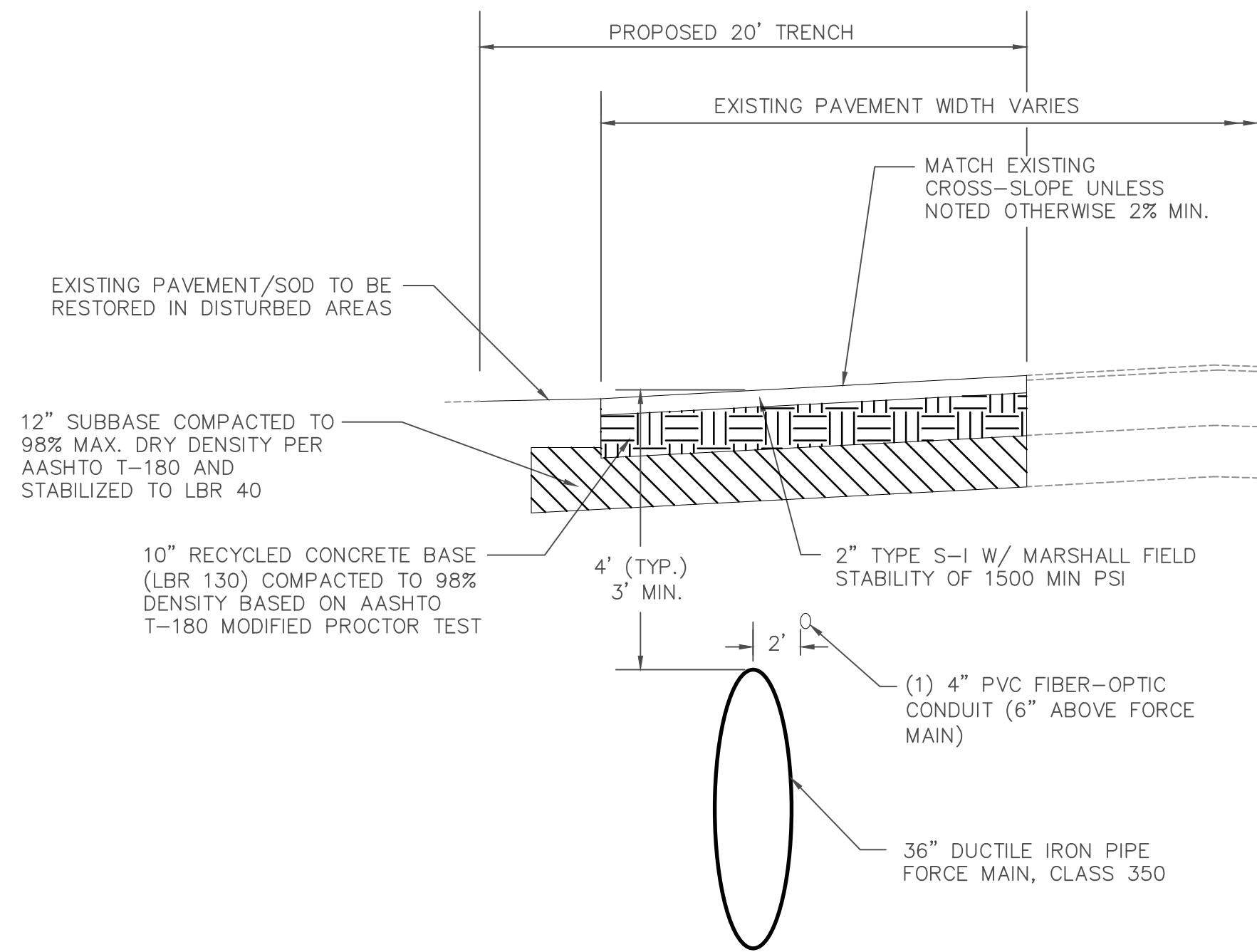
HALUK KILIC, P.E.
P.E. NUMBER: 84244

NO.	DATE	SUBMITTALS / REVISIONS
1	11/25/18	SUBMITTED TO DEP. DAYTONA BEACH
2	12/11/18	SUBMITTED TO CITY OF DAYTONA BEACH
3	4/30/19	SUBMITTED TO CITY OF DAYTONA BEACH

**S. BEACH STREET
FORCEMAIN IMPROVEMENTS
COVER SHEET**

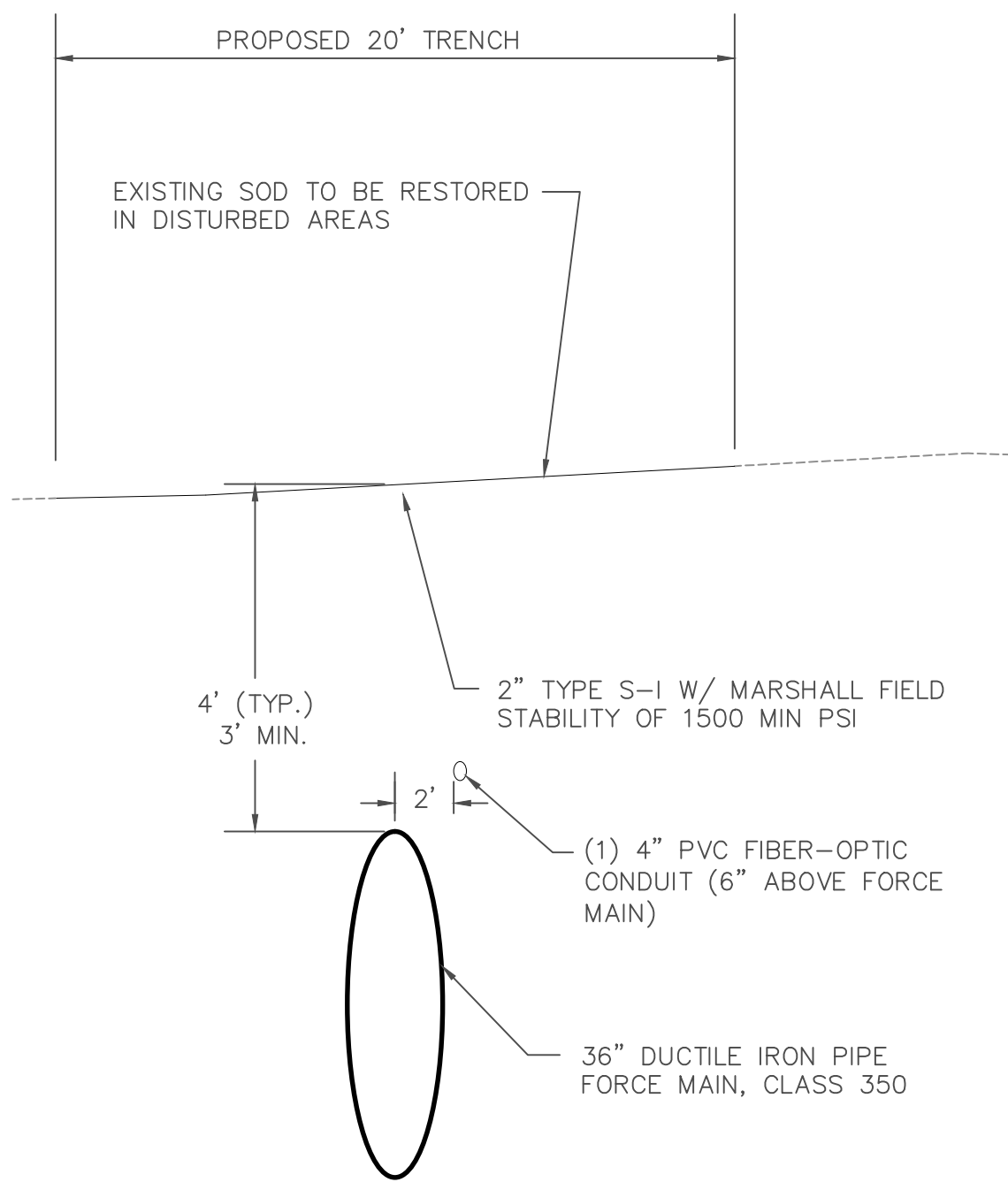
PROJECT NO. ZC 09062
DESIGNED BY: HK
DRAFTED BY: MLR
CHECKED BY: HK/BB
DRAWING FILE: 09062CV1
XREF'S:

HALUK KILIC, P.E. NO 84244
NOT VALID WITHOUT SEAL



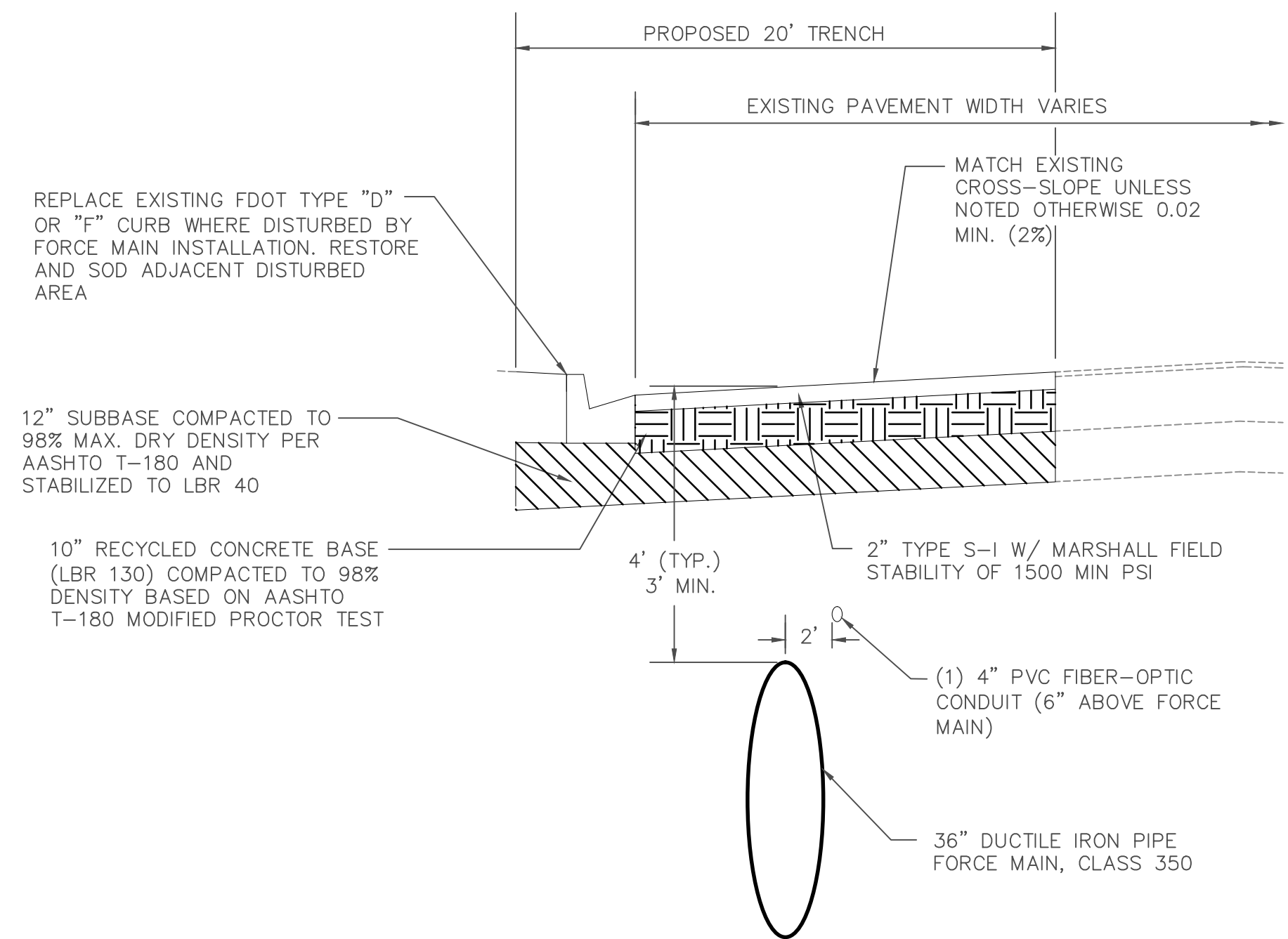
**BEACH STREET FORCE MAIN
TYPICAL SECTION — ROADWAY**

N.T.S.
STA: 17+26.29 TO 17+54.08; 17+63.25 TO 17+90.75;
26+43.24 TO 29+12.52; 29+99.25 TO 30+31.89;
46+94.70 TO 60+09.06; 60+59.50 TO 62+04.26;
71+52.81 TO 71+86.71



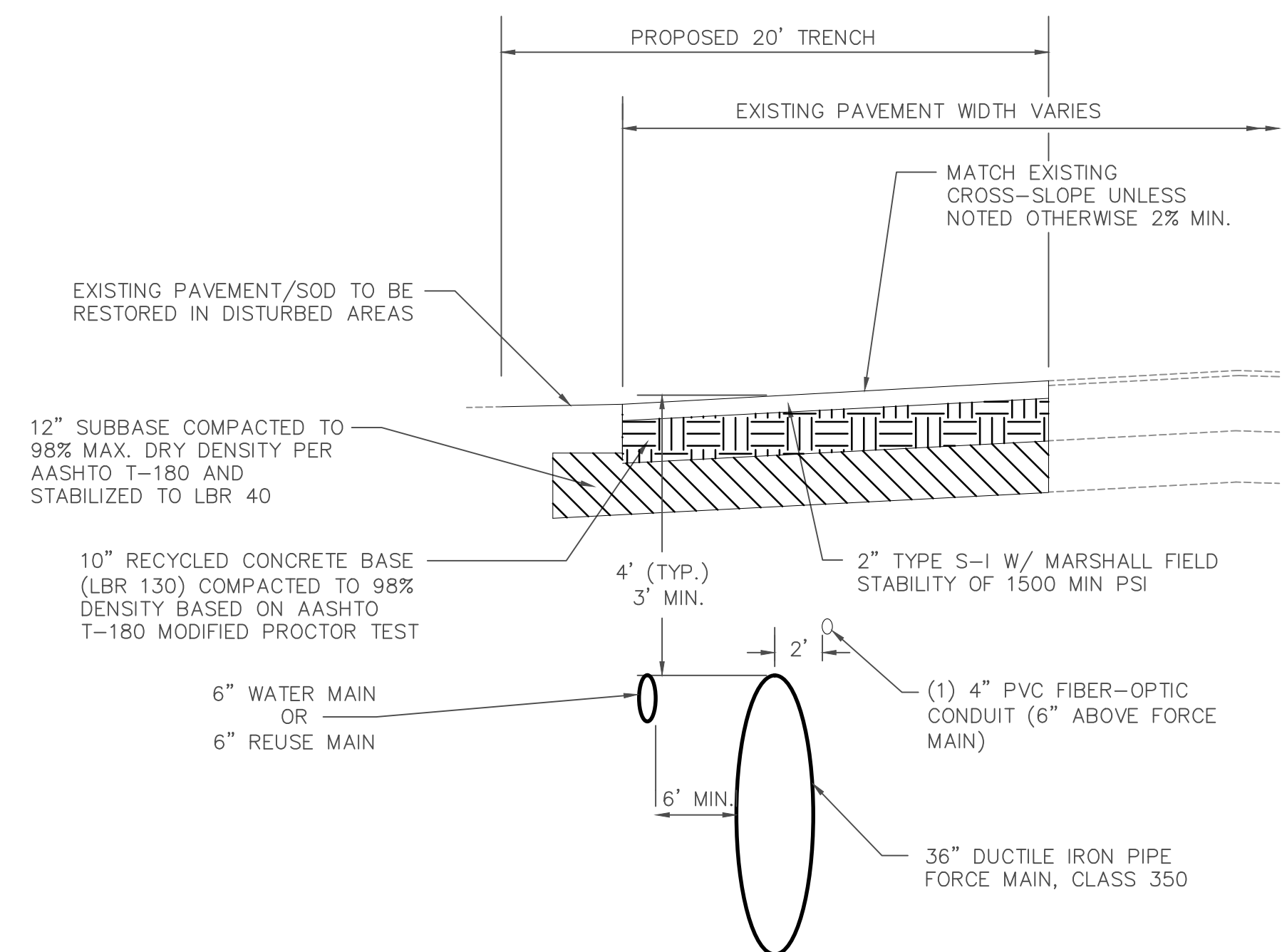
**BEACH STREET FORCE MAIN
TYPICAL SECTION — SODDED AREA**

N.T.S.
STA: 15+33.07 TO 17+26.29; 17+54.08 TO 17+63.25;
17+90.75 TO 19+90.51; 29+12.52 TO 29+99.25;
60+09.06 TO 60+59.50; 62+04.26 TO 71+52.81;
71+86.71 TO 72+06.41



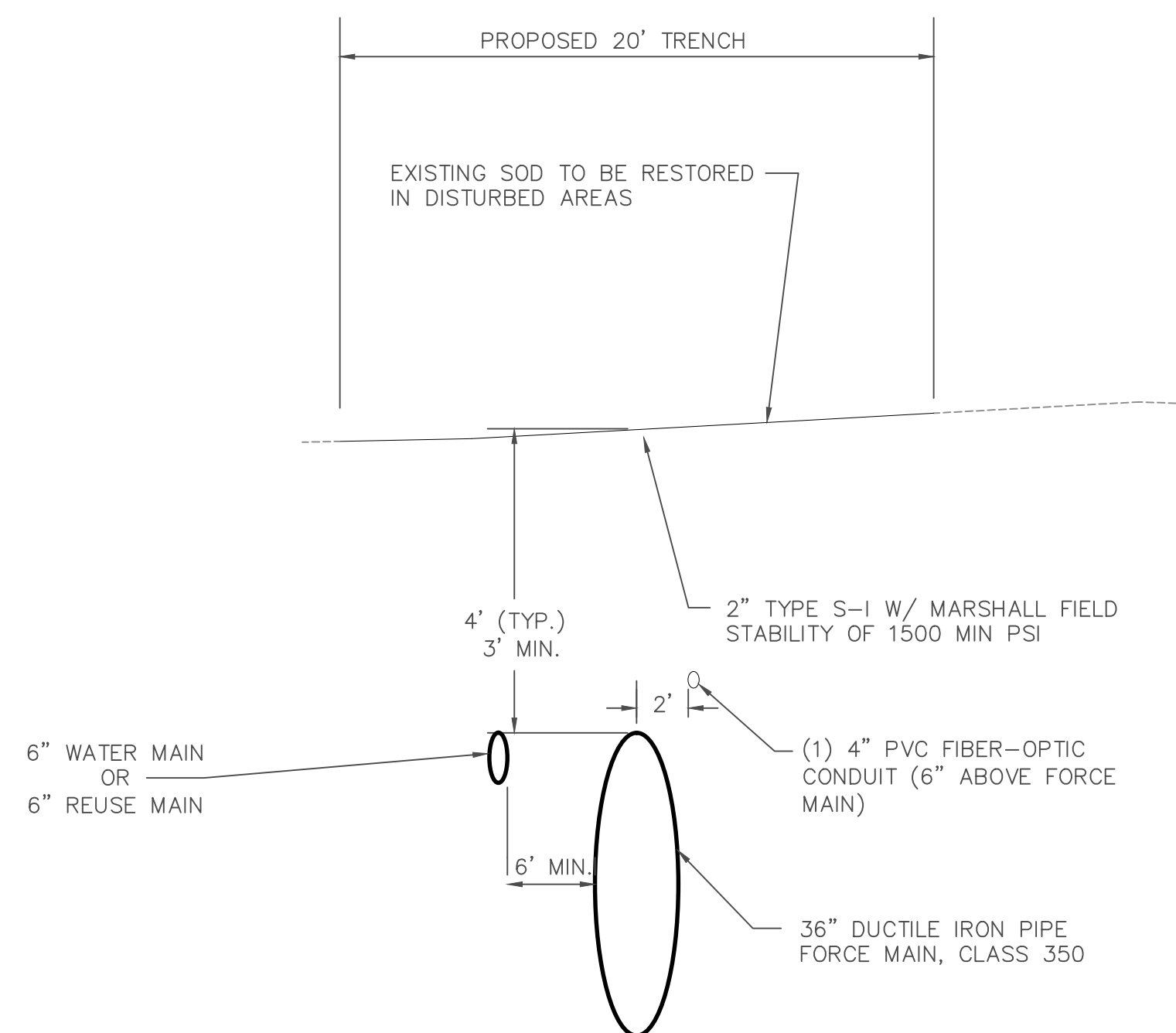
**BEACH STREET FORCE MAIN
TYPICAL SECTION WITH CURB**

N.T.S.
STA: 19+90.51 TO 26+43.24; 30+31.89 TO 30+90.82;
46+47.15 TO 46+94.70



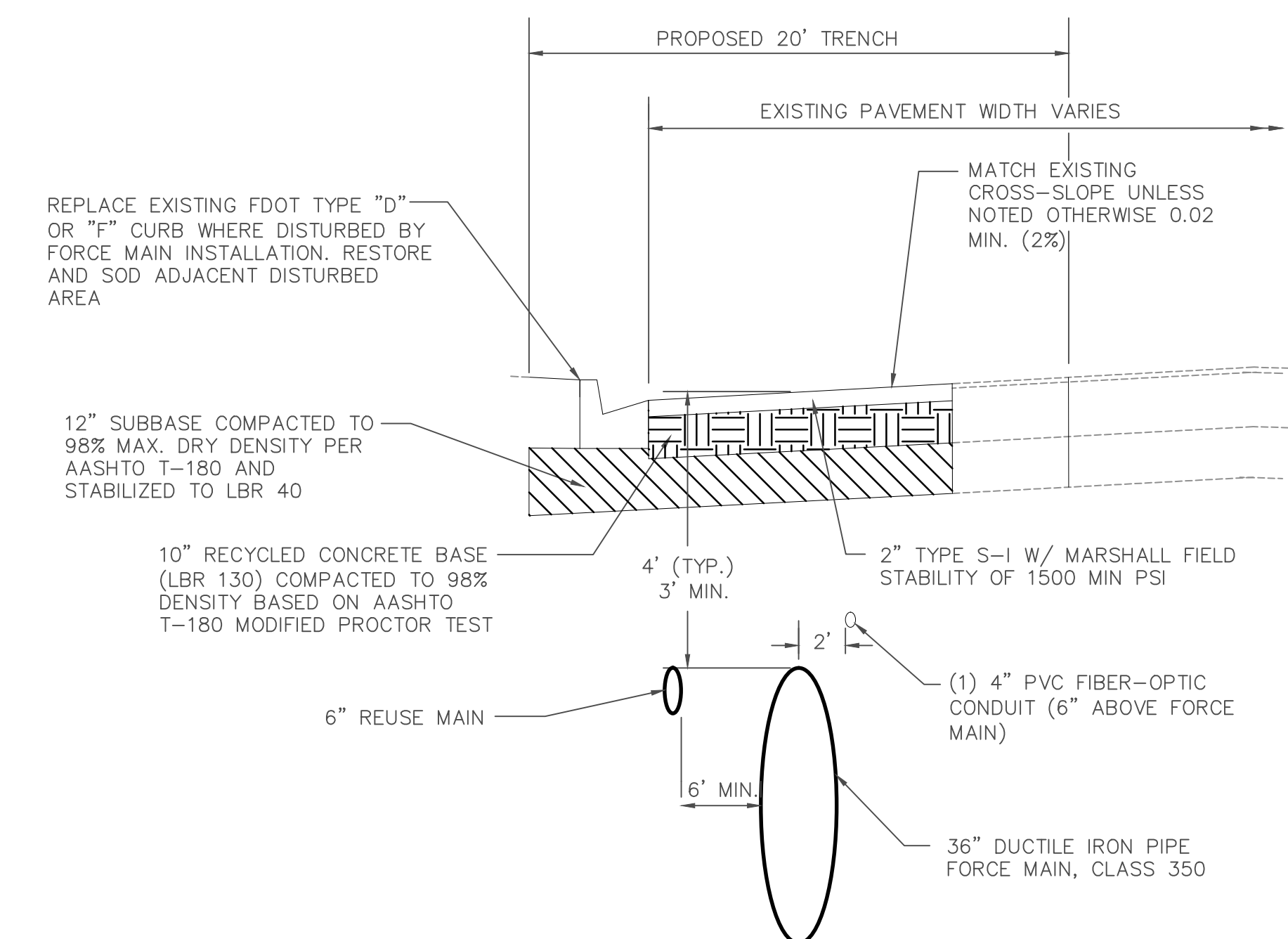
**BEACH STREET FORCE MAIN
TYPICAL SECTION WITH
WATERMAIN/RECLAIMED
WATERMAIN — ROADWAY**

N.T.S.
STA: 11+39.77 TO 11+73.12; 12+22.12 TO 14+15.64;
14+77.96 TO 15+33.07; 30+98.54 TO 34+43.47;
38+83.32 TO 39+10.56; 46+61.35;
60+75.63 TO 62+18.29;



**BEACH STREET FORCE MAIN
TYPICAL SECTION WITH
WATERMAIN/RECLAIMED
WATERMAIN — SODDED AREA**

N.T.S.
STA: 10+00.00 TO 11+39.77; 11+73.12 TO 12+22.12;
35+12.92 TO 35+90.64; 37+14.27 TO 37+67.81;
37+88.95 TO 38+83.32; 39+10.56 TO 46+10.70



**BEACH STREET FORCE MAIN
TYPICAL SECTION WITH
RECLAIMED WATERMAIN AND CURB**

N.T.S.
STA: 14+15.64 TO 14+77.96; 30+90.82 TO 30+98.54;
34+43.47 TO 35+12.92; 35+90.64 TO 37+14.27;
37+67.81 TO 37+88.95; 46+10.70 TO 46+47.15



CIVIL ENGINEERING
LANDSCAPE ARCHITECTURE
ENVIRONMENTAL
PLANNING
TRANSPORTATION

NO.	DATE	SUBMITTALS / REVISIONS
1	12-19-18	SUBMITTED TO DEP. OF DAYTONA BEACH
2	1-10-19	REVISED TO CITY OF DAYTONA BEACH
3	4-30-19	SUBMITTED TO CITY OF DAYTONA BEACH

**S. BEACH STREET
FORCE MAIN IMPROVEMENTS
TYPICAL CROSS SECTIONS**

CITY OF DAYTONA BEACH
VOLUSIA COUNTY, FLORIDA

PROJECT NO: ZC 09062
DESIGNED BY: HK
DRAFTED BY: PEJ
CHECKED BY: HK/BB
DRAWING FILE: 09062CV1
XREFS: 0902BAS
XREFS:

SUMMARY OF QUANTITIES

ITEM NUMBER	DESCRIPTION	UNIT	QUANTITY
1	MOBILIZATION/DEMOLITION	LS	1
2	MAINTENANCE OF TRAFFIC	LS	1
3	SURVEY LAYOUT, AS-BUILTS/ CERTIFIED RECORD DRAWINGS	LS	1
4	CLEARING AND GRUBBING	AC	2
5	PAVEMENT REMOVAL	SY	7,629
6	REMOVAL & DISPOSAL OF EXISTING UTILITY INFRASTRUCTURE	LF	2,056
7	REMOVAL & DISPOSAL OF EXISTING STORM STRUCTURES	EA	10
8	IRRIGATION REMOVAL AND REPLACEMENT	LS	1
9	STAKED SLT FENCE (TYPE III)	LF	8,200
10	EROSION CONTROL FOR EXISTING INLET/PIPES	LS	1
11	TREE PROTECTION	LS	1
12	8" GREEN PVC SDR-26, ASTM D-3034 SANITARY MAIN	LF	39
13	6" GREEN PVC SDR-26, ASTM D-3034 SANITARY SERVICE	LF	66
14	36" DIP (CLASS 350) FORCEMAIN	LF	5,934
15	36" DIP (45 BEND)(CLASS 350) FORCEMAIN	EA	17
16	36" DIP (22.5 BEND)(CLASS 350) FORCEMAIN	EA	5
17	36" DIP (11.25 BEND)(CLASS 350) FORCEMAIN	EA	8
18	36" PLUG VALVE - FORCEMAIN	EA	1
19	36" HDPE DR-26 FORCEMAIN	LF	159
20	36" HDPE DR-26 (45 BEND)	EA	1
21	36" HDPE DR-26 (22.5 BEND)	EA	2
22	AR/VACUUM COMBINATION RELEASE VALVE (A.R.I. MODEL D-025) OR EQUAL	EA	6
23	PULL BOX (CDR #A14-3060-36)	EA	7
24	PULL BOX (CDR #A14-3060-36)(HEAVY DUTY OR EQUAL)	EA	7
25	4" PVC CONDUIT (PVC SCHEDULE 40)	LF	6,206
26	4" PVC LONG SWEEPING 90 BENDS (SCH 40)	EA	28
27	SERVICE CONNECTIONS, UTILITY COORDINATION, ETC - SANITARY SEWER	EA	6
28	CONNECTION TO EXISTING 24" FORCEMAIN @ LIME OAK AVE.	LS	1
29	CONNECTION TO EXISTING 36" FORCE MAIN @ SOUTH STREET	LS	1
30	CONNECTION TO EXISTING 42" SANITARY SEWER @ PLANT	LS	1
31	CLASS III REINFORCED CONCRETE PIPE		
	A. 12" RCP	LF	105
	B. 15" RCP	LF	63
	C. 18" RCP	LF	360
	D. 24" RCP	LF	102
	E. 30" RCP	LF	60
	F. 36" RCP	LF	96
32	PVC STORM PIPE (WHITE), SDR-26, ASTM D-3034		
	A. 4" PVC	LF	14
	B. 6" PVC	LF	19
	C. 8" PVC	LF	21
33	TYPE "E" INLET WITH STEEL GRATE	EA	1
34	TYPE "C" INLET WITH STEEL GRATE	EA	6
35	JUNCTION BOX, DRAINAGE, SPECIAL (5' X 5')	EA	1
36	JUNCTION BOX, DRAINAGE (4' DIA., 0'-6" DEEP)	EA	1
37	COUPLING - STORM		
	A. 12" RCP TO VCP	EA	2
	B. 12" RCP TO CMP	EA	1
	C. 15" RCP TO VCP	EA	1
	D. 18" RCP TO CMP	EA	1
	E. 4" PVC TO VCP	EA	1
	F. 6" PVC TO VCP	EA	1
	G. 8" PVC TO CMP	EA	1
38	6" PVC C900 WATER MAIN	LF	147
39	6" GATE VALVE WITH VALVE BOX - WATER	EA	2
40	1" WATER SERVICE - ENDOTRACE	EA	10
41	2" WATER SERVICE - ENDOTRACE	EA	6
42	CONNECTION TO EXISTING - WATER	EA	2
43	6" PVC RECLAIMED WATER MAIN (DR-18)	LF	2,330
44	6" DIP RECLAIMED WATER MAIN (CLASS 350)	LF	70
45	6" GATE VALVE WITH VALVE BOX - RECLAIMED WATER	EA	6
46	CONNECTION TO EXISTING - RECLAIMED WATER	EA	4
47	2" ASPHALT PAVEMENT	SY	7,810
48	10" RECYCLED CONCRETE BASE COURSE	SY	7,810
49	12" SUBBASE STABILIZED TO LBR-40 98% ASSHTO	SY	7,810
50	TYPE "F" CONCRETE CURB & GUTTER	LF	398
51	TYPE "D" CONCRETE CURB	LF	73
52	SIDEWALK REMOVAL AND REPLACEMENT (6" DEEP)	SY	36
53	CONCRETE DRIVEWAY REMOVAL AND REPLACEMENT (6" DEEP)	SY	26
54	TRAFFIC STRIPING AND SIGNAGE	LS	1
55	PARKING AREA RESTRIPIING (INCLUDES HANDICAP SPACES)	LS	1
56	SODDING	SY	7,810
57	REMOVE & REPLACE PERMANENT FENCE	LF	900
58	REMOVE & REPLACE TRAFFIC LOOPS	EA	3
59	TEMPORARY CONSTRUCTION FENCE	LF	900

PAY ITEM NOTES:

- THE UNIT COST FOR EACH UTILITY PAY ITEM SHALL INCLUDE ALL COORDINATION, MATERIAL, INCIDENTAL ITEMS AND WORK NECESSARY FOR CONSTRUCTION COMPLETION IN COMPLIANCE WITH THE "CITY OF DAYTONA BEACH UTILITIES DEPARTMENT STANDARD DETAILS" (LATEST EDITION) UNLESS OTHERWISE NOTED IN THE PLANS.
- PAY ITEMS WITH FDOT ITEM NUMBERS NOTED IN THEIR DESCRIPTION ARE FLORIDA DEPARTMENT OF TRANSPORTATION (FDOT) COMPLIANT PAY ITEMS. PAY ITEMS THAT ARE NOT OTHERWISE NOTED ARE CITY COMPLIANT PAY ITEMS.
- ALL FDOT PAY ITEMS SHALL BE CONSTRUCTED, MEASURED AND PAID FOR IN ACCORDANCE WITH THEIR GOVERNING SECTION REQUIREMENTS IN THE "FDOT STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION," YEAR 2000 EDITION UNLESS OTHERWISE NOTED.
- MAINTENANCE OF TRAFFIC INCLUDES ALL WORK AND ITEMS NECESSARY FOR THE SAFE AND OPERATIONALLY EFFECTIVE MAINTENANCE OF PEDESTRIAN AND VEHICULAR TRAFFIC THAT ARE NOT INCLUDED FOR PAYMENT UNDER SEPARATE ITEMS. MAINTENANCE OF TRAFFIC TO INCLUDE TRAFFIC SIGNAL ACTUATION OR SUBSTITUTE AND REPLACEMENT OF DETECTOR LOOPS.
- REMOVAL & DISPOSAL OF UTILITY AND STORM INFRASTRUCTURE COST INCLUDES ALL WORK AND MATERIALS NECESSARY TO REMOVE AND DISPOSE OF THE INDICATED FACILITIES AND OTHER INCIDENTAL FACILITIES RENDERED UNUSABLE BY THE WORK IN THESE PLANS.
- MATERIAL UNDESIRABLE FOR BACK FILL SHALL BE INCLUDED AS PART OF THE REGULAR EXCAVATION.
- DEWATERING TO BE INCLUDED IN THE COST OF THE PIPE.
- ALL DIP FORCEMAIN SHALL BE EPOXY LINED.
- PAY ITEMS #12 & 13: DEPTH OF 10' OR GREATER SHALL BE GREEN C-905 OR DR-26.
- QUANTITIES ARE APPROXIMATE. CONTRACTOR TO VERIFY.
- ALTERNATE BEND CONFIGURATIONS TO BE APPROVED BY CITY/ENGINEER AT TIME OF SHOP DRAWING REVIEW.
- PAY ITEM #4 - CLEARING & GRUBBING INCLUDES REMOVAL & DISPOSAL OF ALL IMPROVEMENTS SUCH AS BUT NOT LIMITED TO PAVEMENT, ANY CONCRETE, SIDEWALKS, CURBING, MISC. PIPES, BOX CULVERTS, ETC. THAT ARE NOT OTHERWISE LISTED UNDER THEIR OWN PAY ITEM.
- PAY ITEM #37 SHALL BE FERNCO COUPLING OR EQUAL.
- PAY ITEM #22 - THE 2" A.R.I. D-025 COMBINATION ARV/VACUUM ASSEMBLY UNIT COST SHALL INCLUDE ALL COORDINATION WORK AND MATERIALS NECESSARY FOR CONSTRUCTION OF A COMPLETE AND ADEQUATELY FUNCTIONING VALVE ASSEMBLY TO INCLUDE BUT NOT LIMITED TO THE EXCAVATION, ROCK, VAULT, PIPING, MAIN CONNECTION, ALL FITTINGS, COMPACTION, MISCELLANEOUS GRADING AND SOD. SEE AIR/VACUUM VALVE DETAIL ON SHEET C24 FOR ADDITIONAL INFORMATION. THE LID SHALL READ "AIR RELEASE VALVE."
- PAY ITEM #25 - THE 4" PVC SCHEDULE 40 FOR FIBER OPTIC CONDUIT SHALL INCLUDE THE INSTALLATION OF A HEAVY DUTY MULE TAPE TO BE USED BY THE CITY AT A POST-CONSTRUCTION DATE TO PULL IN A FIBER OPTIC CABLE LINE THROUGH THE CONDUIT. THE COST OF FURNISHINGS AND INSTALLING THE MULE TAPE SHALL BE INCLUDED IN THE COST OF THE PVC CONDUIT. THE LID SHALL READ "FIBER OPTIC."
- PAY ITEMS #33 & 34 - TOP ELEVATIONS OF THE RECONSTRUCTED INLETS SHALL BE GRADED TO DRAIN AND STEEL RETICULINE GRATES SHALL BE USED FOR PEDESTRIAN AND BICYCLE TRAFFIC SAFETY.
- PAY ITEM #56 - CONTRACTOR TO MATCH EXISTING TYPE OF SOD.
- FOR ALL CONCRETE COLLARS (FDOT INDEX NO 430-001) THAT ARE NEEDED, THE COST WILL INCLUDE ALL WORK AND MATERIALS NECESSARY FOR CONSTRUCTION. THE COMPLETED COST OF THE COLLAR IS INCLUDED IN THE COST OF THE PIPE.
- PAY ITEMS #40 & 41 - 1" & 2" WATER SERVICE COST INCLUDES ALL WORK AND MATERIALS FOR CONSTRUCTION OF A COMPLETED AND ADEQUATELY FUNCTIONING WATER SERVICE ASSEMBLY, INCLUDING BUT NOT LIMITED TO THE EXCAVATION, ROCK, PAVEMENT REMOVAL, ENDOTRACE, PIPING, WATER MAIN CONNECTION, AND FITTINGS, PAVEMENT REPLACEMENT, COMPACTION, MISCELLANEOUS GRADING, AND SOD. WATER SERVICES ARE RUN FROM THE TAP AT WATER MAIN TO THE WATER METER. SEE DETAIL ON SHEET C25 FOR ADDITIONAL INFORMATION.



CIVIL ENGINEERING
LANDSCAPE ARCHITECTURE
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NO.	DATE	SUBMITTALS / REVISIONS
1	12/15/18	SUBMITTED TO FDOT - DAYTONA BEACH
2	1/15/19	REVISIONS TO CITY OF DAYTONA BEACH
3	4/30/19	SUBMITTED TO CITY OF DAYTONA BEACH

**S. BEACH STREET
FORCEMAIN IMPROVEMENTS
SUMMARY OF QUANTITIES**

VOLUSIA COUNTY, FLORIDA
CITY OF DAYTONA BEACH

PROJECT NO.: ZC 09062
DESIGNED BY: HK
DRAFTED BY: PEJ
CHECKED BY: HK/BB
DRAWING FILE: 09062CV1
XREF'S: 09062BAS
XREF'S:

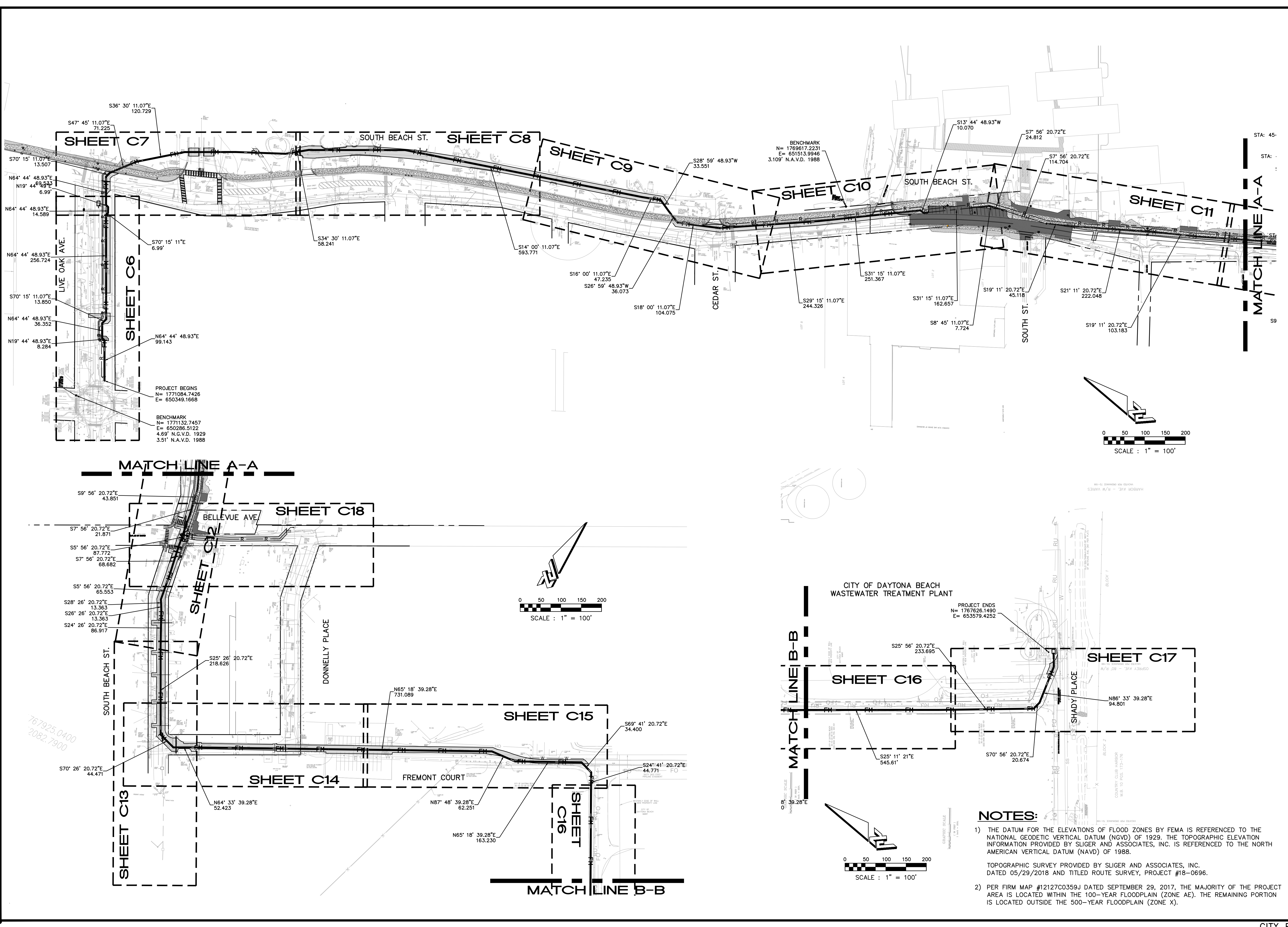
NO.	DATE	SUBMITTALS / REVISIONS
1	12-19-18	SUBMITTED TO DEP. OF TRANSPORTATION, BEACH
2	1-10-19	REVISED TO CITY OF DAYTONA BEACH
3	4-30-19	SUBMITTED TO CITY OF DAYTONA BEACH

**S. BEACH STREET
 FORCEMAIN IMPROVEMENTS
 OVERALL PLAN**

CITY OF DAYTONA BEACH
 VOLUSIA COUNTY, FLORIDA

PROJECT NO. ZC 09062
DESIGNED BY: HK/MLR
DRAFTED BY: MLR
CHECKED BY: HK/BB
DRAWING FILE: 09062PP
XREF'S: 09062BAS
XREF'S:

SHEET: C5 OF 25



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 PLANNING PLANS/CONSTRUCTION PLANS - PRINTED

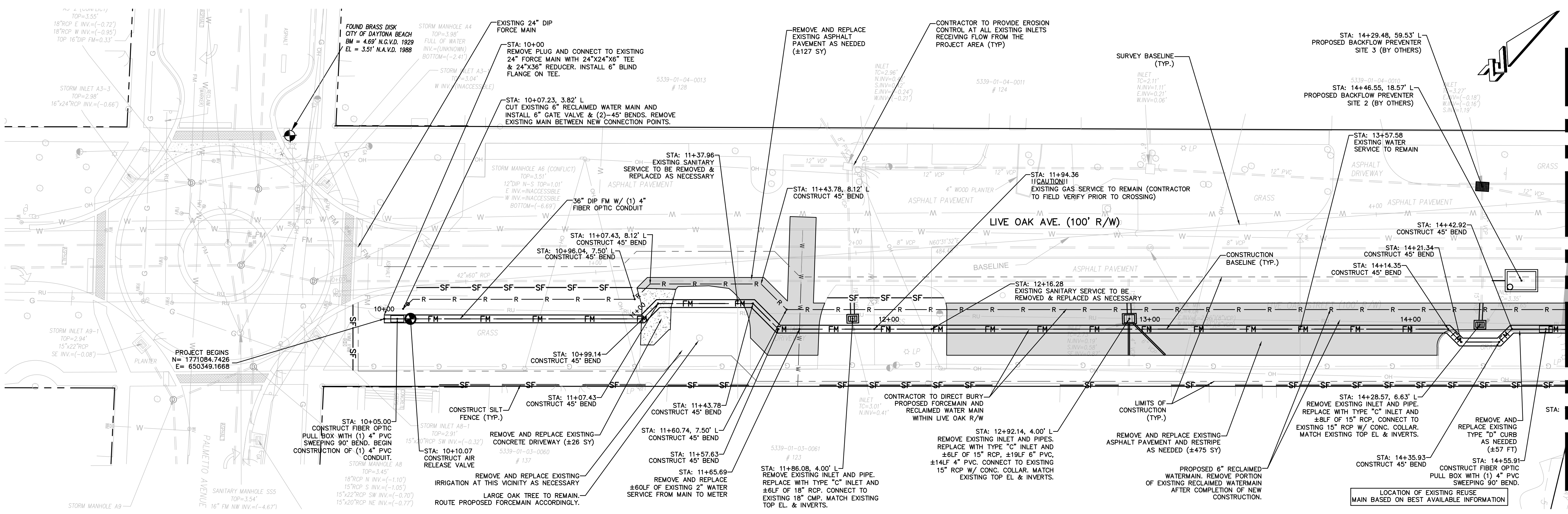
NO.	DATE	SUBMITTALS / REVISIONS
1	12-19-18	SUBMITTED TO DPB
2	1-10-19	REVISIONS TO CITY OF DAYTONA BEACH
3	4-30-19	SUBMITTED TO CITY OF DAYTONA BEACH

**S. BEACH STREET
 FORCEMAIN IMPROVEMENTS
 PLAN AND PROFILE**

PROJECT NO. ZC 09062
 DESIGNED BY: HK/MLR
 DRAFTED BY: MLR
 CHECKED BY: HK/BB

DRAWING FILE: 09062PP
 XREFS: 09062BAS
 XREFS:

MATCH SHEET C7



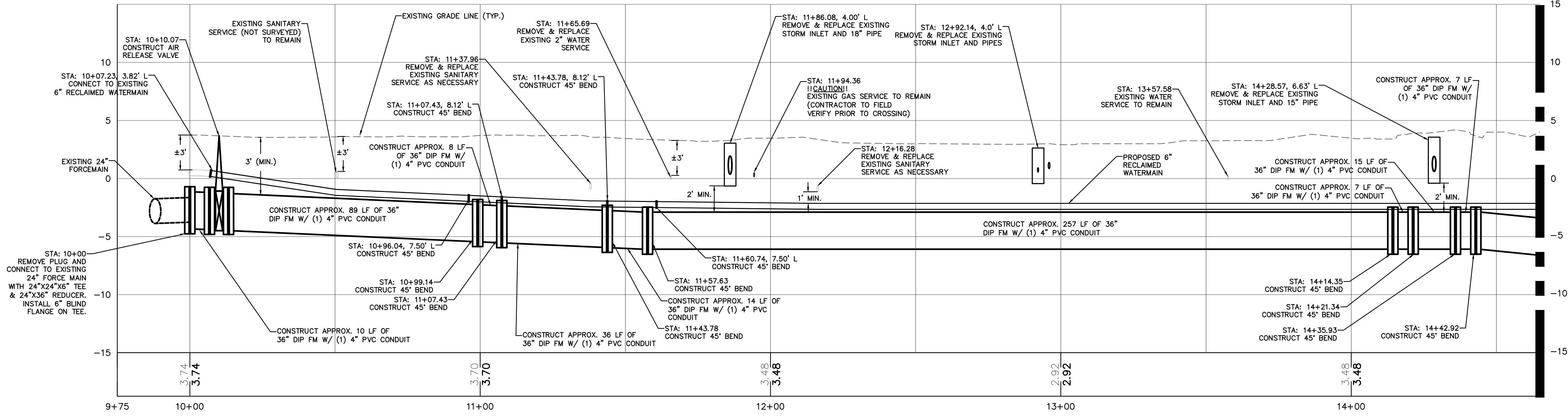
PLAN & PROFILE

PLAN VIEW: 1"=20'
 PROFILE VIEW: HORIZ: 1"=20'
 VERT: 1"=5'

- CONTRACTOR NOTES**
1. REPLACE EXISTING SOD, ASPHALT AND CONCRETE AS NEEDED. (MATCH EXISTING TYPE AND/OR SECTION)
 2. RESTORE ANY DISTURBED AREAS DUE TO CONSTRUCTION ACTIVITIES.
 3. CONTRACTOR TO VERIFY LOCATIONS OF UTILITIES PRIOR TO AND DURING CONSTRUCTION ACTIVITIES.
 4. CONTRACTOR TO REMOVE AND REPLACE FENCING AS NECESSARY (MATCH EXISTING TYPE).
 5. CONTRACTOR TO IMMEDIATELY NOTIFY ENGINEER IF ANY EXISTING UTILITY INFORMATION CONFLICTS WITH ANY INFORMATION PROVIDED ON APPROVED CONSTRUCTION PLANS.
 6. ANY SIDEWALKS OR CROSSWALKS DISTURBED DURING CONSTRUCTION MUST BE BROUGHT UP TO CURRENT A.D.A. STANDARDS.
 7. PLEASE REFER TO CITY OF DAYTONA BEACH DETAIL PIPE SEPARATION DETAIL FOR INFORMATION PERTAINING TO THE AREAS WHERE UTILITY PIPE CONFLICTS OCCUR.
 8. PLEASE NOTE THAT THE EXISTING SANITARY PIPING IS VOP (VITRIFIED CLAY PIPE) AND IS IN GOOD CONDITION WITH NO APPARENT LEAKAGE.
 9. CONTRACTOR TO VIDEO TAPE, TAKE PICTURES, AND/OR DOCUMENT THE CURRENT CONDITIONS OF THE SIDEWALKS, ADJACENT BUILDINGS, AND OTHER STRUCTURES PRIOR TO CONSTRUCTION ACTIVITIES.
 10. REFER TO SHEET C3 FOR TYPICAL CROSS-SECTIONS.
 11. FIBER OPTIC PULL BOX ON PLAN VIEW IS SHOWN FOR GRAPHICAL REPRESENTATION. CONTRACTOR TO CONSTRUCT THE FIBER OPTIC PULL BOX AND CONDUIT IN THE SAME TRENCH WITH THE PROPOSED 36" FM (PROVIDE A MIN. OF 3FT HORIZONTAL CLEARANCE BETWEEN FORCE MAIN AND FIBER OPTIC PULLBOX).
 12. CONTRACTOR TO INSTALL RECLAIMED MAIN W/ MIN. 3" VERTICAL CLEARANCE.
 13. CONTRACTOR TO FIELD LOCATE EXISTING VALVES FOR SHUTDOWN PURPOSES.
 14. CONTRACTOR TO REPLACE ANY TRAFFIC LOOPS DAMAGED DURING CONSTRUCTION.
 15. CONTRACTOR TO PAVE PORTIONS OF THE PROJECT AS WORK ZONE ADVANCES ALONG ROUTE.
 16. CONTRACTOR TO CONTINUOUS CLEAN SITE AS WORK ZONE ADVANCES.
 17. EXCAVATION MATERIAL TO BE HAULED OFF AND DISPOSED BY CONTRACTOR.
 18. CONTRACTOR TO COORDINATE NEIGHBORHOOD MEETING PRIOR TO COMMENCEMENT OF CONSTRUCTION.
 19. CONTRACTOR TO STABILIZE EXISTING POWER POLES IF NECESSARY FOR PROPOSED CONSTRUCTION.
 20. CONTRACTOR SHALL PROTECT & MAINTAIN THE INTEGRITY OF ALL EXPOSED PRESSURIZED UTILITY PIPES DURING CONSTRUCTION. ANY COST ASSOCIATED WITH THIS ITEM SHALL BE INCLUDED IN THE COST OF 36" DIP FORCEMAIN PIPE CONSTRUCTION.
 21. CONTRACTOR SHALL SUBMIT INTERIM AS-BUILT DRAWINGS OF WORK COMPLETED WITH EACH PAY APPLICATION.
 22. CONTRACTOR TO ESTABLISH CONSTRUCTION BENCHMARKS AS NEEDED.

PROPOSED LEGEND	
	PROPOSED SHARED USE PATH/SIDEWALK SWEETHEART TRAIL PROJECT
	36" DIP FORCE MAIN
	PROPOSED PAVEMENT
	PROPOSED SHARED USE PATH/SIDEWALK SWEETHEART TRAIL PROJECT
	APPROXIMATE LIMITS OF CONSTRUCTION
	WATERMAIN OR SERVICE
	RECLAIMED WATERMAIN
	FINISHED GRADE ELEVATION

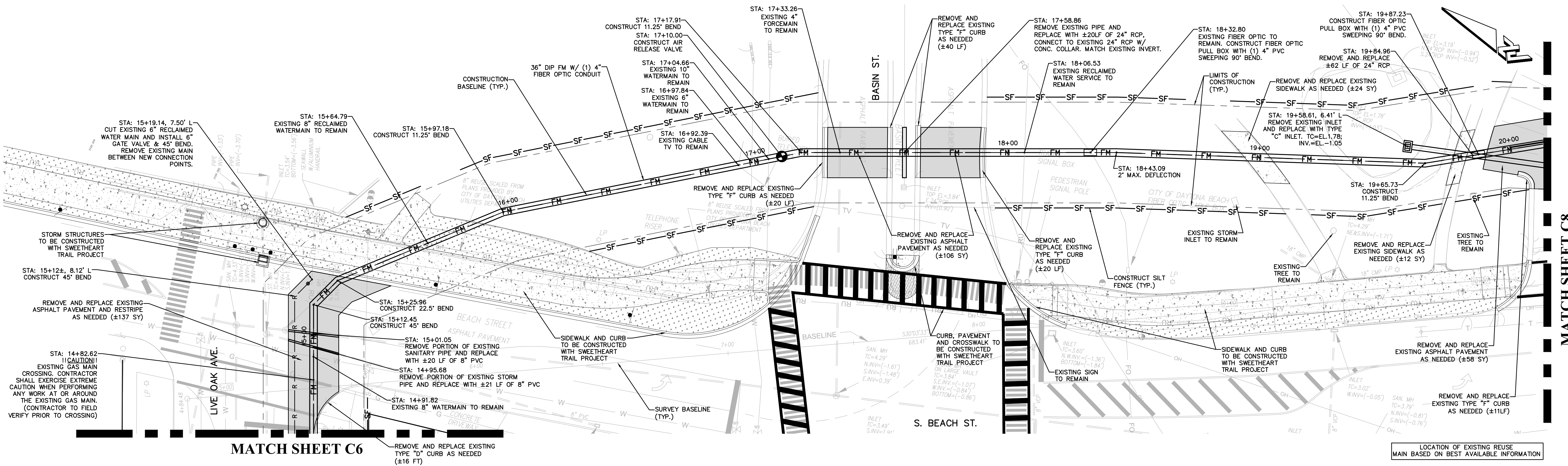
EXISTING LEGEND	
	BURIED SANITARY SEWER
	BURIED TELEPHONE LINE
	BURIED WATER LINE
	BURIED ELECTRIC LINE
	BURIED GAS LINE
	BURIED TELEVISION LINE
	BURIED FORCE MAIN
	AERIAL UTILITY LINE
	MAIL BOX
	SIGN
	TREE
	FIRE HYDRANT
	WATER METER
	GUY ANCHOR
	UTILITY POLE
	IRON ROD WITH CAP
	ELECTRIC BOX
	IRON PIPE
	TELEPHONE BOX
	ELECTRIC METER
	TRAFFIC SIGNAL BOX
	CLEAN OUT
	CABLE TELEVISION BOX
	CONCRETE MONUMENT
	PERMANENT REFERENCE MONUMENT
	PERMANENT CONTROL POINT
	LIGHT POLE
	WATER VALVE
	EXISTING ELEVATION
	TRAFFIC LIGHT POLE



NO.	DATE	SUBMITTALS / REVISIONS
1	12-18-18	SUBMITTED TO DEPT. OF DAYTONA BEACH
2	12-18-18	REVISIONS TO CITY OF DAYTONA BEACH
3	4-26-19	SUBMITTED TO CITY OF DAYTONA BEACH

**S. BEACH STREET
 FORCEMAIN IMPROVEMENTS
 PLAN AND PROFILE**

PROJECT NO. ZC 09062
 DESIGNED BY: HK/MLR
 DRAFTED BY: MLR
 CHECKED BY: HK/BB
 DRAWING FILE: 09062PP
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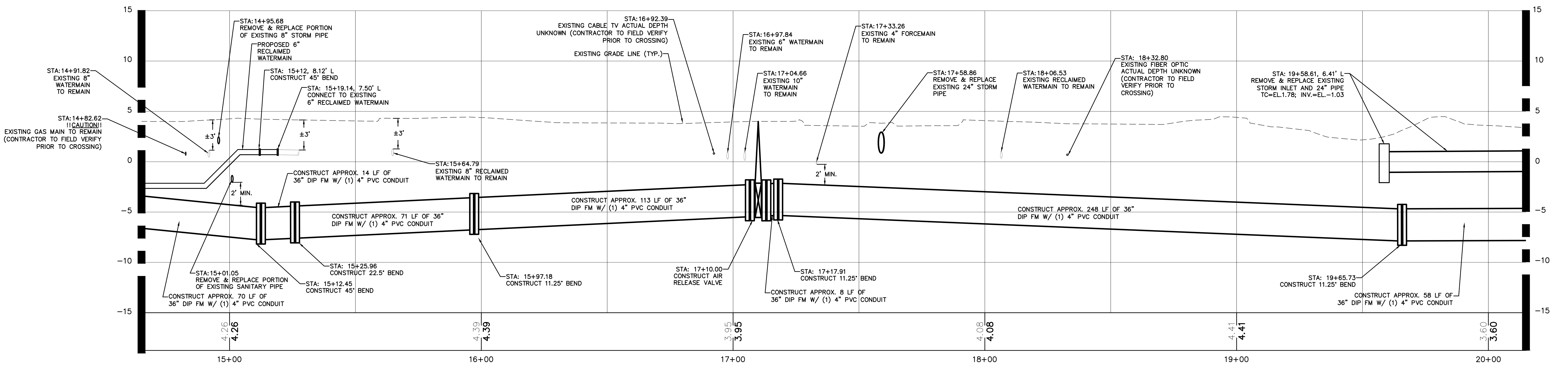
- CONTRACTOR NOTES**
- REPLACE EXISTING SOD, ASPHALT AND CONCRETE AS NEEDED. (MATCH EXISTING TYPE AND/OR SECTION)
 - RESTORE ANY DISTURBED AREAS DUE TO CONSTRUCTION ACTIVITIES.
 - CONTRACTOR TO VERIFY LOCATIONS OF UTILITIES PRIOR TO AND DURING CONSTRUCTION ACTIVITIES.
 - CONTRACTOR TO REMOVE AND REPLACE FENCING AS NECESSARY (MATCH EXISTING TYPE)
 - CONTRACTOR TO IMMEDIATELY NOTIFY ENGINEER IF ANY EXISTING UTILITY INFORMATION CONFLICTS WITH ANY INFORMATION PROVIDED ON APPROVED CONSTRUCTION PLANS.
 - ANY SIDEWALKS OR CROSSWALKS DISTURBED DURING CONSTRUCTION MUST BE BROUGHT UP TO CURRENT A.D.A. STANDARDS.
 - PLEASE REFER TO CITY OF DAYTONA BEACH DETAIL PIPE SEPARATION DETAIL FOR INFORMATION PERTAINING TO THE AREAS WHERE UTILITY PIPE CONFLICTS OCCUR.
 - PLEASE NOTE THAT THE EXISTING SANITARY PIPING IS VCP (VITRIFIED CLAY PIPE) AND IS IN GOOD CONDITION WITH NO APPARENT LEAKAGE
 - CONTRACTOR TO VIDEO TAPE, TAKE PICTURES, AND/OR DOCUMENT THE CURRENT CONDITIONS OF THE SIDEWALKS, ADJACENT BUILDINGS, AND OTHER STRUCTURES PRIOR TO CONSTRUCTION ACTIVITIES.
 - REFER TO SHEET C3 FOR TYPICAL CROSS-SECTIONS.
 - FIBER OPTIC PULL BOX ON PLAN VIEW IS SHOWN FOR GRAPHICAL REPRESENTATION. CONTRACTOR TO CONSTRUCT THE FIBER OPTIC PULL BOX AND CONDUIT IN THE SAME TRENCH WITH THE PROPOSED 36" FM (PROVIDE A MIN. OF 3FT HORIZONTAL CLEARANCE BETWEEN FORCE MAIN AND FIBER OPTIC PULLBOX).
 - CONTRACTOR TO INSTALL RECLAIMED MAIN W/ MIN. 3" VERTICAL CLEARANCE.
 - CONTRACTOR TO FIELD LOCATE EXISTING VALVES FOR SHUTDOWN PURPOSES.
 - CONTRACTOR TO REPLACE ANY TRAFFIC LOOPS DAMAGED DURING CONSTRUCTION.
 - CONTRACTOR TO PAVE PORTIONS OF THE PROJECT AS WORK ZONE ADVANCES ALONG ROUTE.
 - CONTRACTOR TO CONTINUOUSLY CLEAN SITE AS WORK ZONE ADVANCES.
 - EXCAVATION MATERIAL TO BE HAULED OFF AND DISPOSED BY CONTRACTOR.
 - CONTRACTOR TO COORDINATE NEIGHBORHOOD MEETING PRIOR TO COMMENCEMENT OF CONSTRUCTION.
 - CONTRACTOR TO STABILIZE EXISTING POWER POLES IF NECESSARY FOR PROPOSED CONSTRUCTION.
 - CONTRACTOR SHALL PROTECT & MAINTAIN THE INTEGRITY OF ALL EXPOSED PRESSURIZED UTILITY PIPES DURING CONSTRUCTION. ANY COST ASSOCIATED WITH THIS ITEM SHALL BE INCLUDED IN THE COST OF 36" DIP FORCEMAIN PIPE CONSTRUCTION.
 - CONTRACTOR SHALL SUBMIT INTERIM AS-BUILT DRAWINGS OF WORK COMPLETED WITH EACH PAY APPLICATION.
 - CONTRACTOR TO ESTABLISH CONSTRUCTION BENCHMARKS AS NEEDED.

PLAN & PROFILE

PLAN VIEW: 1"=20'
 PROFILE VIEW: HORIZ: 1"=20'
 VERT: 1"=5'

PROPOSED LEGEND		
	PROPOSED SHARED USE PATH/SIDEWALK SWEETHEART TRAIL PROJECT	
	36" DIP FORCE MAIN	
	PROPOSED CURB (MATCH EXISTING)	
	PROPOSED PAVEMENT	
	PROPOSED SOD SWEETHEART TRAIL PROJECT	
	APPROXIMATE LIMITS OF CONSTRUCTION	
	WATERMAIN OR SERVICE	
	RECLAIMED WATERMAIN	
	FINISHED GRADE ELEVATION	

EXISTING LEGEND			
	BURIED SANITARY SEWER		MAIL BOX
	BURIED TELEPHONE LINE		SIGN
	BURIED WATER LINE		TREE
	BURIED ELECTRIC LINE		FIRE HYDRANT
	BURIED GAS LINE		WATER METER
	BURIED FORCE MAIN		GUY ANCHOR
	AERIAL UTILITY LINE		IRON ROD WITH CAP
	ELECTRIC BOX		PERMANENT CONTROL POINT
	IRON PIPE		LIGHT POLE
	TELEPHONE BOX		WATER VALVE
	ELECTRIC METER		EXISTING ELEVATION
	TRAFFIC SIGNAL BOX		CABLE TELEVISION BOX
	CLEAN OUT		TV TRAFFIC LIGHT POLE
	CONCRETE MONUMENT		PERMANENT REFERENCE MONUMENT

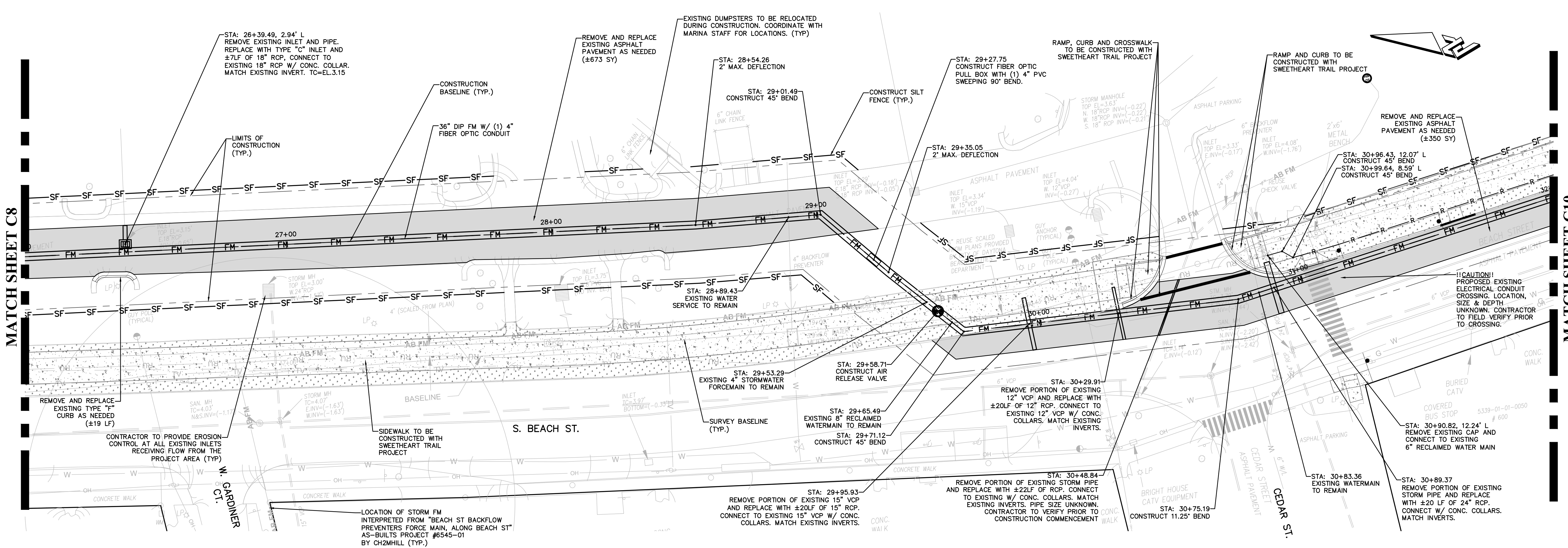


NO.	DATE	SUBMITTALS / REVISIONS
1	12-19-18	SUBMITTED TO DPB
2	12-20-18	REVISIONS TO DPB
3	4-30-19	SUBMITTED TO CITY OF DAYTONA BEACH

**S. BEACH STREET
 FORCEMAIN IMPROVEMENTS
 PLAN AND PROFILE**

PROJECT NO.:	ZC 09062
DESIGNED BY:	HK/MLR
DRAFTED BY:	MLR
CHECKED BY:	HK/BB
DRAWING FILE:	09062PP
XREF'S:	09062BAS

SHEET:	C9	OF	25
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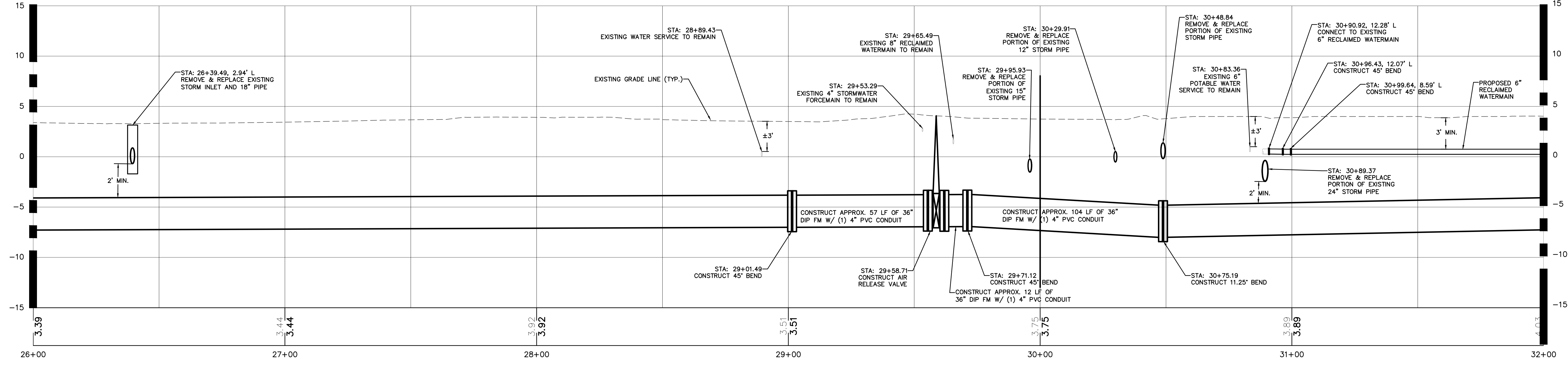
- CONTRACTOR NOTES**
- REPLACE EXISTING SOD, ASPHALT AND CONCRETE AS NEEDED. (MATCH EXISTING TYPE AND/OR SECTION)
 - RESTORE ANY DISTURBED AREAS DUE TO CONSTRUCTION ACTIVITIES.
 - CONTRACTOR TO VERIFY LOCATIONS OF UTILITIES PRIOR TO AND DURING CONSTRUCTION ACTIVITIES.
 - CONTRACTOR TO REMOVE AND REPLACE FENCING AS NECESSARY (MATCH EXISTING TYPE)
 - CONTRACTOR TO IMMEDIATELY NOTIFY ENGINEER IF ANY EXISTING UTILITY INFORMATION CONFLICTS WITH ANY INFORMATION PROVIDED ON APPROVED CONSTRUCTION PLANS.
 - ANY SIDEWALKS OR CROSSWALKS DISTURBED DURING CONSTRUCTION MUST BE BROUGHT UP TO CURRENT A.D.A. STANDARDS.
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 - CONTRACTOR TO INSTALL RECLAIMED MAIN W/ MIN. 3' VERTICAL CLEARANCE.
 - CONTRACTOR TO FIELD LOCATE EXISTING VALVES FOR SHUTDOWN PURPOSES.
 - CONTRACTOR TO REPLACE ANY TRAFFIC LOOPS DAMAGED DURING CONSTRUCTION.
 - CONTRACTOR TO PAVE PORTIONS OF THE PROJECT AS WORK ZONE ADVANCES ALONG ROUTE.
 - CONTRACTOR TO CONTINUOUS CLEAN SITE AS WORK ZONE ADVANCES.
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PLAN & PROFILE

PLAN VIEW: 1"=20'
 PROFILE VIEW: HORIZ: 1"=20'
 VERT: 1"=5'

PROPOSED LEGEND			
[Symbol]	PROPOSED SHARED USE PATH/SIDEWALK SWEETHEART TRAIL PROJECT	[Symbol]	PROPOSED SOD SWEETHEART TRAIL PROJECT
[Symbol]	36" DIP FORCE MAIN	[Symbol]	APPROXIMATE LIMITS OF CONSTRUCTION
[Symbol]	PROPOSED CURB (MATCH EXISTING)	[Symbol]	WATERMAIN OR SERVICE
[Symbol]	PROPOSED PAVEMENT	[Symbol]	RECLAIMED WATERMAIN
[Symbol]	PROPOSED PAVEMENT	[Symbol]	FINISHED GRADE ELEVATION

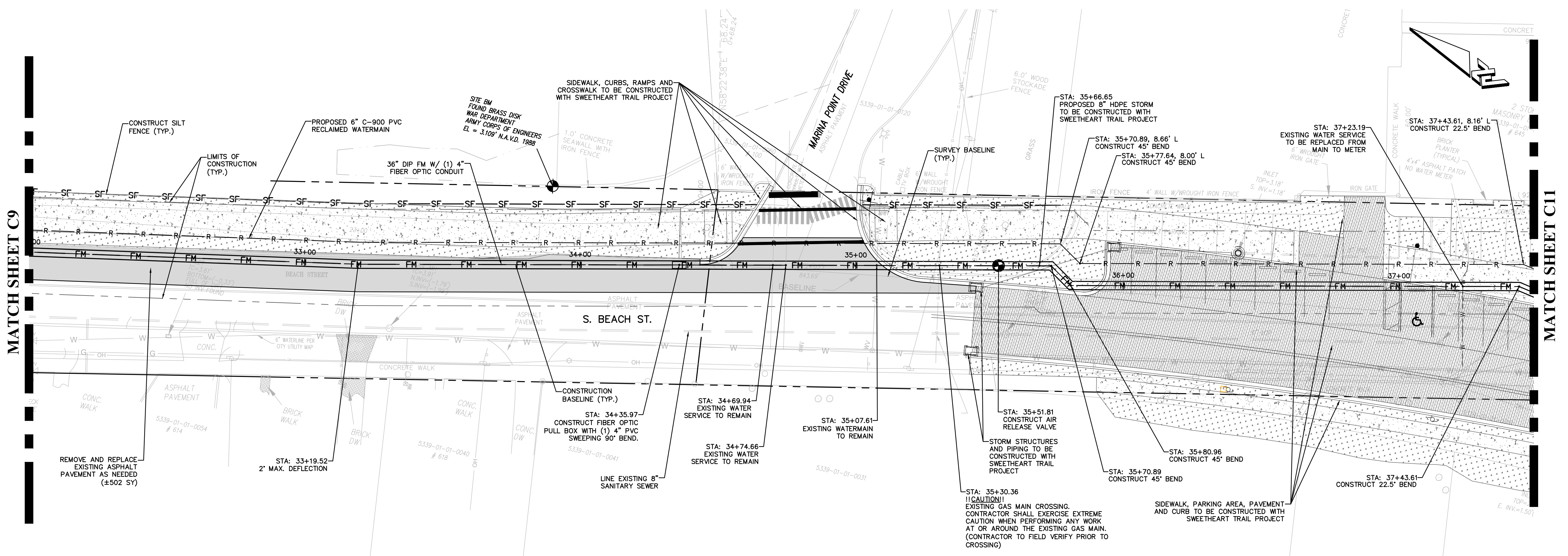
EXISTING LEGEND			
[Symbol]	BURIED SANITARY SEWER	[Symbol]	MAIL BOX
[Symbol]	BURIED TELEPHONE LINE	[Symbol]	SON
[Symbol]	BURIED WATER LINE	[Symbol]	TREE
[Symbol]	BURIED ELECTRIC LINE	[Symbol]	FH
[Symbol]	BURIED GAS LINE	[Symbol]	WM
[Symbol]	BURIED TELEVISION LINE	[Symbol]	GA
[Symbol]	BURIED FORCE MAIN	[Symbol]	UTILITY POLE
[Symbol]	AERIAL UTILITY LINE	[Symbol]	IRON ROD WITH CAP
[Symbol]	EB	[Symbol]	ELECTRIC BOX
[Symbol]	IP	[Symbol]	IRON PIPE
[Symbol]	TM	[Symbol]	TELEPHONE BOX
[Symbol]	EM	[Symbol]	ELECTRIC METER
[Symbol]	FM	[Symbol]	TRAFFIC SIGNAL BOX
[Symbol]	CO	[Symbol]	CLEAN OUT
[Symbol]	CM	[Symbol]	CONCRETE MONUMENT
[Symbol]	PRM	[Symbol]	PERMANENT CONTROL POINT
[Symbol]	LP	[Symbol]	LIGHT POLE
[Symbol]	WV	[Symbol]	WATER VALVE
[Symbol]	EV	[Symbol]	EXISTING ELEVATION
[Symbol]	TV	[Symbol]	CABLE TELEVISION BOX
[Symbol]	TL	[Symbol]	TRAFFIC LIGHT POLE
[Symbol]	PRM	[Symbol]	PERMANENT REFERENCE MONUMENT



NO.	DATE	SUBMITTALS / REVISIONS
1	12-19-18	SUBMITTED TO DEP. DAYTONA BEACH
2	12-19-18	SUBMITTED TO CITY OF DAYTONA BEACH
3	4-30-19	SUBMITTED TO CITY OF DAYTONA BEACH

PROJECT NO. ZC 09062
DESIGNED BY: HK/MLR
DRAFTED BY: MLR
CHECKED BY: HK/BB
DRAWING FILE: 09062PP
XREF'S: 09062BAS

HALUK KELIC, P.E. NO. 84244 NOT VALID WITHOUT SEAL
SHEET: C10 OF 25



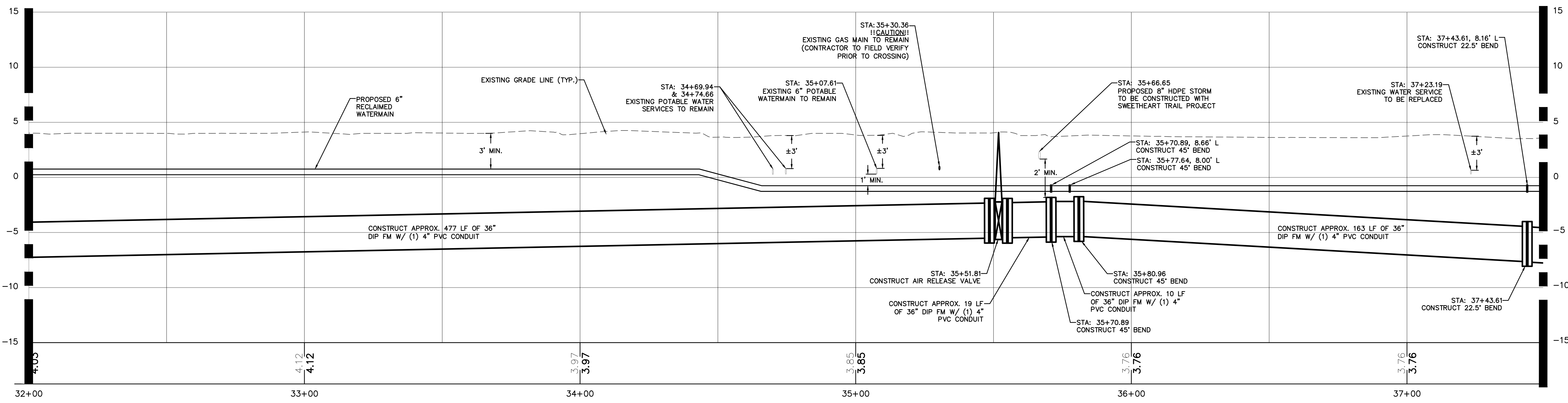
PLAN & PROFILE

PLAN VIEW: 1"=20'
 PROFILE VIEW: HORIZ: 1"=20'
 VERT: 1"=5'

PROPOSED LEGEND			
[Symbol]	PROPOSED SHARED USE PATH/SIDEWALK SWEETHEART TRAIL PROJECT	[Symbol]	PROPOSED SOD SWEETHEART TRAIL PROJECT
[Symbol]	36" DIP FORCE MAIN	[Symbol]	APPROXIMATE LIMITS OF CONSTRUCTION
[Symbol]	PROPOSED CURB (MATCH EXISTING)	[Symbol]	WATERMAIN OR SERVICE
[Symbol]	PROPOSED PAVEMENT	[Symbol]	RECLAIMED WATERMAIN
[Symbol]	FINISHED GRADE ELEVATION	[Symbol]	3.45

EXISTING LEGEND			
[Symbol]	BURIED SANITARY SEWER	[Symbol]	MAIL BOX
[Symbol]	BURIED TELEPHONE LINE	[Symbol]	SIGN
[Symbol]	BURIED WATER LINE	[Symbol]	TREE
[Symbol]	BURIED ELECTRIC LINE	[Symbol]	FIRE HYDRANT
[Symbol]	BURIED GAS LINE	[Symbol]	WATER METER
[Symbol]	BURIED TELEVISION LINE	[Symbol]	QUIV ANCHOR
[Symbol]	BURIED FORCE MAIN	[Symbol]	UTILITY POLE
[Symbol]	AERIAL UTILITY LINE	[Symbol]	IRON ROD WITH CAP
[Symbol]	ELECTRIC BOX	[Symbol]	PERMANENT CONTROL POINT
[Symbol]	IRON PIPE	[Symbol]	LIGHT POLE
[Symbol]	TELEPHONE BOX	[Symbol]	WATER VALVE
[Symbol]	ELECTRIC METER	[Symbol]	EXISTING ELEVATION
[Symbol]	TRAFFIC SIGNAL BOX	[Symbol]	CABLE TELEVISION BOX
[Symbol]	CLEAN OUT	[Symbol]	CONCRETE MONUMENT
[Symbol]	PERMANENT MONUMENT	[Symbol]	TRAFFIC LIGHT POLE

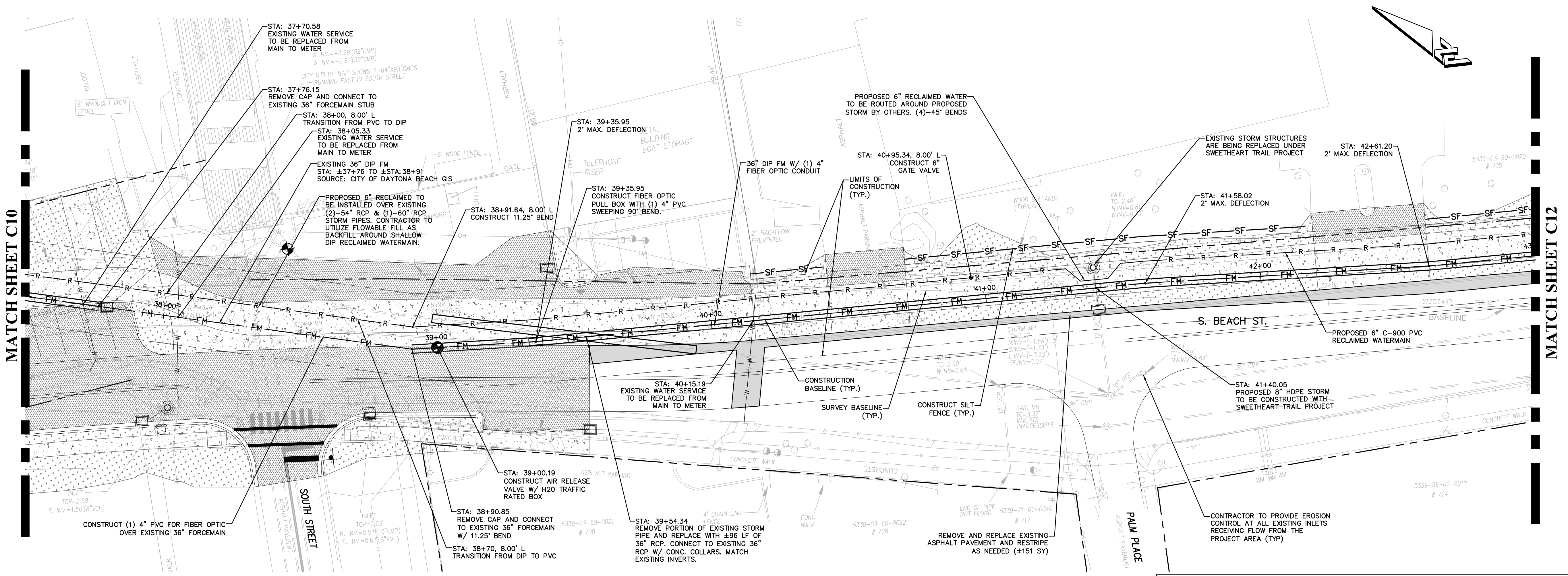
- CONTRACTOR NOTES**
- REPLACE EXISTING SOD, ASPHALT AND CONCRETE AS NEEDED. (MATCH EXISTING TYPE AND/OR SECTION)
 - RESTORE ANY DISTURBED AREAS DUE TO CONSTRUCTION ACTIVITIES.
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8: UNCORRECTED ENGINEERING PLANS CANNOT BE CONSIDERED AS PRINTED 07/2018 8:44 AM

NO.	DATE	SUBMITTALS / REVISIONS
1	12-19-18	SUBMITTED TO DPB
2	1-10-19	REVISION TO DAYTONA BEACH
3	4-26-19	SUBMITTED TO CITY OF DAYTONA BEACH

PROJECT NO. ZC 09062
DESIGNED BY: HK/MLR
DRAFTED BY: MLR
CHECKED BY: HK/BB
DRAWING FILE: 09062PP
XREF'S: 0902BAS
XREF'S:

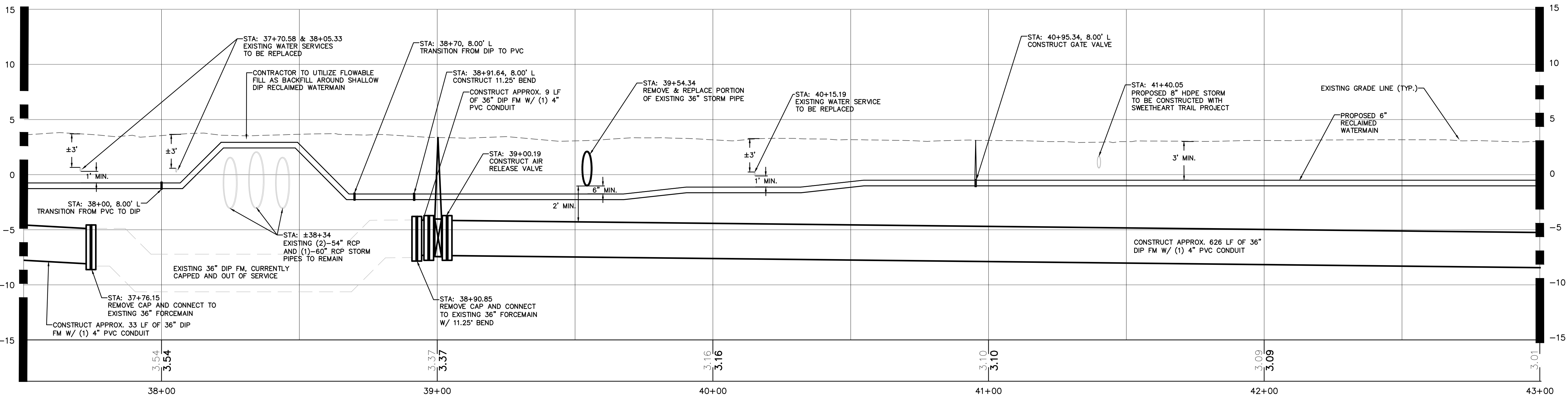


- CONTRACTOR NOTES**
1. REPLACE EXISTING SOD, ASPHALT AND CONCRETE AS NEEDED. (MATCH EXISTING TYPE AND/OR SECTION)
 2. RESTORE ANY DISTURBED AREAS DUE TO CONSTRUCTION ACTIVITIES.
 3. CONTRACTOR TO VERIFY LOCATIONS OF UTILITIES PRIOR TO AND DURING CONSTRUCTION ACTIVITIES.
 4. CONTRACTOR TO REMOVE AND REPLACE FENCING AS NECESSARY (MATCH EXISTING TYPE)
 5. CONTRACTOR TO IMMEDIATELY NOTIFY ENGINEER IF ANY EXISTING UTILITY INFORMATION CONFLICTS WITH ANY INFORMATION PROVIDED ON APPROVED CONSTRUCTION PLANS.
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 15. CONTRACTOR TO PAVE PORTIONS OF THE PROJECT AS WORK ZONE ADVANCES ALONG ROUTE.
 16. CONTRACTOR TO CONTINUOUS CLEAN SITE AS WORK ZONE ADVANCES.
 17. EXCAVATION MATERIAL TO BE HAULED OFF AND DISPOSED BY CONTRACTOR.
 18. CONTRACTOR TO COORDINATE NEIGHBORHOOD MEETING PRIOR TO COMMENCEMENT OF CONSTRUCTION.
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 21. CONTRACTOR SHALL SUBMIT INTERIM AS-BUILT DRAWINGS OF WORK COMPLETED WITH EACH PAY APPLICATION.
 22. CONTRACTOR TO ESTABLISH CONSTRUCTION BENCHMARKS AS NEEDED.

PLAN & PROFILE

PLAN VIEW: 1"=20'
PROFILE VIEW: HORIZ: 1"=20'
VERT: 1"=5'

PROPOSED LEGEND		EXISTING LEGEND	
	PROPOSED SHARED USE PATH/SIDEWALK SWEETHEART TRAIL PROJECT		BURIED SANITARY SEWER
	36" DIP FORCE MAIN		BURIED TELEPHONE LINE
	PROPOSED CURB (MATCH EXISTING)		BURIED WATER LINE
	PROPOSED PAVEMENT		BURIED ELECTRIC LINE
	PROPOSED SOD SWEETHEART TRAIL PROJECT		BURIED GAS LINE
	APPROXIMATE LIMITS OF CONSTRUCTION		BURIED TELEVISION LINE
	WATERMAIN OR SERVICE		AERIAL UTILITY LINE
	RECLAIMED WATERMAIN		MAIL BOX
	FINISHED GRADE ELEVATION		SIGN
	PERMANENT CONTROL POINT		TREE
	LIGHT POLE		FIRE HYDRANT
	WATER VALVE		TELEPHONE BOX
	EXISTING ELEVATION		ELECTRIC METER
	CABLE TELEVISION BOX		WATER METER
	TRAFFIC LIGHT POLE		GUY ANCHOR
	PERMANENT REFERENCE MONUMENT		UTILITY POLE
			IRON ROD WITH CAP

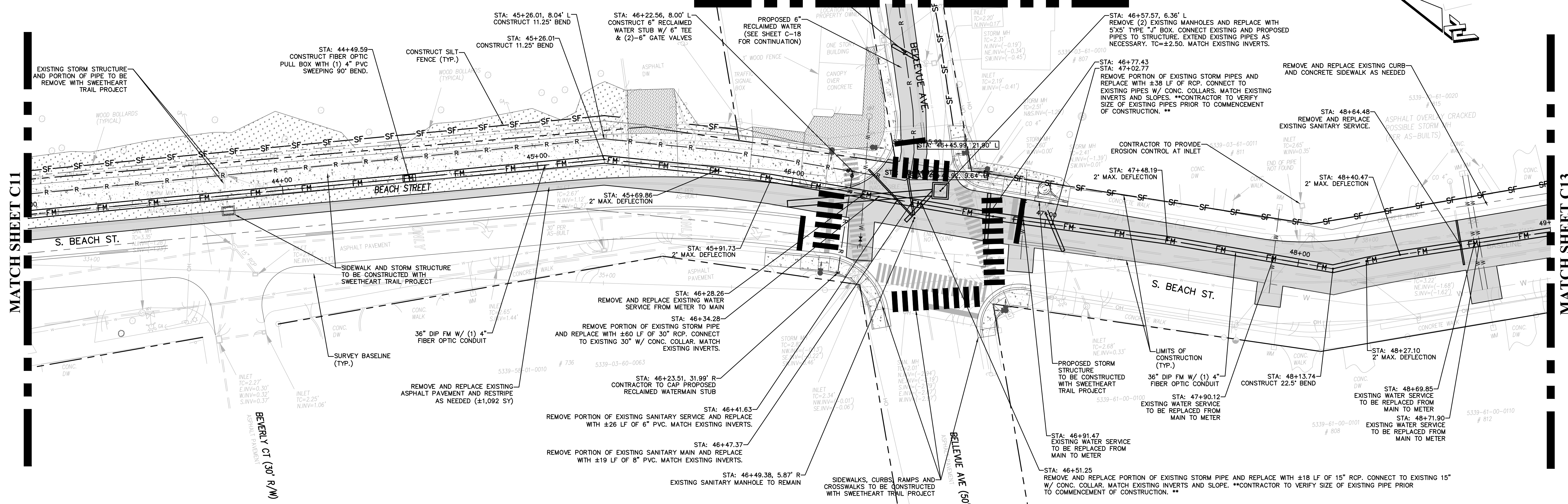


NO.	DATE	SUBMITTALS / REVISIONS
1	12-19-18	SUBMITTED TO DPB
2	12-20-18	REVISION TO CITY OF DAYTONA BEACH
3	4-30-19	SUBMITTED TO CITY OF DAYTONA BEACH

PROJECT NO.:	ZC 09062
DESIGNED BY:	HK/MLR
DRAFTED BY:	MLR
CHECKED BY:	HK/BB
DRAWING FILE:	09062PP
XREFS:	09062BAS

HALUK KELIC, P.E. NO. 84244 NOT VALID WITHOUT SEAL
SHEET: C12 OF 25

MATCH SHEET C-18

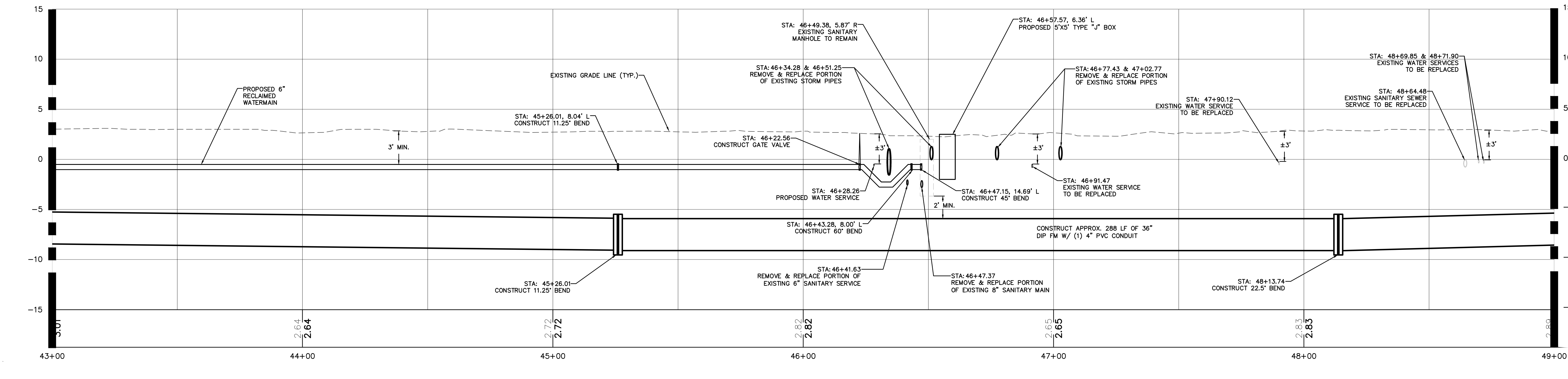


PLAN & PROFILE

PLAN VIEW: 1"=20'
 PROFILE VIEW: HORIZ: 1"=20'
 VERT: 1"=5'

- CONTRACTOR NOTES**
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PROPOSED LEGEND		
	PROPOSED SHARED USE PATH/SIDEWALK SWEETHEART TRAIL PROJECT	
	36" DIP FORCE MAIN	
	PROPOSED CURB (MATCH EXISTING)	
	PROPOSED PAVEMENT	
	BURIED SANITARY SEWER	
	BURIED TELEPHONE LINE	
	BURIED WATER LINE	
	BURIED ELECTRIC LINE	
	BURIED GAS LINE	
	BURIED TELEVISION LINE	
	BURIED FORCE MAIN	
	AERIAL UTILITY LINE	
	IRON ROD WITH CAP	
	ELECTRIC BOX	
	IRON PIPE	
	TELEPHONE BOX	
	ELECTRIC METER	
	TRAFFIC SIGNAL BOX	
	CLEAN OUT	
	CONCRETE MONUMENT	
	PERMANENT REFERENCE MONUMENT	

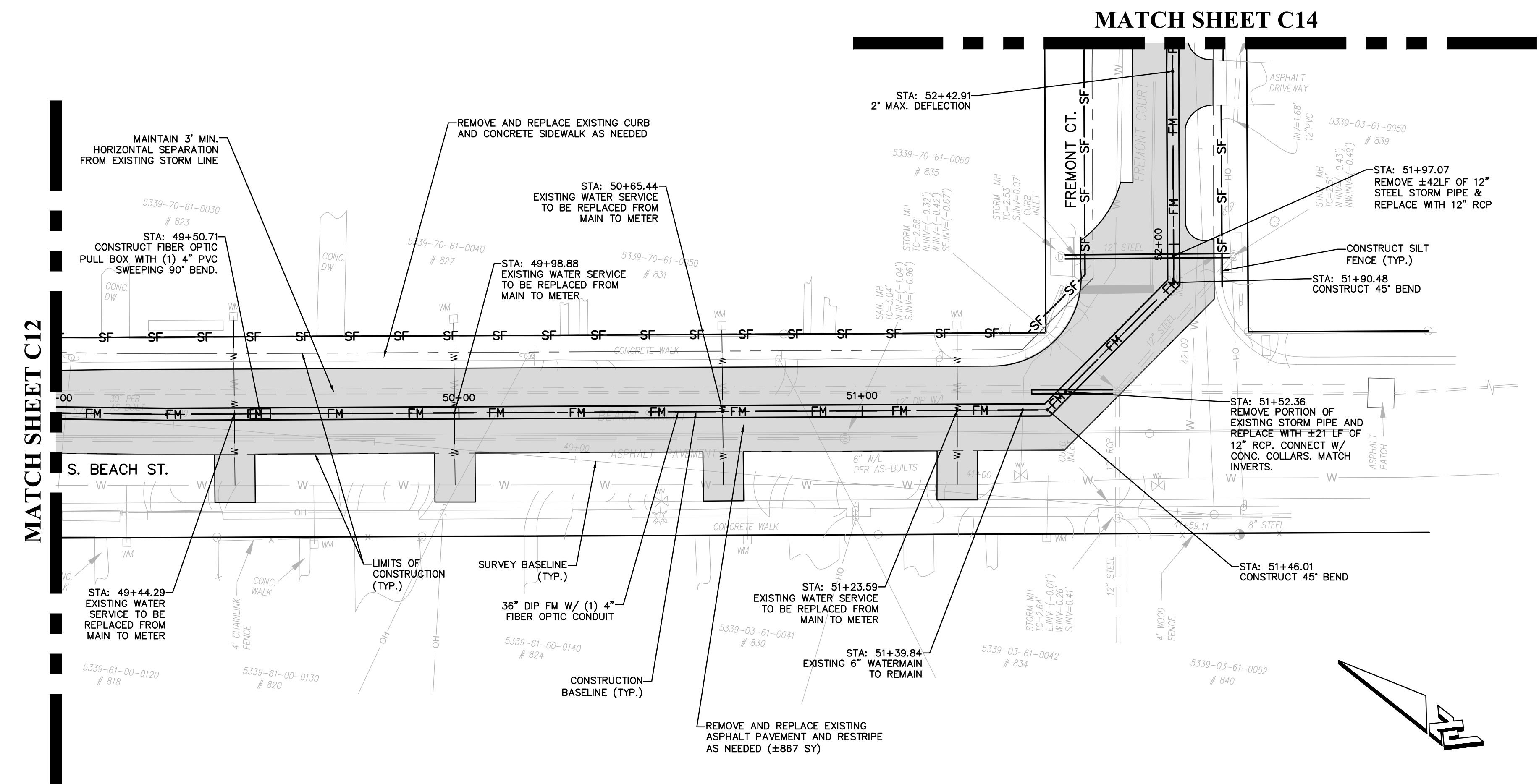


NO.	DATE	SUBMITTALS / REVISIONS
1	12-15-18	SUBMITTED TO DEPT. OF PUBLIC WORKS, DAYTONA BEACH
2	1-10-19	REVISED TO CITY OF DAYTONA BEACH
3	4-30-19	SUBMITTED TO CITY OF DAYTONA BEACH

**S. BEACH STREET
 FORCEMAIN IMPROVEMENTS
 PLAN AND PROFILE**

PROJECT NO. ZC 09062
 DESIGNED BY: HK/MLR
 DRAFTED BY: MLR
 CHECKED BY: HK/BB

DRAWING FILE: 09062PP
 XREF'S: 09062BAS
 XREF'S:



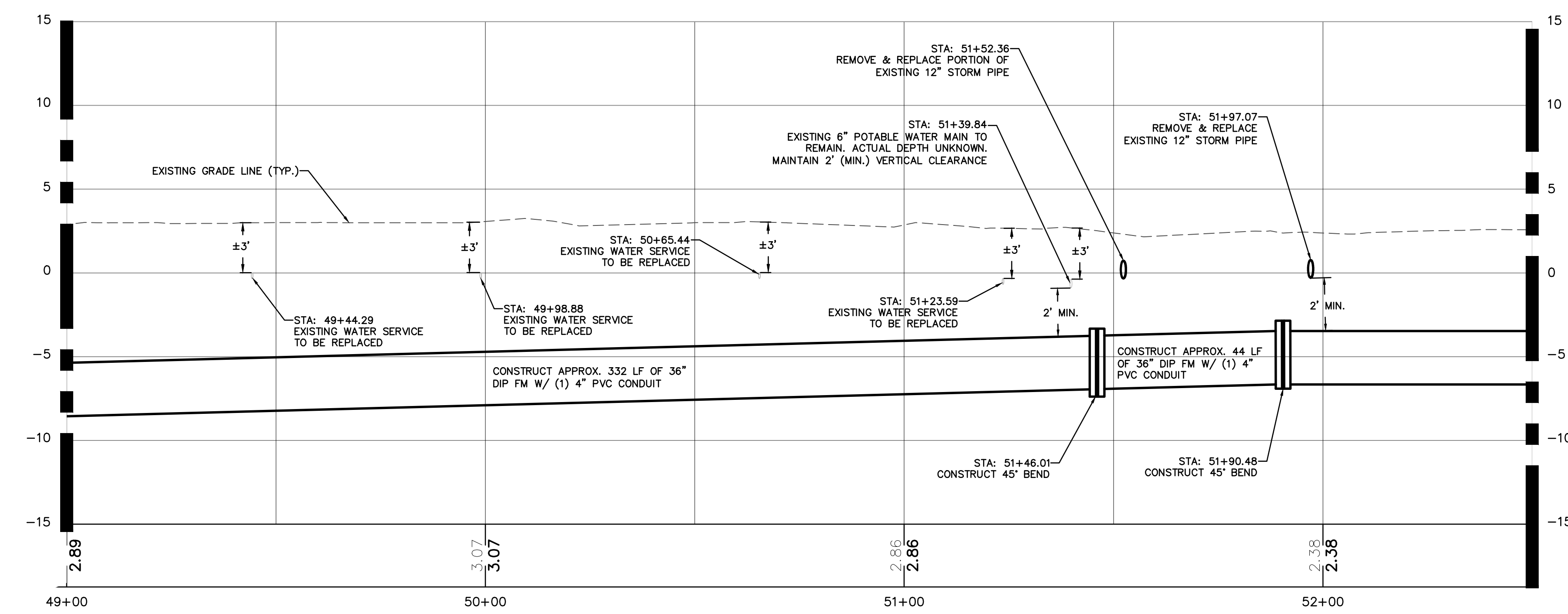
PLAN & PROFILE

PLAN VIEW: 1"=20'
 PROFILE VIEW: HORIZ: 1"=20'
 VERT: 1"=5'

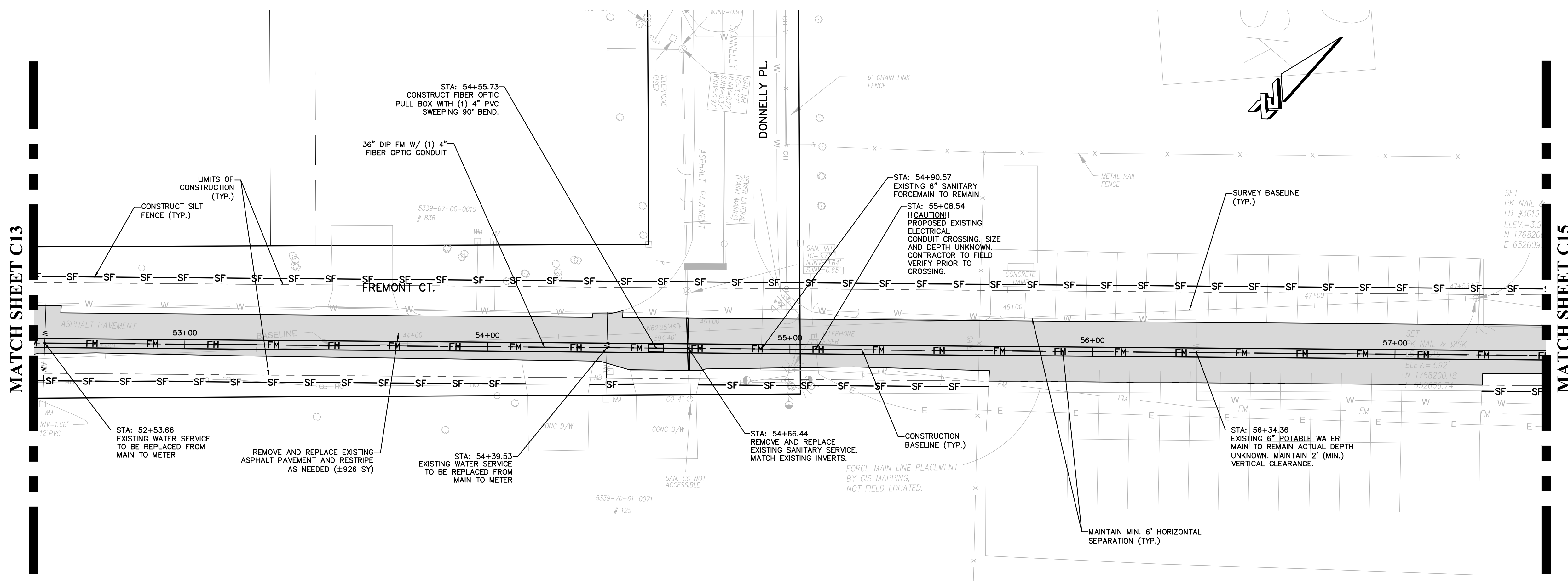
- CONTRACTOR NOTES**
- REPLACE EXISTING SOD, ASPHALT AND CONCRETE AS NEEDED. (MATCH EXISTING TYPE AND/OR SECTION)
 - RESTORE ANY DISTURBED AREAS DUE TO CONSTRUCTION ACTIVITIES.
 - CONTRACTOR TO VERIFY LOCATIONS OF UTILITIES PRIOR TO AND DURING CONSTRUCTION ACTIVITIES.
 - CONTRACTOR TO REMOVE AND REPLACE FENCING AS NECESSARY (MATCH EXISTING TYPE)
 - CONTRACTOR TO IMMEDIATELY NOTIFY ENGINEER IF ANY EXISTING UTILITY INFORMATION CONFLICTS WITH ANY INFORMATION PROVIDED ON APPROVED CONSTRUCTION PLANS.
 - ANY SIDEWALKS OR CROSSWALKS DISTURBED DURING CONSTRUCTION MUST BE BROUGHT UP TO CURRENT A.D.A. STANDARDS.
 - PLEASE REFER TO CITY OF DAYTONA BEACH DETAIL PIPE SEPARATION DETAIL FOR INFORMATION PERTAINING TO THE AREAS WHERE UTILITY PIPE CONFLICTS OCCUR.
 - PLEASE NOTE THAT THE EXISTING SANITARY PIPING IS VCP (VITRIFIED CLAY PIPE) AND IS IN GOOD CONDITION WITH NO APPARENT LEAKAGE
 - CONTRACTOR TO VIDEO TAPE, TAKE PICTURES, AND/OR DOCUMENT THE CURRENT CONDITIONS OF THE SIDEWALKS, ADJACENT BUILDINGS, AND OTHER STRUCTURES PRIOR TO CONSTRUCTION ACTIVITIES.
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 - CONTRACTOR TO INSTALL RECLAIMED MAIN W/ MIN. 3' VERTICAL CLEARANCE.
 - CONTRACTOR TO FIELD LOCATE EXISTING VALVES FOR SHUTDOWN PURPOSES.
 - CONTRACTOR TO REPLACE ANY TRAFFIC LOOPS DAMAGED DURING CONSTRUCTION.
 - CONTRACTOR TO PAVE PORTIONS OF THE PROJECT AS WORK ZONE ADVANCES ALONG ROUTE.
 - CONTRACTOR TO CONTINUOUS CLEAN SITE AS WORK ZONE ADVANCES.
 - EXCAVATION MATERIAL TO BE HAULED OFF AND DISPOSED BY CONTRACTOR.
 - CONTRACTOR TO COORDINATE NEIGHBORHOOD MEETING PRIOR TO COMMENCEMENT OF CONSTRUCTION.
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 - CONTRACTOR SHALL SUBMIT INTERIM AS-BUILT DRAWINGS OF WORK COMPLETED WITH EACH PAY APPLICATION.
 - CONTRACTOR TO ESTABLISH CONSTRUCTION BENCHMARKS AS NEEDED.

PROPOSED LEGEND			
[Symbol]	PROPOSED SHARED USE PATH/SIDEWALK SWEETHEART TRAIL PROJECT	[Symbol]	PROPOSED SOD SWEETHEART TRAIL PROJECT
[Symbol]	36" DIP FORCE MAIN	[Symbol]	APPROXIMATE LIMITS OF CONSTRUCTION
[Symbol]	PROPOSED CURB (MATCH EXISTING)	[Symbol]	WATERMAIN OR SERVICE
[Symbol]	PROPOSED PAVEMENT	[Symbol]	RECLAIMED WATERMAIN
[Symbol]	PROPOSED PAVEMENT SWEETHEART TRAIL PROJECT	[Symbol]	FINISHED GRADE ELEVATION

EXISTING LEGEND			
[Symbol]	BURIED SANITARY SEWER	[Symbol]	MAIL BOX
[Symbol]	BURIED TELEPHONE LINE	[Symbol]	SIGN
[Symbol]	BURIED WATER LINE	[Symbol]	TREE
[Symbol]	BURIED ELECTRIC LINE	[Symbol]	FIRE HYDRANT
[Symbol]	BURIED GAS LINE	[Symbol]	WATER METER
[Symbol]	BURIED TELEVISION LINE	[Symbol]	UTILITY POLE
[Symbol]	BURIED FORCE MAIN	[Symbol]	UTILITY POLE
[Symbol]	AERIAL UTILITY LINE	[Symbol]	IRON ROD WITH CAP
[Symbol]	CONCRETE MONUMENT	[Symbol]	PERMANENT REFERENCE MONUMENT
[Symbol]	ELECTRIC BOX	[Symbol]	PERMANENT CONTROL POINT
[Symbol]	IRON PIPE	[Symbol]	LIGHT POLE
[Symbol]	TELEPHONE BOX	[Symbol]	WATER VALVE
[Symbol]	ELECTRIC METER	[Symbol]	EXISTING ELEVATION
[Symbol]	TRAFFIC SIGNAL BOX	[Symbol]	CABLE TELEVISION BOX
[Symbol]	CLEAN OUT	[Symbol]	TRAFFIC LIGHT POLE



NO.	DATE	SUBMITTALS / REVISIONS
1	12/15/18	SUBMITTED TO DPB
2	12/15/18	REVISIONS TO CITY OF DAYTONA BEACH
3	4/30/19	SUBMITTED TO CITY OF DAYTONA BEACH



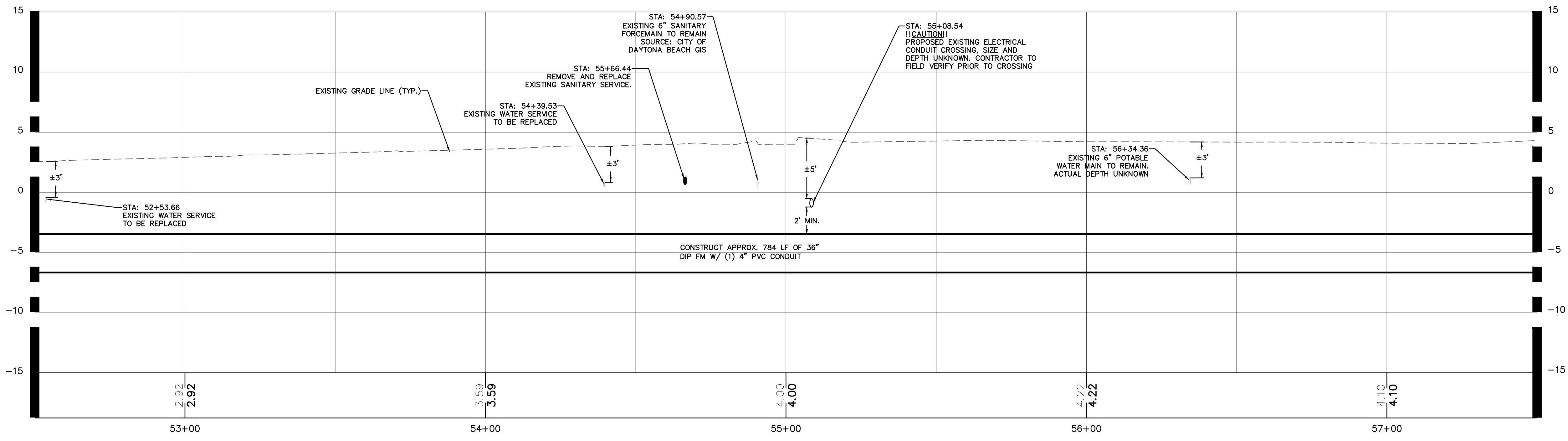
- CONTRACTOR NOTES**
1. REPLACE EXISTING SOD, ASPHALT AND CONCRETE AS NEEDED. (MATCH EXISTING TYPE AND/OR SECTION)
 2. RESTORE ANY DISTURBED AREAS DUE TO CONSTRUCTION ACTIVITIES.
 3. CONTRACTOR TO VERIFY LOCATIONS OF UTILITIES PRIOR TO AND DURING CONSTRUCTION ACTIVITIES.
 4. CONTRACTOR TO REMOVE AND REPLACE FENCING AS NECESSARY (MATCH EXISTING TYPE)
 5. CONTRACTOR TO IMMEDIATELY NOTIFY ENGINEER IF ANY EXISTING UTILITY INFORMATION CONFLICTS WITH ANY INFORMATION PROVIDED ON APPROVED CONSTRUCTION PLANS.
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 15. CONTRACTOR TO PAVE PORTIONS OF THE PROJECT AS WORK ZONE ADVANCES ALONG ROUTE.
 16. CONTRACTOR TO CONTINUOUS CLEAN SITE AS WORK ZONE ADVANCES.
 17. EXCAVATION MATERIAL TO BE HAULED OFF AND DISPOSED BY CONTRACTOR.
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 21. CONTRACTOR SHALL SUBMIT INTERIM AS-BUILT DRAWINGS OF WORK COMPLETED WITH EACH PAY APPLICATION.
 22. CONTRACTOR TO ESTABLISH CONSTRUCTION BENCHMARKS AS NEEDED.

PLAN & PROFILE

PLAN VIEW: 1"=20'
 PROFILE VIEW: HORIZ: 1"=20'
 VERT: 1"=5'

PROPOSED LEGEND			
	PROPOSED SHARED USE PATH/SIDEWALK SWEETHEART TRAIL PROJECT		PROPOSED SOD SWEETHEART TRAIL PROJECT
	36" DIP FORCE MAIN		APPROXIMATE LIMITS OF CONSTRUCTION
	PROPOSED CURB (MATCH EXISTING)		WATERMAIN OR SERVICE
	PROPOSED PAVEMENT		RECLAIMED WATERMAIN
	PROPOSED PAVEMENT SWEETHEART TRAIL PROJECT		FINISHED GRADE ELEVATION

EXISTING LEGEND			
	BURIED SANITARY SEWER		MAIL BOX
	BURIED TELEPHONE LINE		SON
	BURIED WATER LINE		TREE
	BURIED ELECTRIC LINE		FIRE HYDRANT
	BURIED GAS LINE		WATER METER
	BURIED TELEVISION LINE		GUY ANCHOR
	BURIED FORCE MAIN		UTILITY POLE
	AERIAL UTILITY LINE		IRON ROD WITH CAP
	ELECTRIC BOX		PERMANENT CONTROL POINT
	IRON PIPE		LIGHT POLE
	TELEPHONE BOX		WATER VALVE
	ELECTRIC METER		EXISTING ELEVATION
	TRAFFIC SIGNAL BOX		CLEAN OUT
	CONCRETE MONUMENT		CABLE TELEVISION BOX
	PERMANENT REFERENCE MONUMENT		TRAFFIC LIGHT POLE



S. BEACH STREET FORCEMAIN IMPROVEMENTS PLAN AND PROFILE

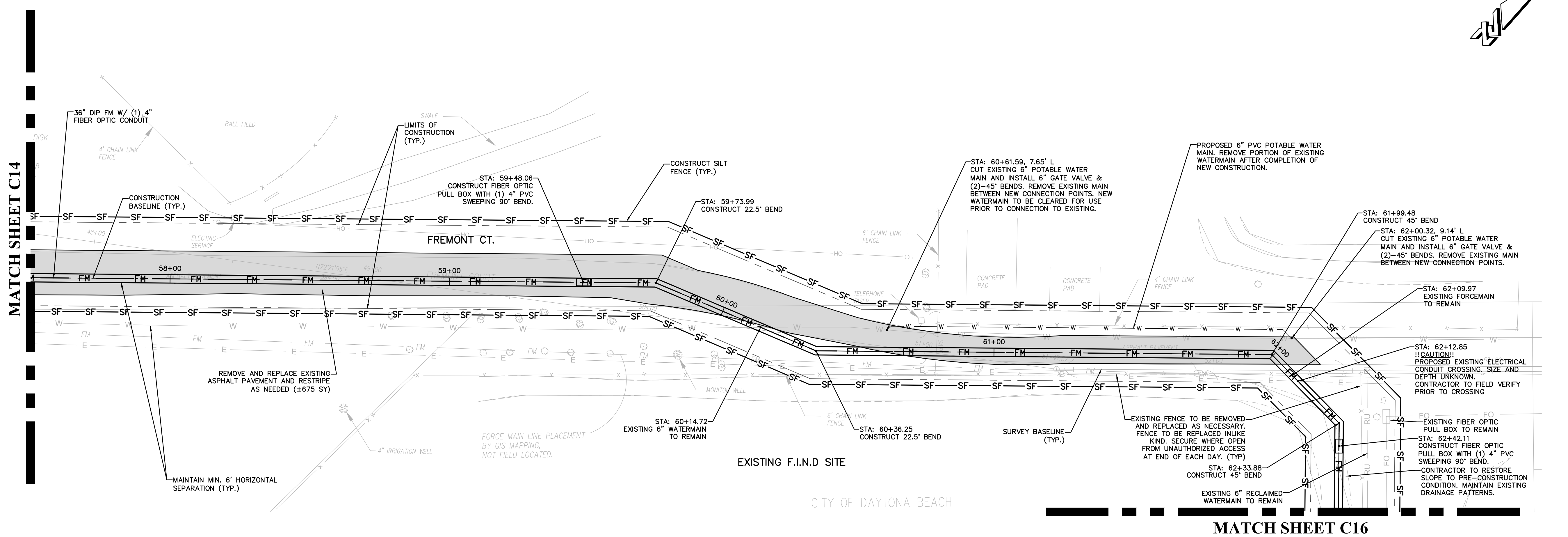
PROJECT NO: ZC 09062
 DESIGNED BY: HK/MLR
 DRAFTED BY: MLR
 CHECKED BY: HK/BB

DRAWING FILE: 09062PP
 XREF'S: 09062BAS
 XREF'S:

NO.	DATE	SUBMITTALS / REVISIONS
1	12-12-18	SUBMITTED TO DPB - DAYTONA BEACH
2	1-10-19	REVISION TO CITY OF DAYTONA BEACH
3	4-26-19	SUBMITTED TO CITY OF DAYTONA BEACH

PROJECT NO. ZC 09062
DESIGNED BY: HK/MLR
DRAFTED BY: MLR
CHECKED BY: HK/BB
DRAWING FILE: 09062PP
XREF'S: 09062BAS

HALUK KELIC, P.E. NO 84244 NOT VALID WITHOUT SEAL
SHEET: C15 OF 25



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PLAN & PROFILE

PLAN VIEW: 1"=20'
 PROFILE VIEW: HORIZ: 1"=20'
 VERT: 1"=5'

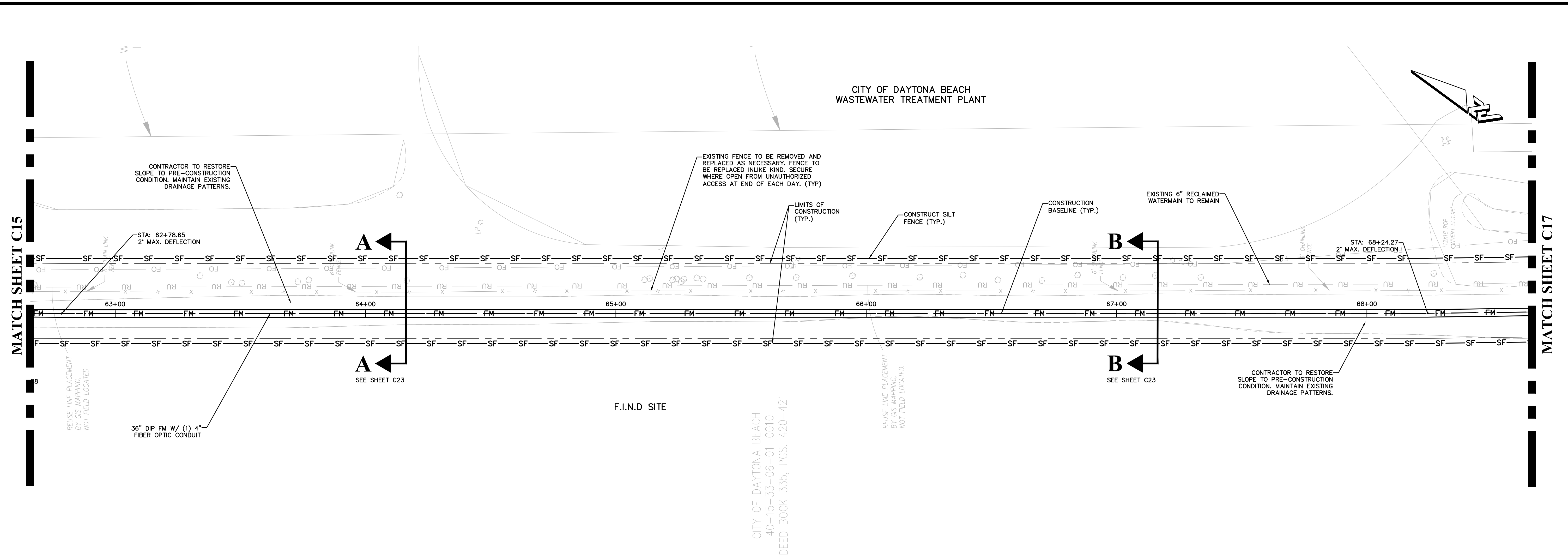
PROPOSED LEGEND		
	PROPOSED SHARED USE PATH/SIDEWALK SWEETHEART TRAIL PROJECT	
	36" DIP FORCE MAIN	
	PROPOSED CURB (MATCH EXISTING)	
	PROPOSED PAVEMENT	
	PROPOSED SOD SWEETHEART TRAIL PROJECT	

EXISTING LEGEND		
	BURIED SANITARY SEWER	
	BURIED TELEPHONE LINE	
	BURIED WATER LINE	
	BURIED ELECTRIC LINE	
	BURIED GAS LINE	
	BURIED TELEVISION LINE	
	BURIED FORCE MAIN	
	AERIAL UTILITY LINE	
	ELECTRIC BOX	
	IRON PIPE	
	TELEPHONE BOX	
	ELECTRIC METER	
	TRAFFIC SIGNAL BOX	
	CLEAN OUT	
	CONCRETE MONUMENT	
	PERMANENT REFERENCE MONUMENT	

NO.	DATE	SUBMITTALS / REVISIONS
1	12/15/18	SUBMITTED TO DPB
2	1/15/19	REVISED TO CITY OF DAYTONA BEACH
3	4/30/18	SUBMITTED TO CITY OF DAYTONA BEACH

PROJECT NO. ZC 09062
DESIGNED BY: HKMLR
DRAFTED BY: MLR
CHECKED BY: HK/BB
DRAWING FILE: 09062PP
XREF'S: 09062BAS

HALUK KELIC, P.E. NO 84244 NOT VALID WITHOUT SEAL
SHEET: C16 OF 25



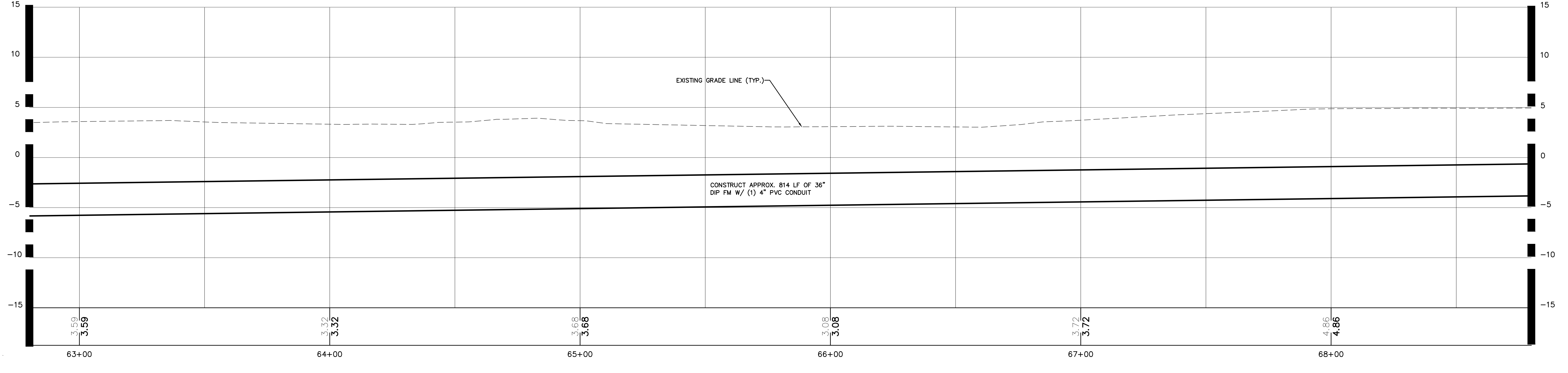
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PLAN & PROFILE

PLAN VIEW: 1"=20'
 PROFILE VIEW: HORIZ: 1"=20'
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PROPOSED LEGEND		
	PROPOSED SHARED USE PATH/SIDEWALK SWEETHEART TRAIL PROJECT	
	36" DIP FORCE MAIN	
	PROPOSED CURB (MATCH EXISTING)	
	PROPOSED PAVEMENT	
	PROPOSED SOD SWEETHEART TRAIL PROJECT	
	APPROXIMATE LIMITS OF CONSTRUCTION	
	WATERMAIN OR SERVICE	
	RECLAIMED WATERMAIN	
	FINISHED GRADE ELEVATION	

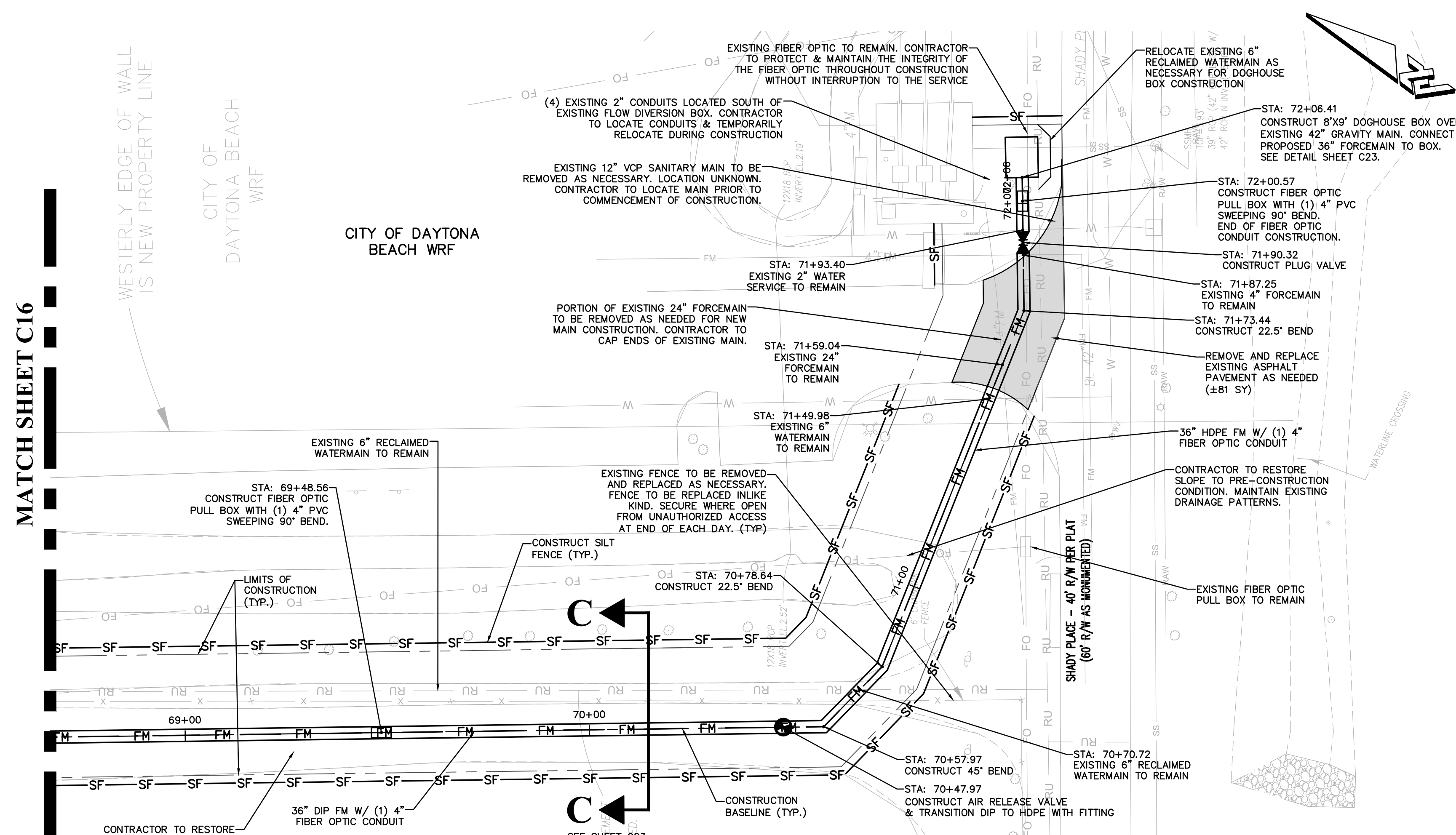
EXISTING LEGEND			
	BURIED SANITARY SEWER		MAIL BOX
	BURIED TELEPHONE LINE		SIGN
	BURIED WATER LINE		TREE
	BURIED ELECTRIC LINE		FIRE HYDRANT
	BURIED GAS LINE		WATER METER
	BURIED TELEVISION LINE		GUY ANCHOR
	BURIED FORCE MAIN		UTILITY POLE
	AERIAL UTILITY LINE		IRON ROD WITH CAP
	ELECTRIC BOX		PERMANENT CONTROL POINT
	IRON PIPE		LIGHT POLE
	TELEPHONE BOX		WATER VALVE
	ELECTRIC METER		EXISTING ELEVATION
	TRAFFIC SIGNAL BOX		CABLE TELEVISION BOX
	CLEAN OUT		TRAFFIC LIGHT POLE
	CONCRETE MONUMENT		PERMANENT REFERENCE MONUMENT



NO.	DATE	SUBMITTALS / REVISIONS
1	11/20/18	SUBMITTED TO DPB
2	12/11/18	REVISIONS TO CITY OF DAYTONA BEACH
3	4/30/19	SUBMITTED TO CITY OF DAYTONA BEACH

PROJECT NO. ZC 09062
DESIGNED BY: HK/MLR
DRAFTED BY: MLR
CHECKED BY: HK/BB
DRAWING FILE: 09062PP
XREFS: 09062BAS
XREFS:

HALLIK KILIC, P.E. NO. 84244 NOT VALID WITHOUT SEAL
SHEET: C17 OF 25



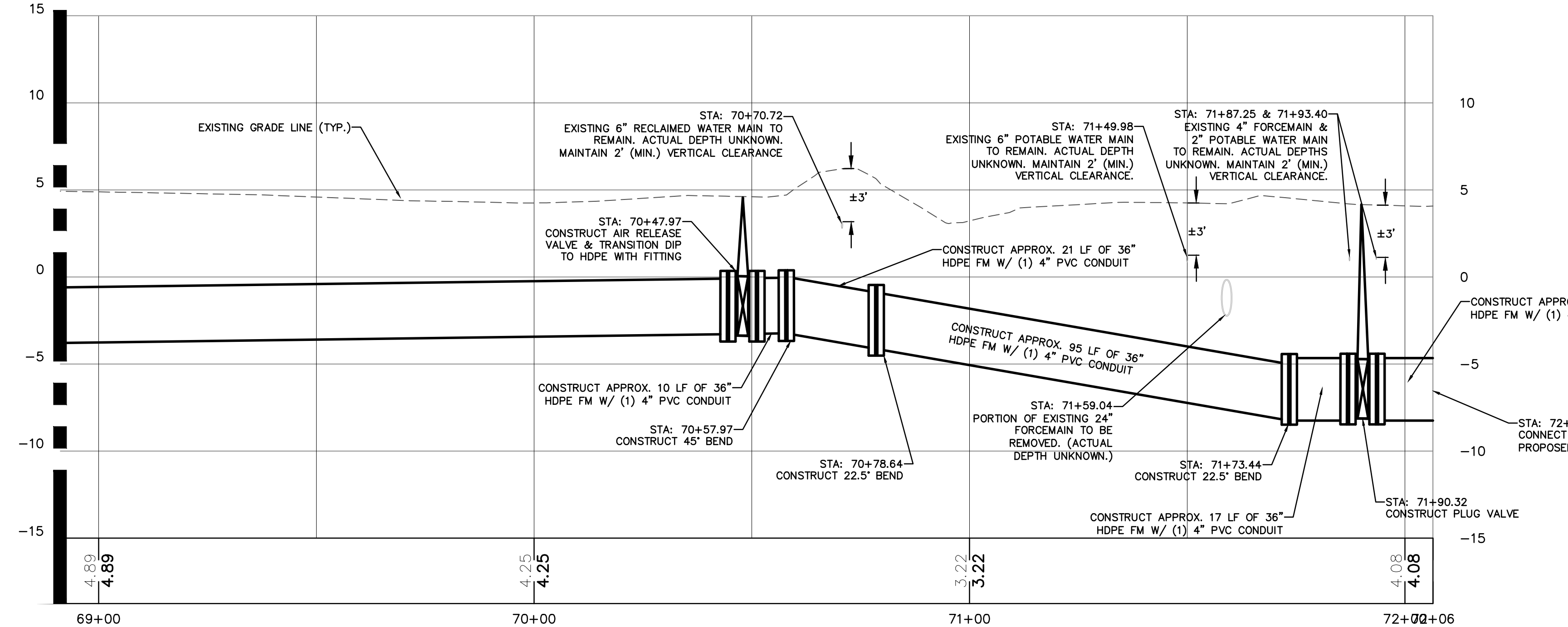
PLAN & PROFILE

PLAN VIEW: 1"=20'
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PROPOSED LEGEND	
	PROPOSED SHARED USE PATH/SIDEWALK SWEETHEART TRAIL PROJECT
	36" DIP FORCE MAIN
	PROPOSED PAVEMENT
	PROPOSED CURB (MATCH EXISTING)
	WATERMAIN OR SERVICE
	RECLAIMED WATERMAIN
	PROPOSED SOD SWEETHEART TRAIL PROJECT
	APPROXIMATE LIMITS OF CONSTRUCTION
	FINISHED GRADE ELEVATION

EXISTING LEGEND	
	BURIED SANITARY SEWER
	BURIED TELEPHONE LINE
	BURIED ELECTRIC LINE
	BURIED GAS LINE
	BURIED TELEVISION LINE
	BURIED FORCE MAIN
	AERIAL UTILITY LINE
	MAIL BOX
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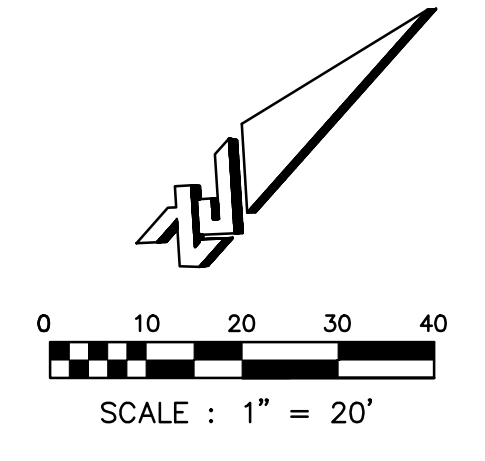
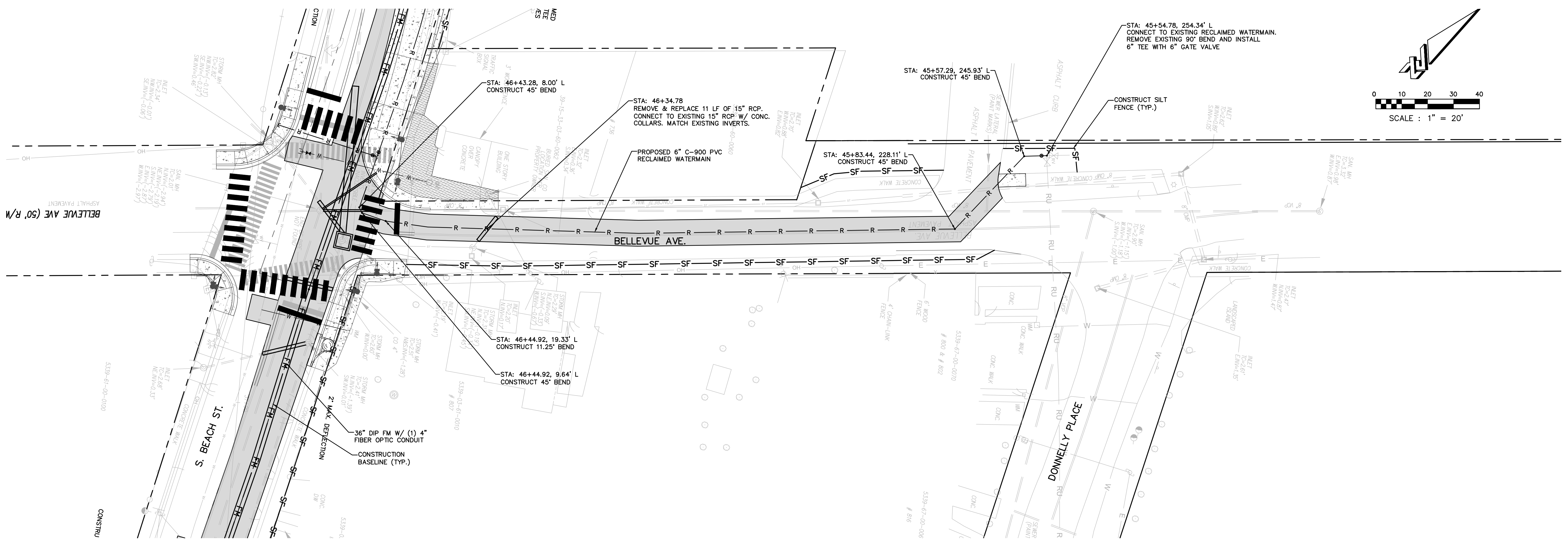


NO.	DATE	SUBMITTALS / REVISIONS
1	12-15-18	SUBMITTED TO DPB
2	1-15-19	REVISIONS TO CITY OF DAYTONA BEACH
3	4-30-18	SUBMITTED TO CITY OF DAYTONA BEACH

**S. BEACH STREET
 FORCEMAIN IMPROVEMENTS
 PLAN AND PROFILE**

PROJECT NO. ZC 09062
DESIGNED BY: HK/MLR
DRAFTED BY: MLR
CHECKED BY: HK/BB
DRAWING FILE: 09062PP
XREF'S: 09062BAS
XREF'S:

HALUK KELIC, P.E. NO. 84244 NOT VALID WITHOUT SEAL
SHEET: C18 OF 25



- CONTRACTOR NOTES**
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 - CONTRACTOR TO VIDEO TAPE, TAKE PICTURES, AND/OR DOCUMENT THE CURRENT CONDITIONS OF THE SIDEWALKS, ADJACENT BUILDINGS, AND OTHER STRUCTURES PRIOR TO CONSTRUCTION ACTIVITIES.
 - REFER TO SHEET C3 FOR TYPICAL CROSS-SECTIONS.
 - FIBER OPTIC PULL BOX ON PLAN VIEW IS SHOWN FOR GRAPHICAL REPRESENTATION. CONTRACTOR TO CONSTRUCT THE FIBER OPTIC PULL BOX AND CONDUIT IN THE SAME TRENCH WITH THE PROPOSED 36" FM (PROVIDE A MIN. OF 3FT HORIZONTAL CLEARANCE BETWEEN FORCE MAIN AND FIBER OPTIC PULLBOX).
 - CONTRACTOR TO INSTALL RECLAIMED MAIN W/ MIN. 3" VERTICAL CLEARANCE.
 - CONTRACTOR TO FIELD LOCATE EXISTING VALVES FOR SHUTDOWN PURPOSES.
 - CONTRACTOR TO REPLACE ANY TRAFFIC LOOPS DAMAGED DURING CONSTRUCTION.
 - CONTRACTOR TO PAVE PORTIONS OF THE PROJECT AS WORK ZONE ADVANCES ALONG ROUTE.
 - CONTRACTOR TO CONTINUOUSLY CLEAN SITE AS WORK ZONE ADVANCES.
 - EXCAVATION MATERIAL TO BE HAULED OFF AND DISPOSED BY CONTRACTOR.
 - CONTRACTOR TO COORDINATE NEIGHBORHOOD MEETING PRIOR TO COMMENCEMENT OF CONSTRUCTION.
 - CONTRACTOR TO STABILIZE EXISTING POWER POLES IF NECESSARY FOR PROPOSED CONSTRUCTION.
 - CONTRACTOR SHALL PROTECT & MAINTAIN THE INTEGRITY OF ALL EXPOSED PRESSURIZED UTILITY PIPES DURING CONSTRUCTION. ANY COST ASSOCIATED WITH THIS ITEM SHALL BE INCLUDED IN THE COST OF 36" DIP FORCEMAIN PIPE CONSTRUCTION.
 - CONTRACTOR SHALL SUBMIT INTERIM AS-BUILT DRAWINGS OF WORK COMPLETED WITH EACH PAY APPLICATION.
 - CONTRACTOR TO ESTABLISH CONSTRUCTION BENCHMARKS AS NEEDED.

PROPOSED LEGEND		
	PROPOSED SHARED USE PATH/SIDEWALK SWEETHEART TRAIL PROJECT	
	36" DIP FORCE MAIN	
	PROPOSED CURB (MATCH EXISTING)	
	PROPOSED PAVEMENT	
	PROPOSED SOD SWEETHEART TRAIL PROJECT	

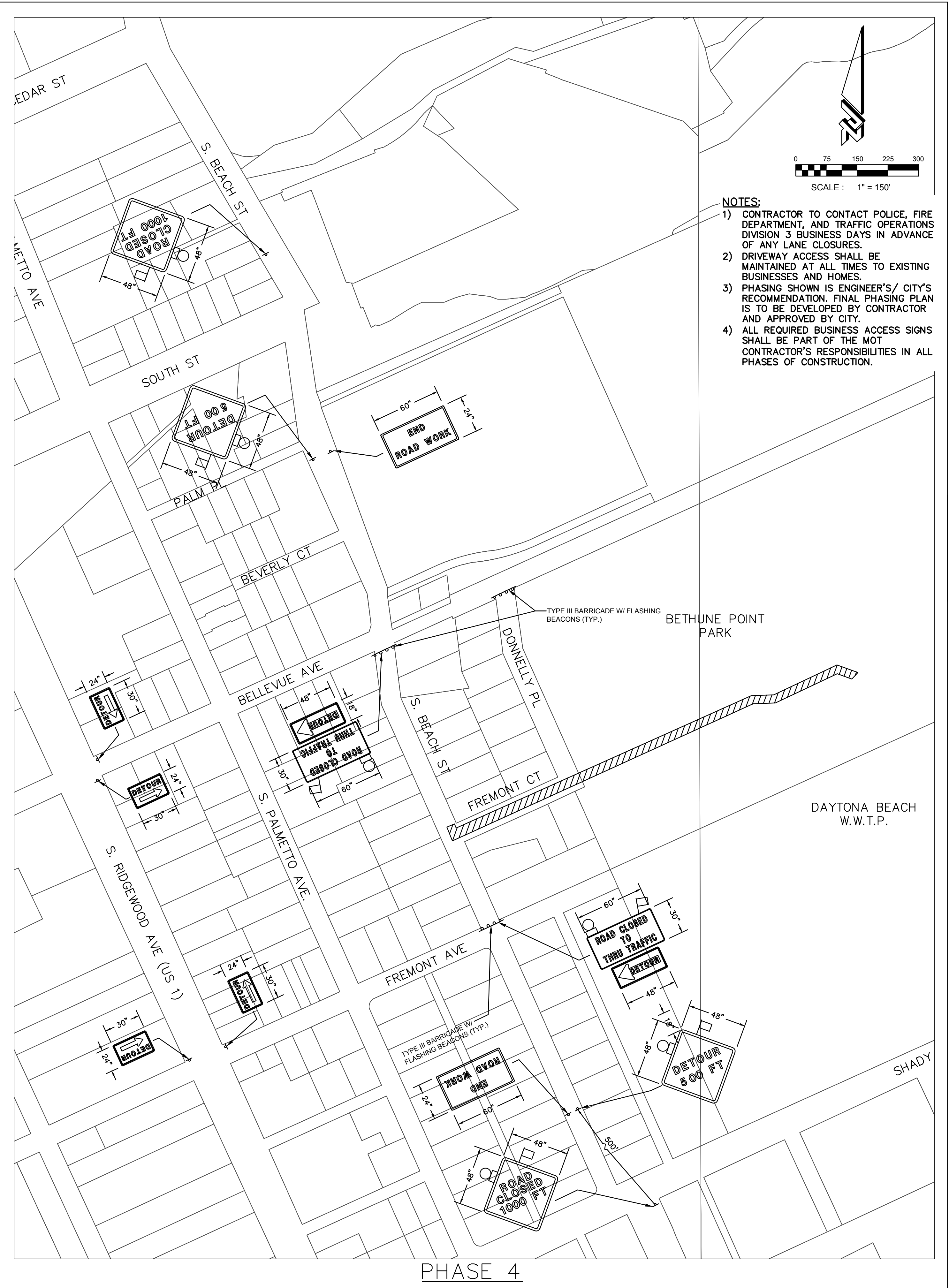
EXISTING LEGEND		
	BURIED SANITARY SEWER	
	BURIED TELEPHONE LINE	
	BURIED WATER LINE	
	BURIED ELECTRIC LINE	
	BURIED GAS LINE	
	BURIED TELEVISION LINE	
	BURIED FORCE MAIN	
	AERIAL UTILITY LINE	
	MAIL BOX	
	TREE	
	FIRE HYDRANT	
	WATER METER	
	CUI ANCHOR	
	UTILITY POLE	
	IRON ROD WITH CAP	
	ELECTRIC BOX	
	IRON PIPE	
	TELEPHONE BOX	
	ELECTRIC METER	
	TRAFFIC SIGNAL BOX	
	CLEAN OUT	
	CONCRETE MONUMENT	
	PERMANENT REFERENCE MONUMENT	



NOTES:

- 1) CONTRACTOR TO CONTACT POLICE, FIRE DEPARTMENT, AND TRAFFIC OPERATIONS DIVISION 3 BUSINESS DAYS IN ADVANCE OF ANY LANE CLOSURES.
- 2) DRIVEWAY ACCESS SHALL BE MAINTAINED AT ALL TIMES TO EXISTING BUSINESSES AND HOMES.
- 3) PHASING SHOWN IS ENGINEER'S/ CITY'S RECOMMENDATION. FINAL PHASING PLAN IS TO BE DEVELOPED BY CONTRACTOR AND APPROVED BY CITY.
- 4) ALL REQUIRED BUSINESS ACCESS SIGNS SHALL BE PART OF THE MOT CONTRACTOR'S RESPONSIBILITIES IN ALL PHASES OF CONSTRUCTION.

SCALE: 1" = 150'



NOTES:

- 1) CONTRACTOR TO CONTACT POLICE, FIRE DEPARTMENT, AND TRAFFIC OPERATIONS DIVISION 3 BUSINESS DAYS IN ADVANCE OF ANY LANE CLOSURES.
- 2) DRIVEWAY ACCESS SHALL BE MAINTAINED AT ALL TIMES TO EXISTING BUSINESSES AND HOMES.
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SCALE: 1" = 150'



CIVIL ENGINEERING
LANDSCAPE ARCHITECTURE
ENVIRONMENTAL PLANNING
TRANSPORTATION

NO.	DATE	SUBMITTALS / REVISIONS
1	11-25-18	SUBMITTED TO FDP
2	12-11-18	REVISIONS TO DAYTONA BEACH
3	4-30-19	SUBMITTED TO CITY OF DAYTONA BEACH

**S. BEACH STREET
FORCE MAIN IMPROVEMENTS
MAINTENANCE OF TRAFFIC**

CITY OF DAYTONA BEACH
VOLUSIA COUNTY, FLORIDA

PROJECT NO.: ZC 09062
DESIGNED BY: HK
DRAFTED BY: PEJ
CHECKED BY: HK/BB
DRAWING FILE: 09062MOT
XREF'S: 09062BAS
XREF'S:

NO.	DATE	SUBMITTALS / REVISIONS
1	11/01/17	SUBMITTED TO FDOT - DAYTONA BEACH
2	11/01/17	REVISION TO CITY OF DAYTONA BEACH
3	4/30/18	SUBMITTED TO CITY OF DAYTONA BEACH

**S. BEACH STREET
 FORCEMAIN IMPROVEMENTS
 CONSTRUCTION DETAILS**

PROJECT NO: ZC 09062
 DESIGNED BY: HK
 DRAFTED BY: PEJ
 CHECKED BY: HK/BB

DRAWING FILE: 09062CV1
 XREFS: 09062BAS
 XREFS:

GENERAL NOTES

- If the work operation (excluding establishing and terminating the work area) requires that two or more work vehicles cross the offset zone in any one hour, traffic control will be in conformance with Index 102-600.
- No special signing is required.
- When a side road intersects the highway within the work area, additional TTC devices shall be placed in accordance with other applicable TCZ indexes.
- When construction activities encroach on a sidewalk refer to Index 102-660.
- For general TCZ requirements and additional information, refer to Index 102-600.

SYMBOLS

- Work Area
- Lane Identification + Direction of Traffic

CONDITIONS
 WHERE ANY VEHICLE, EQUIPMENT, WORKERS OR THEIR ACTIVITIES ARE BEHIND AN EXISTING BARRIER, MORE THAN 2' BEHIND THE CURB, OR 15' OR MORE FROM THE EDGE OF TRAVEL WAY.

LAST REVISION	DESCRIPTION	INDEX	SHEET
11/01/17	FY 2018-19 STANDARD PLANS	102-601	1 of 1

**Table I
 Device Spacing**

Speed (mph)	Cones or Tubular Markers		Type I or Type II Barricades or Vertical Panels or Drums	
	Taper	Tangent	Taper	Tangent
25	25	50	25	50
30 to 45	25	50	30	50
50 to 70	25	50	50	100

**Table II
 Taper Length - Shoulder**

Speed (mph)	S (ft)			Notes
	8'	10'	12'	
25	20	35	42	L = WS ² 60
30	40	50	60	
35	55	68	82	L = WS
40	72	90	107	
45	120	150	180	L = WS
50	133	167	200	
55	147	183	220	L = WS
60	160	200	240	
65	173	217	260	L = WS
70	187	233	280	

GENERAL NOTES

- When four or more work vehicles enter the through traffic lanes in a one hour period or less (excluding establishing and terminating the work area), the advanced FLAGGER sign shall be substituted for the WORKERS sign. For location of flaggers and FLAGGER signs, see Index 102-603.
- SHOULDER WORK sign may be used as an alternate to the WORKER symbol sign only on the side where the shoulder work is being performed.
- When a side road intersects the highway within the TTC zone, additional TTC devices shall be placed in accordance with other applicable TCZ indexes.
- For general TCZ requirements and additional information, refer to Index 102-600.

CONDITIONS
 WHERE ANY VEHICLE, EQUIPMENT, WORKERS OR THEIR ACTIVITIES ENCLOSED THE AREA CLOSER THAN 15' BUT NOT CLOSER THAN 2' TO THE EDGE OF TRAVEL WAY.

LAST REVISION	DESCRIPTION	INDEX	SHEET
11/01/17	FY 2018-19 STANDARD PLANS	102-602	1 of 1

SYMBOLS:

- Work Area
- Channelizing Device (See Index 102-600)
- Work Zone Sign
- Flagger
- Lane Identification + Direction of Traffic

GENERAL NOTES:

- Special Conditions may be required in accordance with these notes and the following sheets:
 - If an active railroad crossing is located closer to the Work Area than the queue length plus 300 feet, extend the Buffer Space as shown on Sheet 3.
 - If the queuing of vehicles across an active railroad crossing cannot be avoided, provide a uniformed traffic control officer or flagger at the highway-rail grade crossing to prevent vehicles from stopping within the highway-rail grade crossing, even if automatic train warning devices are in place.
- If the Work Area encroaches on the Centerline, use the Layout for Temporary Lane Shift to Shoulder on Sheet 3 only if the Existing Paved Shoulder width is sufficient to provide for an 11' lane between the Work Area and the Edge of Existing Paved Shoulder. Reduce the posted speed when appropriate.
- Temporary Raised Rumble Strips:
 - Use when both of the following conditions are met concurrently:
 - Existing Posted Speed is 55 mph or greater;
 - Work duration is greater than 60 minutes.
 - Use a consistent Strip color throughout the work zone.
 - Place each Rumble Strip set transversely across the lane at locations shown.
 - Use Option 1 or Option 2 as shown on Sheet 2. Use only one option throughout work zone.
- Additional one-way control may be provided by the following means:
 - Flag-carrying vehicle;
 - Official vehicle;
 - Plug vehicles;
 - Traffic signals.
 When flaggers are the sole means of one-way control, the flaggers must be in sight of each other or in direct communication at all times.
- When a side road intersects the highway within the TTC zone, place additional TTC devices in accordance with other applicable TCZ indexes.
- When Buffer Space cannot be attained due to geometric constraints, use the greatest attainable length, not less than 200 ft, for posted speeds greater than 25 mph.
- ROAD WORK AHEAD and the BE PREPARED TO STOP signs may be omitted if all of the following conditions are met:
 - Work operations are 60 minutes or less.
 - Speed limit is 45 mph or less.
 - There are no sight obstructions to vehicles approaching the work area for a distance equal to the Buffer Space shown in Table 1.
 - Vehicles in the work area have high-intensity, rotating, flashing, oscillating, or strobe lights operating.
 - Volume and complexity of the roadway has been considered.
 - If a railroad crossing is present, vehicles will not queue across rail tracks. G. AFADs are not in use.
- See Index 102-600 for general TCZ requirements and additional information.
- Automated Flagger Assistance Devices (AFADs) may be used in accordance with Specifications Section 102, 990 and the APL vendor drawings.

**TABLE 1
 DEVICE SPACING**

Posted Speed	Maximum Spacing of Cones or Tubular Markers				Maximum Spacing of Type I or Type II Barricades/Panels/Drums				Distance Between Signs			Buffer Space
	On a Taper	On a Tangent	On a Taper	On a Tangent	A	B	C	D	A	B	C	
25	20	50	20	50	200	200	200	100	150			150
30	20	50	20	50	200	200	200	100	200			200
35	20	50	20	50	200	200	200	100	250			250
40	20	50	20	50	200	200	200	100	300			300
45	20	50	20	50	350	350	350	175	360			360
50	20	50	20	100	500	500	500	250	420			420
55	20	50	20	100	760	1500	1000	500	495			495
60	20	50	20	100	1000	1500	1000	500	570			570
65	20	50	20	100	1640	1500	1000	500	645			645
70	20	50	20	100	2640	1500	1000	500	730			730

CONDITIONS
 WHERE ANY VEHICLE, EQUIPMENT, WORKERS OR THEIR ACTIVITIES ENCLOSED THE AREA BETWEEN THE CENTERLINE AND A LINE 2' OUTSIDE THE EDGE OF TRAVEL WAY.

LAST REVISION	DESCRIPTION	INDEX	SHEET
11/01/17	FY 2018-19 STANDARD PLANS	102-603	1 of 3

SYMBOLS:

- Work Area
- Channelizing Device (See Index 102-600)
- Work Zone Sign
- Flagger
- Lane Identification + Direction of Traffic

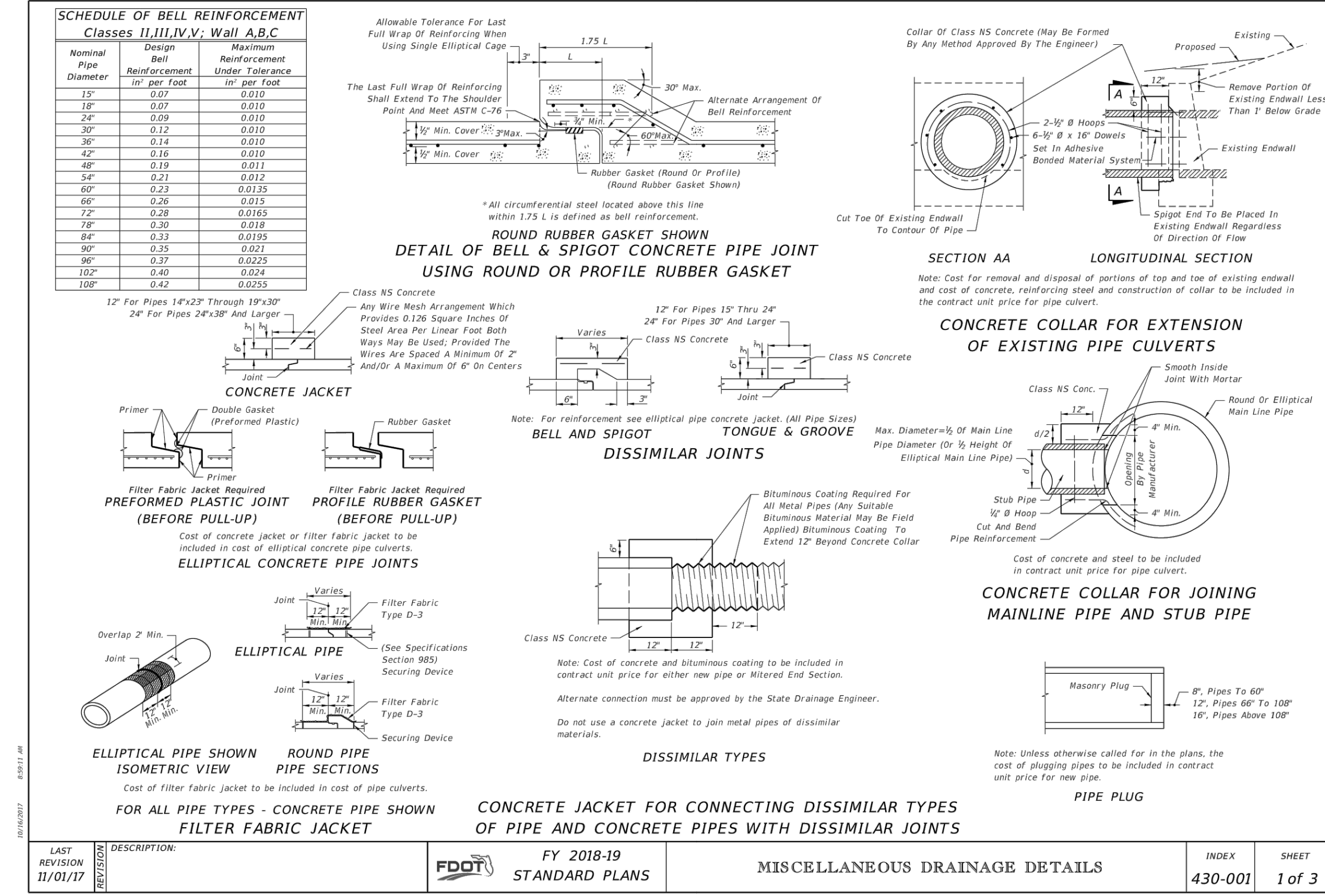
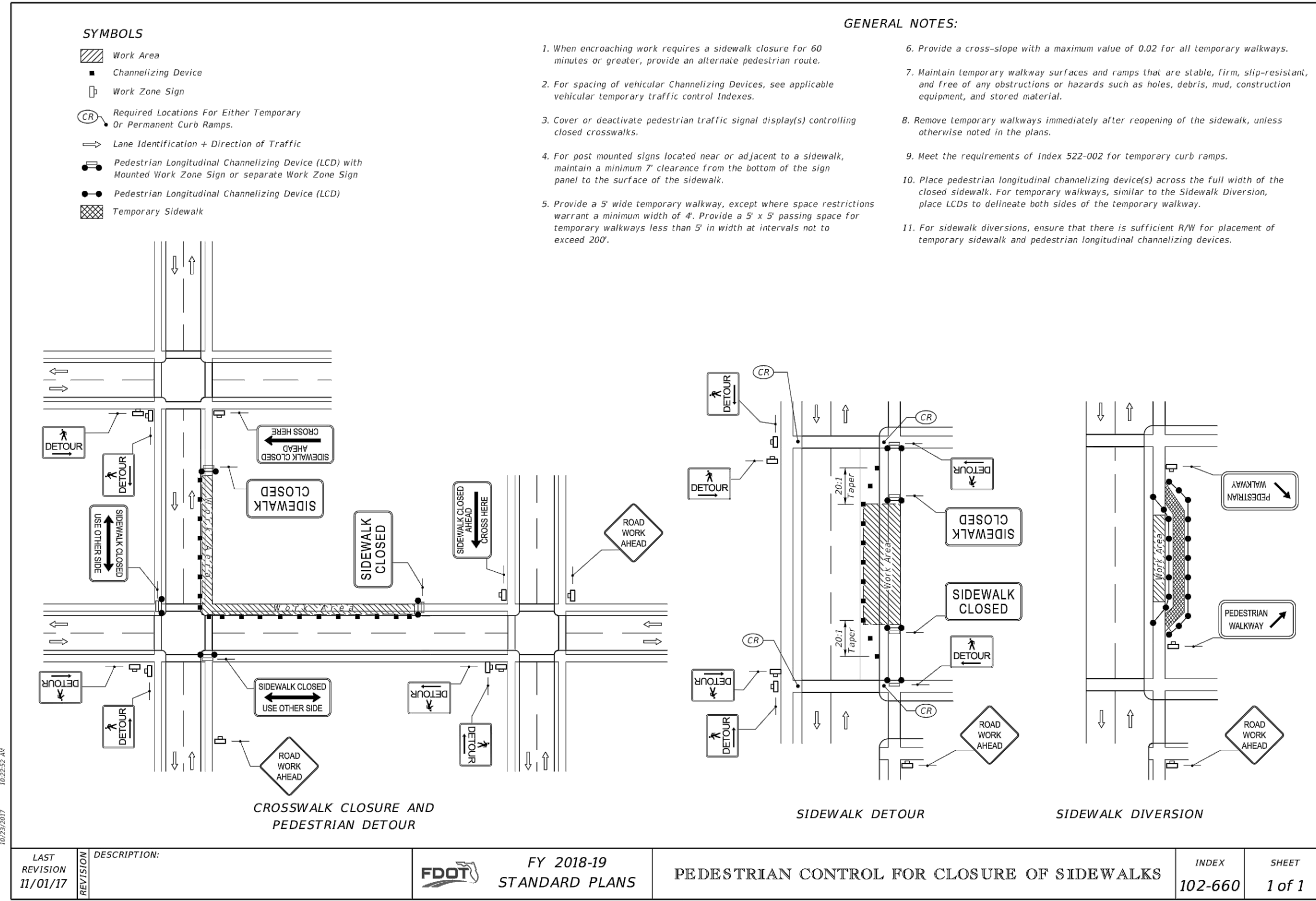
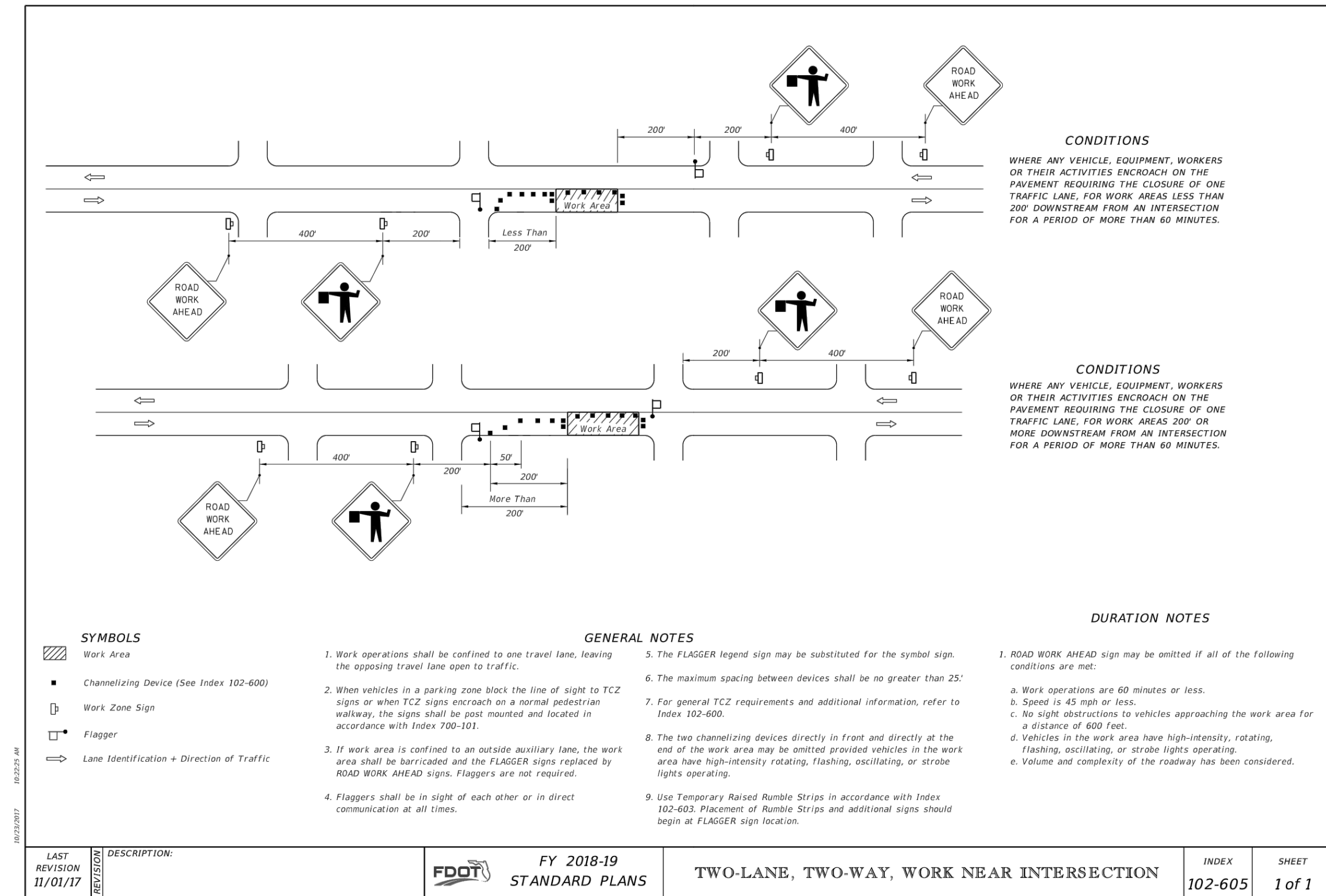
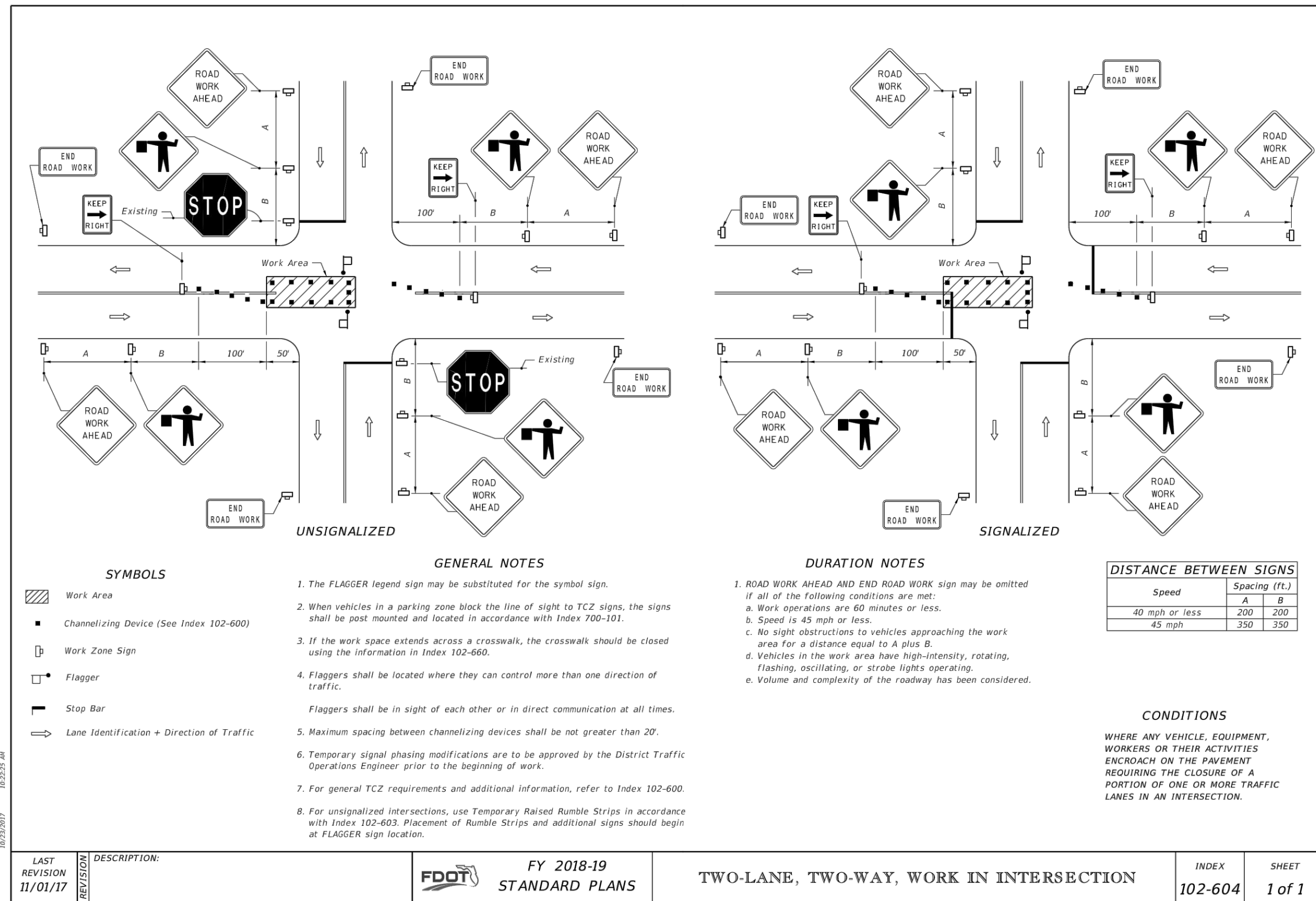
TEMPORARY RAISED RUMBLE STRIPS

OPTION - 1

OPTION - 2

TEMPORARY RAISED RUMBLE STRIPS

LAST REVISION	DESCRIPTION	INDEX	SHEET
11/01/17	FY 2018-19 STANDARD PLANS	102-603	2 of 3



CIVIL ENGINEERING
LANDSCAPE ARCHITECTURE
ENVIRONMENTAL PLANNING
TRANSPORTATION

BY: [Signature]

DATE: [Date]

NO. DATE SUBMITTALS / REVISIONS

1	12/15/18	SUBMITTED TO DP&E
2	1/10/19	SUBMITTED TO DP&E
3	4/30/19	SUBMITTED TO CITY OF DAYTONA BEACH

S. BEACH STREET
FORCEMAIN IMPROVEMENTS
CONSTRUCTION DETAILS

VOLUSIA COUNTY, FLORIDA
CITY OF DAYTONA BEACH

PROJECT NO.: ZC 09062
DESIGNED BY: HK
DRAFTED BY: PEJ
CHECKED BY: HK/BB
DRAWING FILE: 09062CV1
XREFS: 09062BAS
XREFS:

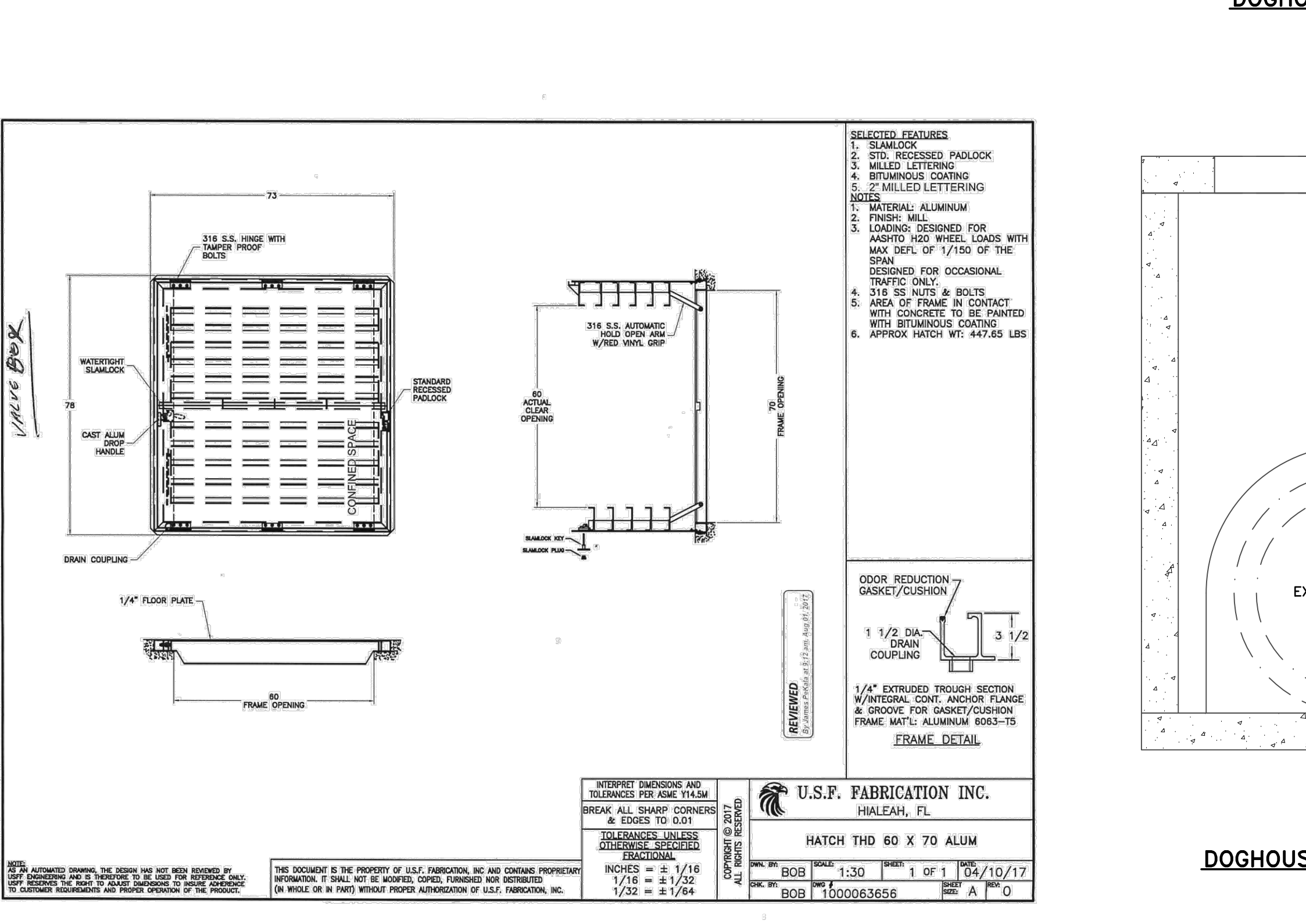
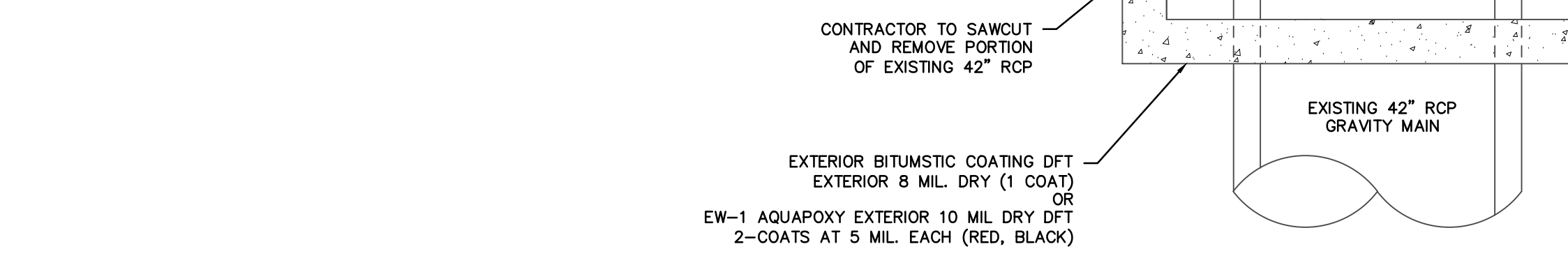
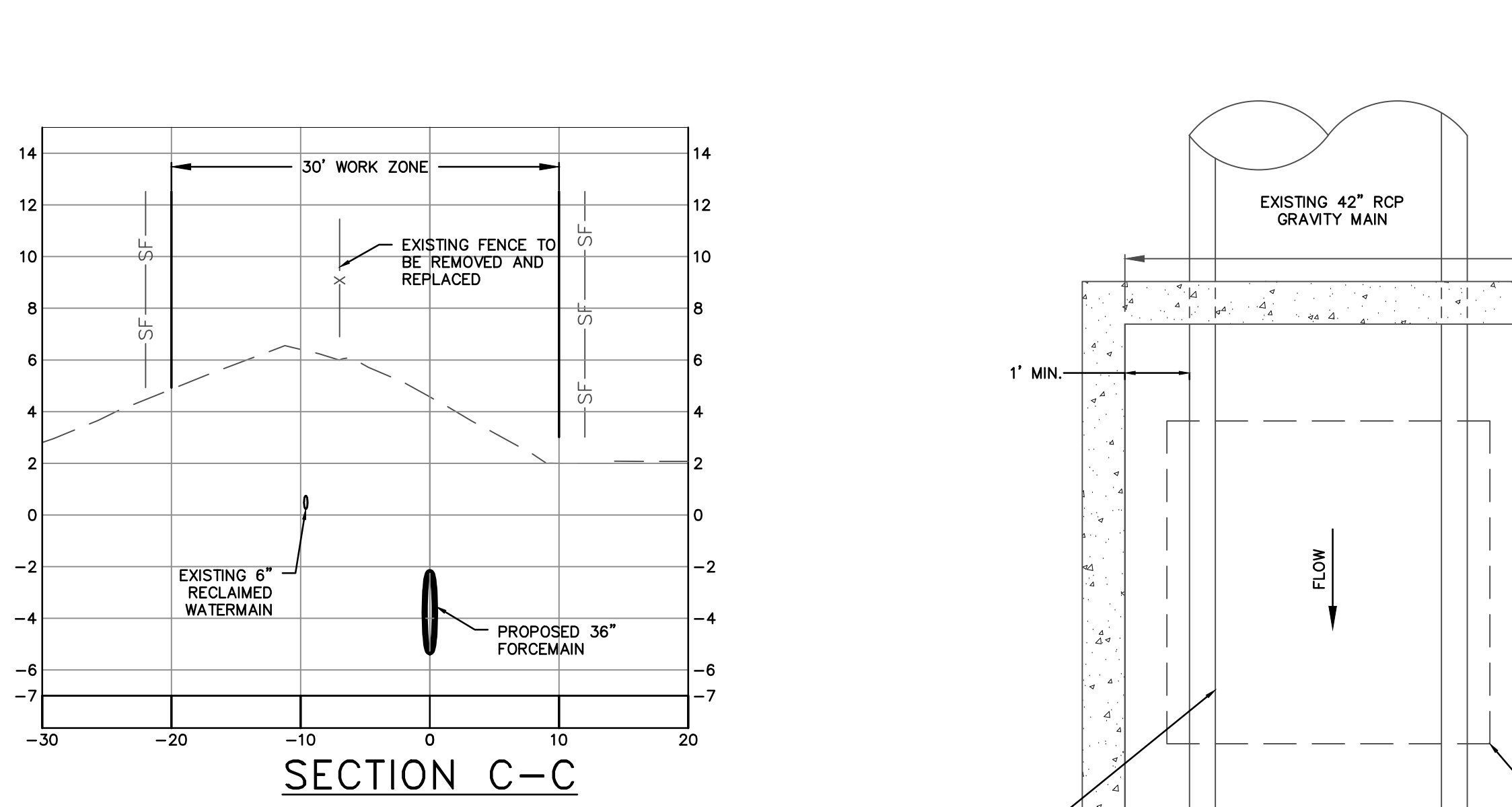
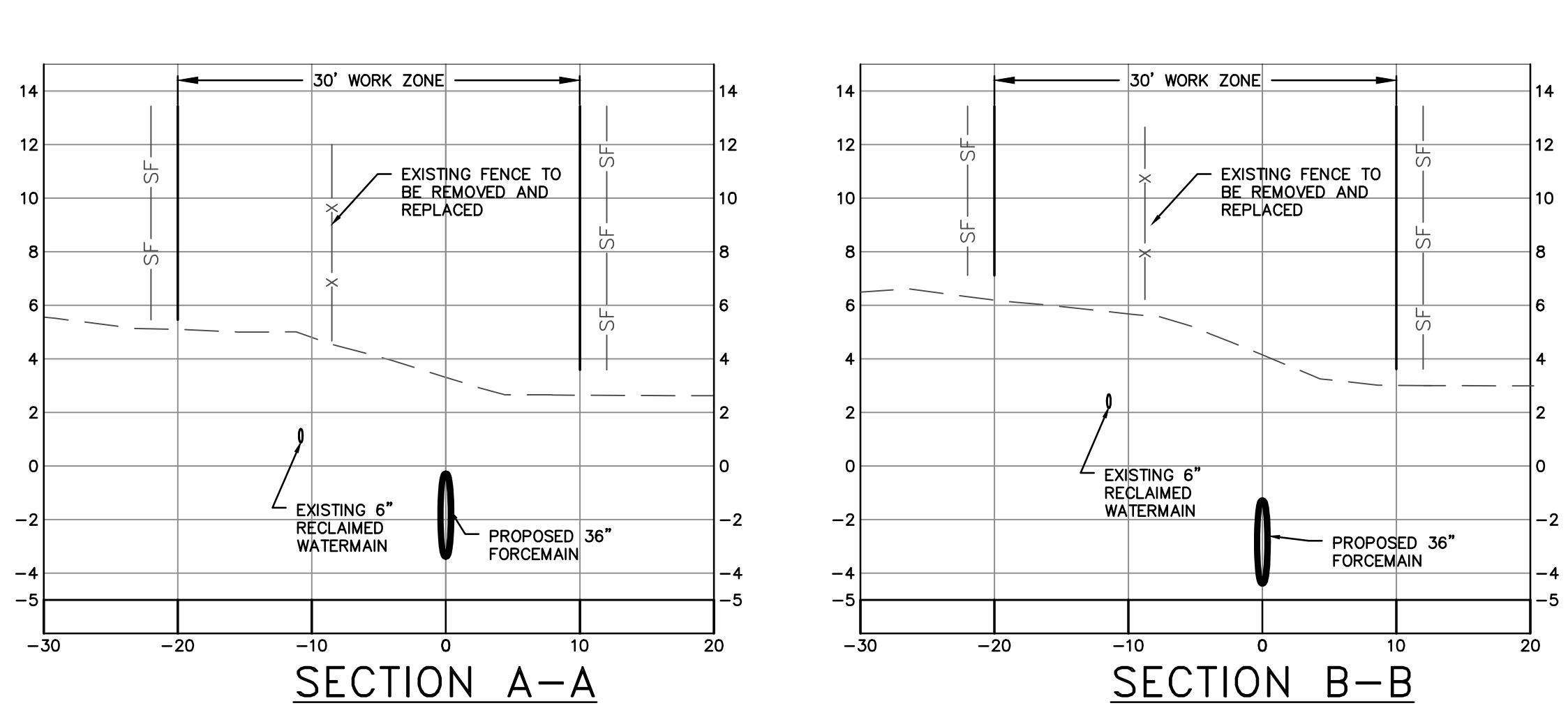
INDEX: 430-001, SHEET: 1 of 3

NO.	DATE	SUBMITTALS / REVISIONS
1	11/01/17	SUBMITTED TO DEP.
2	11/01/17	ADDED TO CITY OF DAYTONA BEACH
3	4/30/18	SUBMITTED TO CITY OF DAYTONA BEACH

**S. BEACH STREET
 FORCEMAIN IMPROVEMENTS
 CONSTRUCTION DETAILS**

PROJECT NO. ZC 09062
DESIGNED BY: HK
DRAFTED BY: PEJ
CHECKED BY: HK/BB
DRAWING FILE: 09062CV1
XREF'S: 0902BAS

LAST REVISION: 11/01/17	DESCRIPTION: FY 2018-19 STANDARD PLANS	INDEX: 425-052	SHEET: 3 of 7
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WALL DEPTH	SCHEDULE	AREA (in. ² /ft.)	MAX. SPACING BARS	WWF
0-15'	A12	0.20	12"	8"
6-10'	A6	0.20	6"	5"
10-13'	A4	0.20	4"	3"
10-15'	B5.5	0.24	5 1/2"	5"
10-15'	C6.5	0.37	6 1/2"	6"

WALL DEPTH	SCHEDULE	AREA (in. ² /ft.)	MAX. SPACING BARS	WWF
0-5'	A12	0.20	12"	8"
6-10'	A6	0.20	6"	5"
10-13'	A4	0.20	4"	3"
10-15'	B5.5	0.24	5 1/2"	5"
10-15'	C6.5	0.37	6 1/2"	6"

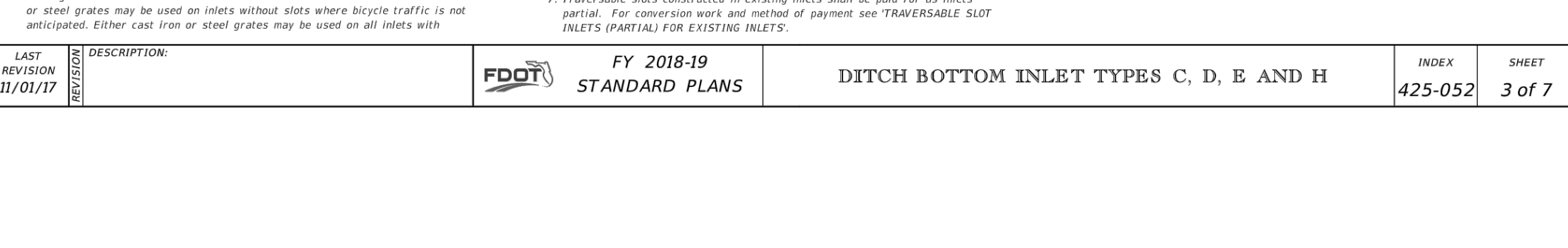
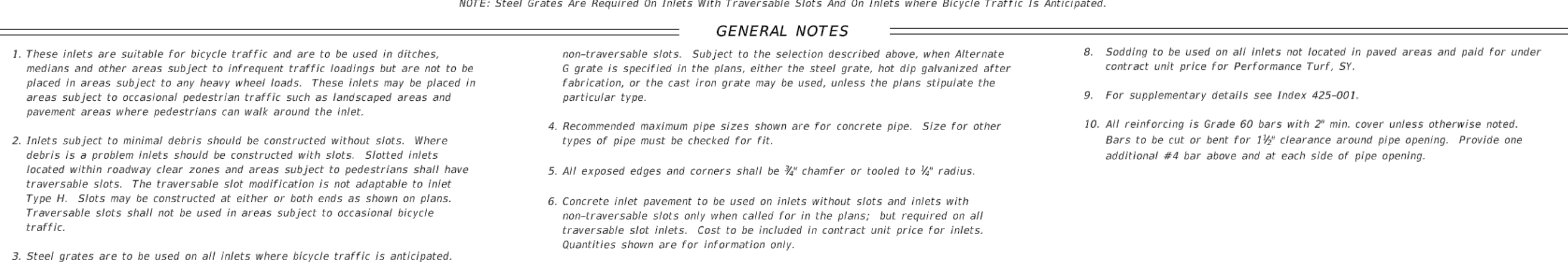
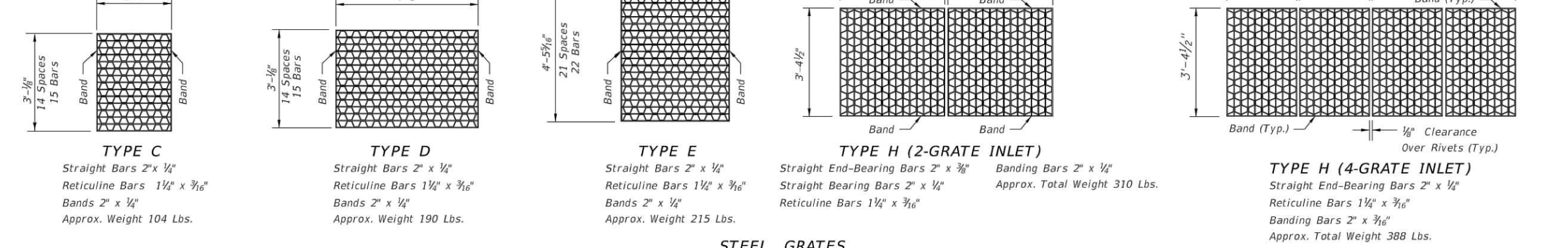
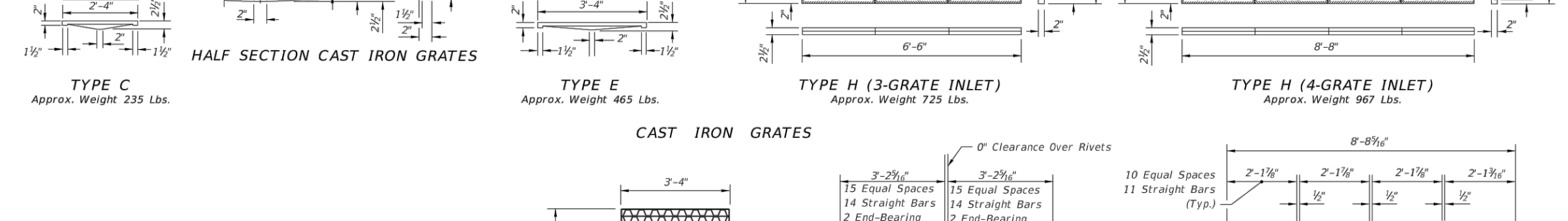
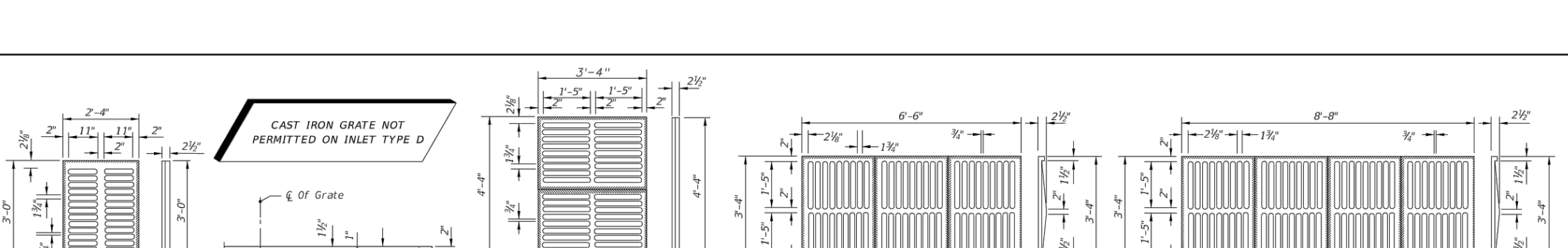
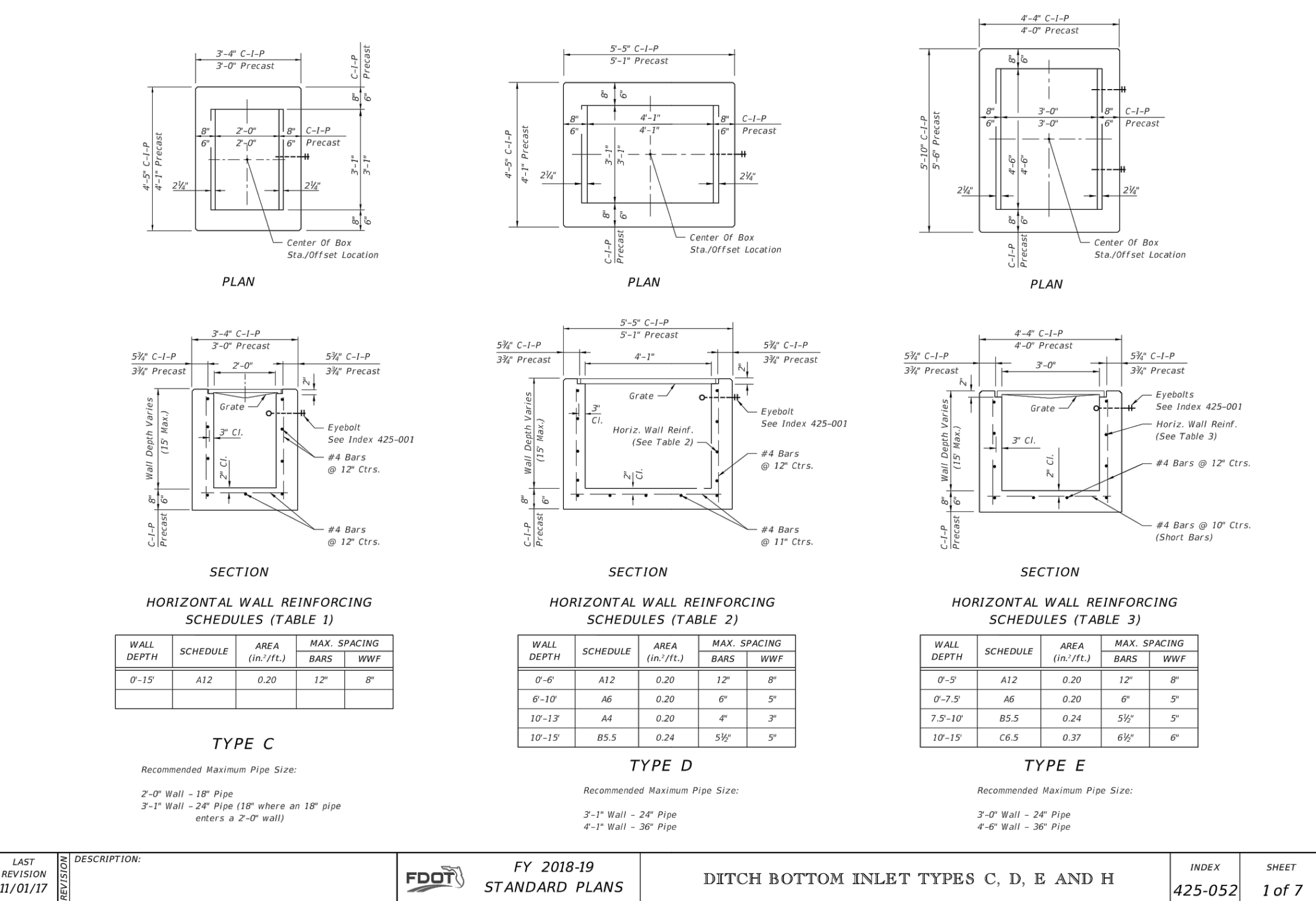
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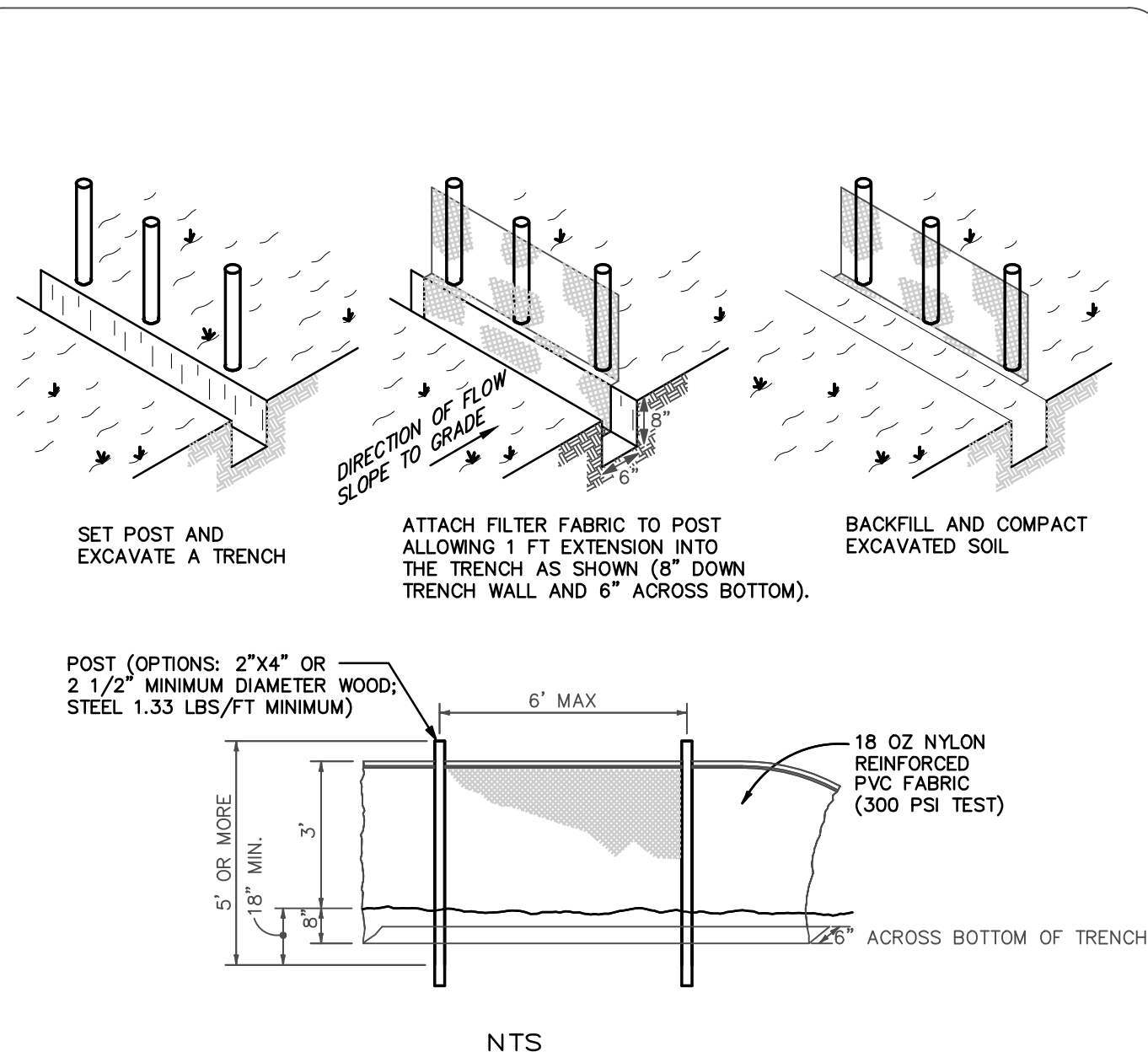
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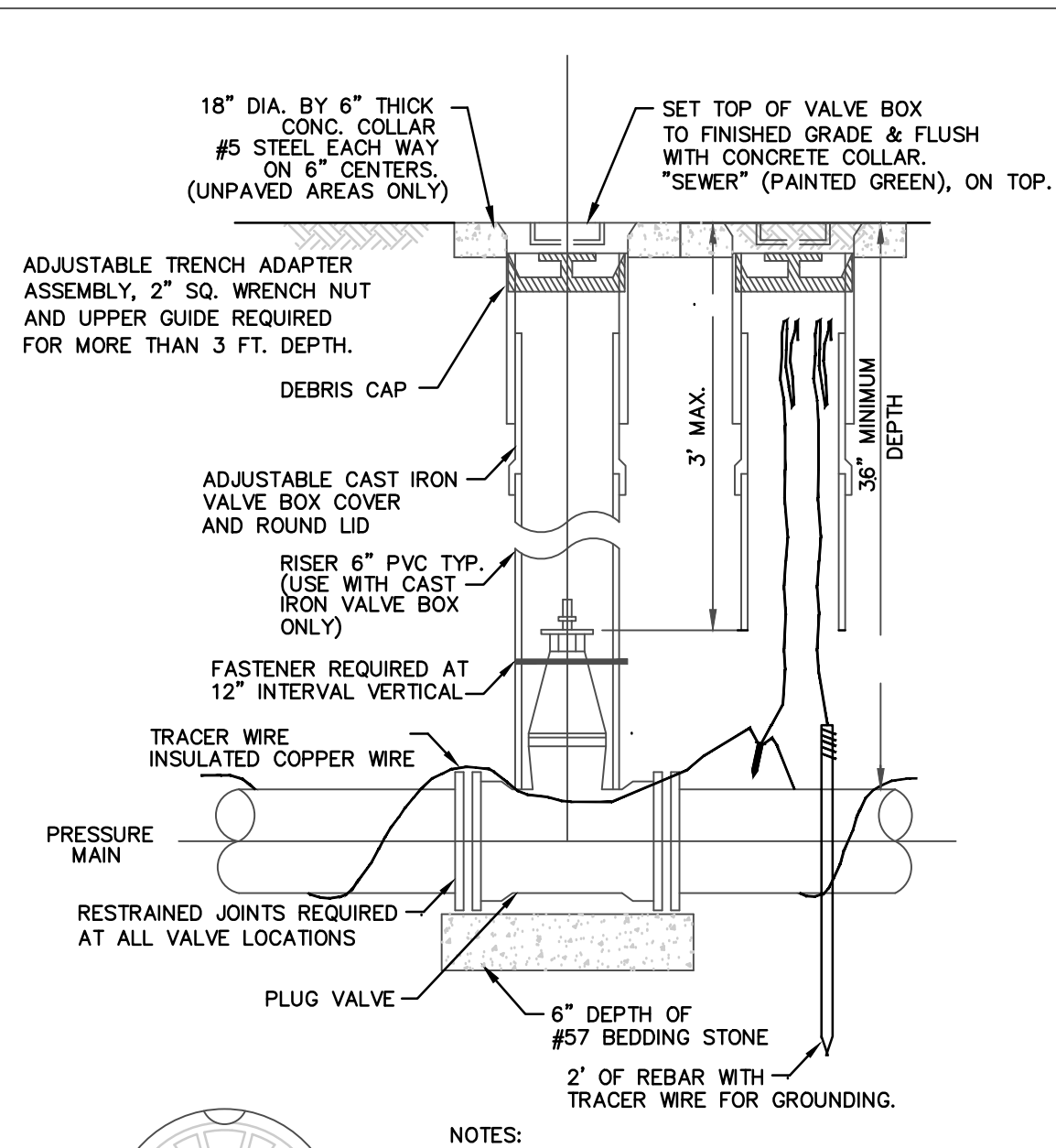
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10-15'	B5.5	0.24	5 1/2"	5"
10-15'	C6.5	0.37	6 1/2"	6"



- NOTES:
1. MATERIALS, CONSTRUCTION METHODS AND MAINTENANCE SHALL BE IN ACCORDANCE WITH THE FLORIDA DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS AND DESIGN STANDARDS CURRENT EDITION.
 2. CONTRACTOR SHALL PROVIDE SILT FENCES, TURBIDITY BARRIERS OR APPROVED BARRIERS AT ALL STORMWATER DISCHARGE POINTS FOR EROSION CONTROL AND SEDIMENT CONTROL DURING CONSTRUCTION. DEPENDING UPON FLOW VELOCITIES AND VOLUME, REDUNDANT (MULTIPLE) PARALLEL FENCES MAY BE NEEDED.
 3. CONTRACTOR SHALL ROUGH GRADE STORMWATER SWALES AND RETENTION AREAS IN COMPLIANCE WITH BEST MANAGEMENT PRACTICES PRIOR TO CONSTRUCTION OF SITE IMPROVEMENTS.
 4. CONTRACTOR SHALL MEET ALL PERMIT CONDITIONS AS ESTABLISHED BY THE CITY OF DAYTONA BEACH AND ALL OTHER APPLICABLE AGENCIES, INCLUDING BUT NOT LIMITED TO COUNTY, FDOT, STATE, FEDERAL, AND THE SURWMD.



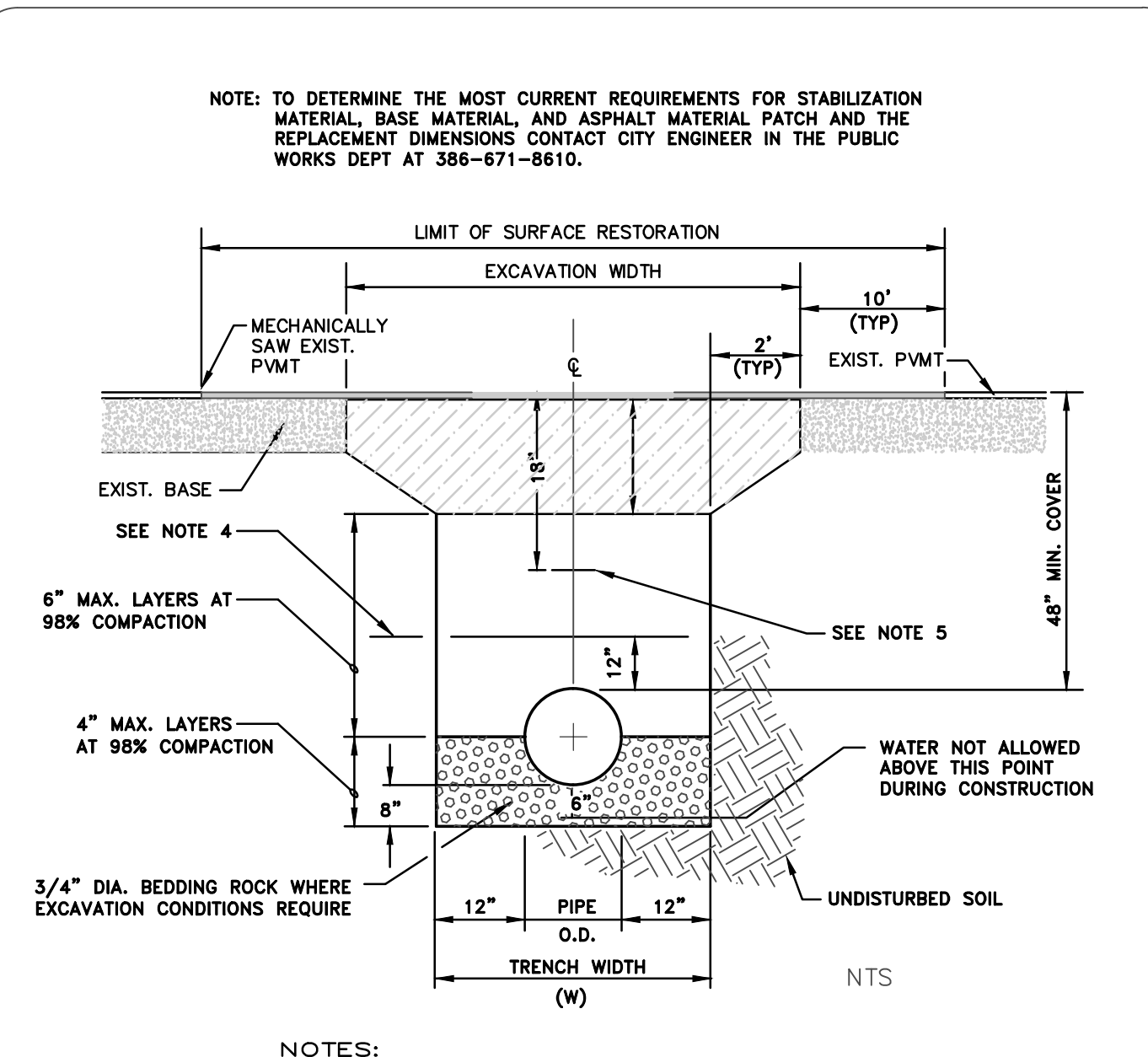
- NOTES:
1. SEE CODB'S APPROVED PRODUCT LIST FOR ACCEPTABLE MANUFACTURERS.
 2. INSTALL RESTRAINED JOINTS, AS REQUIRED, FROM DEFLECTION POINT IN BOTH DIRECTIONS (20' MIN.).
 3. TRACER WIRE SHALL BE A MINIMUM 12 GAUGE WITH A TENSILE STRENGTH/BREAK LOAD OF 452 LBS. SEE TRACER WIRE SPECIFICATION #15049.



LOCATION OF PUBLIC WATER SYSTEM MAINS IN ACCORDANCE WITH F.A.C. RULE 62-555.314

Other Pipe	Horizontal Separation	Crossings (1)	Joint Spacing @ Crossings (Full Joint Center)
Sanitary Sewer Stormwater Force Main, Reclaimed Water (2)	Water Main 3 ft. minimum	Water Main 12 inches in the minimum, except for storm sewer, then 6 inches in the minimum and 12 inches is preferred	Water Main Alternate 3 ft. minimum
Vacuum Sanitary Sewer	Water Main 10 ft. preferred 3 ft. minimum	Water Main 12 inches in the minimum, except for storm sewer, then 6 inches in the minimum and 12 inches is preferred	Water Main Alternate 3 ft. minimum
Gravity or Pressure Sanitary Sewer, Force Main, Reclaimed Water (2)	Water Main 10 ft. preferred 6 ft. minimum (3)	Water Main 12 inches in the minimum, except for storm sewer, then 6 inches in the minimum and 12 inches is preferred	Water Main Alternate 3 ft. minimum
On-Site Sewer Treatment & Disposal System	Water Main 10 ft. minimum	Water Main 12 inches in the minimum, except for storm sewer, then 6 inches in the minimum and 12 inches is preferred	Water Main Alternate 3 ft. minimum

(1) Water main should cross above other pipes. When water main must be below other pipes, the minimum separation is 12 inches.
 (2) Reclaimed water regulated under Part III of Chapter 62-610, F.A.C.
 (3) Minimum separation of 10 ft. preferred.
 (4) Reclaimed water not regulated under Part III of Chapter 62-610, F.A.C.



- NOTES:
1. WHERE SOIL CONDITIONS CAN NOT BE MAINTAINED AS SHOWN ABOVE, PROVIDE APPROVED METHOD OF CONSTRUCTION.
 2. SHEETING WILL BE REQUIRED AS DETERMINED IN THE FIELD.
 3. COMPACTION PERCENTAGES SHOWN REFER TO A.A.S.H.T.O. T-180. PROVIDE COMPACTION TEST REPORTS TO CITY INSPECTOR.
 4. MECHANICAL COMPACTION NOT ALLOWED BELOW THIS LEVEL.
 5. FOR PIPES ONLY - INSTALL METALLIC TAPE AND UP #12 INSULATED SINGLE STRAND COPPER WIRE OVER FULL LENGTH OF PIPE.
 6. THE CONTRACTOR SHALL, UNLESS OTHERWISE NOTED, RESTORE ALL STRIPING, PAVEMENT MARKINGS, DELINEATORS, SIGNAGE AND TRAFFIC SIGNAL SYSTEM COMPONENTS DISTURBED DURING CONSTRUCTION ACTIVITIES. COST OF ALL WORK AND MATERIALS WILL BE CONSIDERED INCIDENTAL TO PATCH MATERIAL ITEMS.

THE CITY OF DAYTONA BEACH ENGINEERING DIVISION

STAKED SILT FENCE DETAIL ST-13

FY-19/20
Drawing Date: 1/08
Drawn By: KSL
Checked By: JMP
Scale: NTS
Revision Date: 01/19
File Name: Silt Fence ST-13
Page 112

THE CITY OF DAYTONA BEACH UTILITIES DEPARTMENT

SANITARY VALVE AND VALVE BOX DETAIL S-16

FY-19/20
Drawing Date: 01/08
Drawn By: KSL
Checked By: JMP
Scale: NTS
Revision Date: 01/19
File Name: Sanitary Valve S-16
Page 28

THE CITY OF DAYTONA BEACH UTILITIES DEPARTMENT

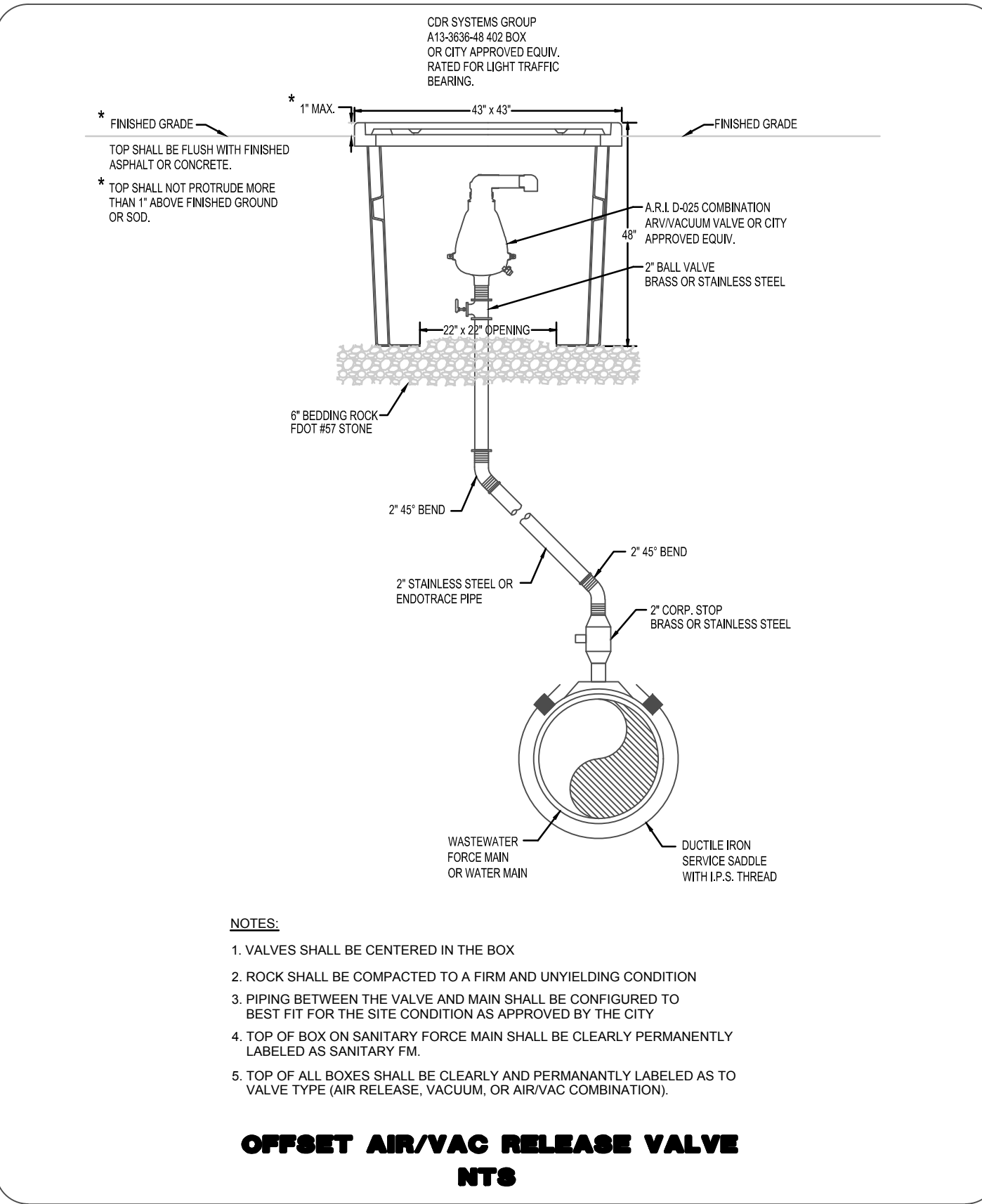
WATER MAIN SEPARATION CHART W-8

FY-19/20
Drawing Date: 01/08
Drawn By: KSL
Checked By: JMP
Scale: NTS
Revision Date: 01/19
File Name: Water Main Separation Chart W-8
Page 12

THE CITY OF DAYTONA BEACH UTILITIES DEPARTMENT

PAVEMENT CUT AND PATCH DETAIL W-12

FY-19/20
Drawing Date: 01/08
Drawn By: KSL
Checked By: JMP
Scale: NTS
Revision Date: 01/19
File Name: Pavement Cut & Patch W-12
Page 16



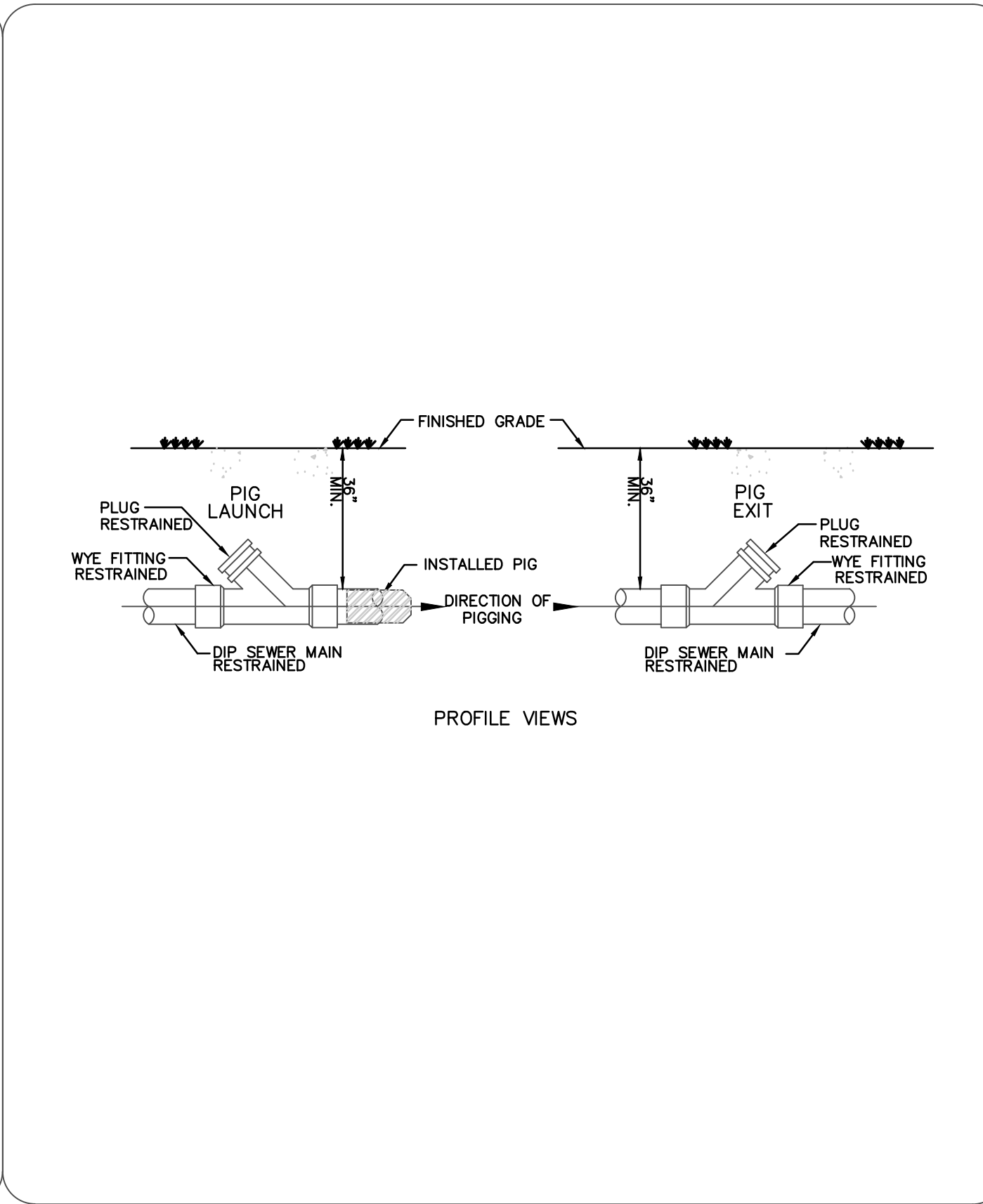
- NOTES:
1. VALVES SHALL BE CENTERED IN THE BOX
 2. ROCK SHALL BE COMPACTED TO A FIRM AND UNYIELDING CONDITION
 3. PIPING BETWEEN THE VALVE AND MAIN SHALL BE CONFIGURED TO BEST FIT FOR THE SITE CONDITION AS APPROVED BY THE CITY
 4. TOP OF BOX ON SANITARY FORCE MAIN SHALL BE CLEARLY PERMANENTLY LABELED AS SANITARY FM.
 5. TOP OF ALL BOXES SHALL BE CLEARLY AND PERMANENTLY LABELED AS TO VALVE TYPE (AIR RELEASE, VACUUM, OR AIR/VAC COMBINATION).

OFFSET AIR/VAC RELEASE VALVE NTS

THE CITY OF DAYTONA BEACH UTILITIES DEPARTMENT

AUTOMATIC AIR/VACUUM VALVE DETAIL S-18

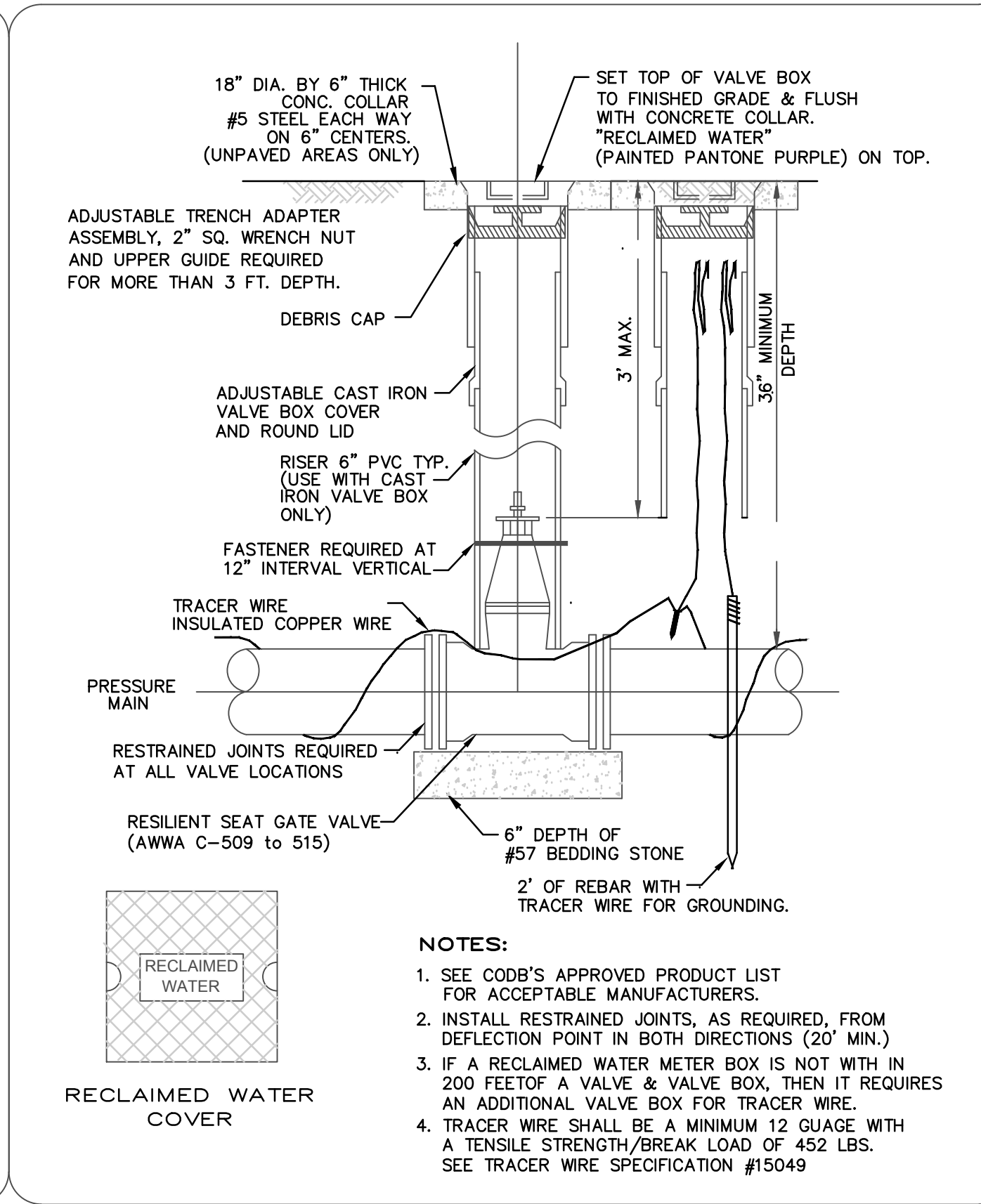
FY-19/20
Drawing Date: 03/10
Drawn By: KSL
Checked By: JMP
Scale: NTS
Revision Date: 01/19
File Name: Automatic Air Valve S-18
Page 80



THE CITY OF DAYTONA BEACH UTILITIES DEPARTMENT

PIG LAUNCH AND RECEIVING DETAIL S-21

FY-19/20
Drawing Date: 01/08
Drawn By: KSL
Checked By: JMP
Scale: NTS
Revision Date: 01/19
File Name: Pig Launch S-21
Page 83



- NOTES:
1. SEE CODB'S APPROVED PRODUCT LIST FOR ACCEPTABLE MANUFACTURERS.
 2. INSTALL RESTRAINED JOINTS, AS REQUIRED, FROM DEFLECTION POINT IN BOTH DIRECTIONS (20' MIN.).
 3. IF A RECLAIMED WATER METER BOX IS NOT WITH IN 200 FEET OF A VALVE & VALVE BOX, THEN IT REQUIRES AN ADDITIONAL VALVE BOX FOR TRACER WIRE.
 4. TRACER WIRE SHALL BE A MINIMUM 12 GAUGE WITH A TENSILE STRENGTH/BREAK LOAD OF 452 LBS. SEE TRACER WIRE SPECIFICATION #15049.

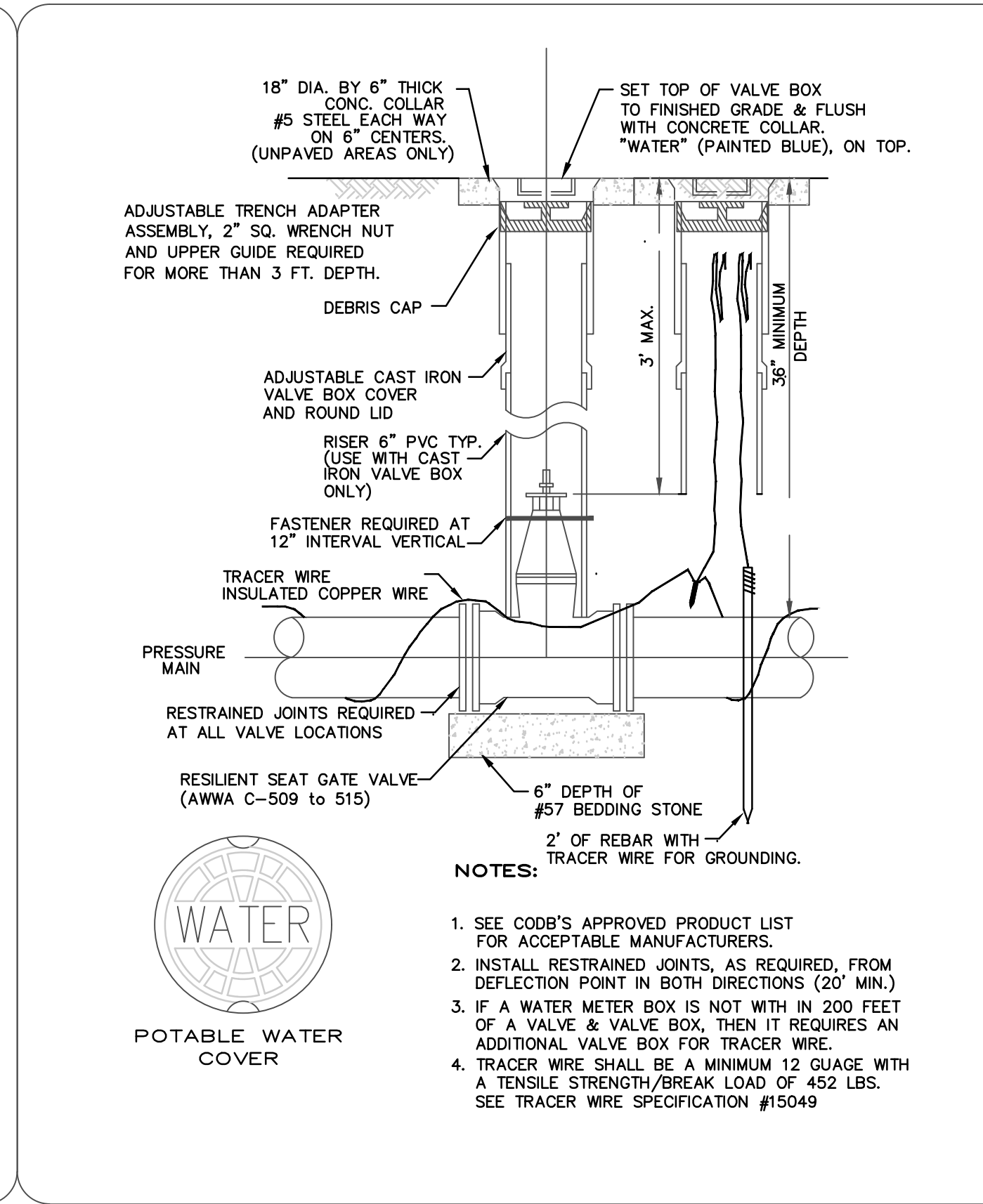


RECLAIMED WATER COVER

THE CITY OF DAYTONA BEACH UTILITIES DEPARTMENT

VALVE AND VALVE BOX DETAIL RW-9

FY-19/20
Drawing Date: 01/08
Drawn By: KSL
Checked By: JMP
Scale: NTS
Revision Date: 01/19
File Name: Valve and Box RW-9
Page 50



POTABLE WATER COVER

THE CITY OF DAYTONA BEACH UTILITIES DEPARTMENT

WATER VALVE AND VALVE BOX DETAIL W-13

FY-19/20
Drawing Date: 01/08
Drawn By: KSL
Checked By: JMP
Scale: NTS
Revision Date: 01/19
File Name: Water Valve W-13
Page 17



CIVIL ENGINEERING
LANDSCAPE ARCHITECTURE
ENVIRONMENTAL PLANNING
TRANSPORTATION

BY: MLR
MLR
MLR

DATE: 12/15/18
12/15/18
4/30/19

SUBMITTED TO: DAYTONA BEACH
SUBMITTED TO: CITY OF DAYTONA BEACH

NO. DATE SUBMITTALS/REVISIONS

1	12/15/18	SUBMITTED TO: DAYTONA BEACH
2	12/15/18	SUBMITTED TO: CITY OF DAYTONA BEACH
3	4/30/19	SUBMITTED TO: CITY OF DAYTONA BEACH

S. BEACH STREET
FORCE MAIN IMPROVEMENTS
CONSTRUCTION DETAILS

FLORIDA COUNTY, FLORIDA
CITY OF DAYTONA BEACH

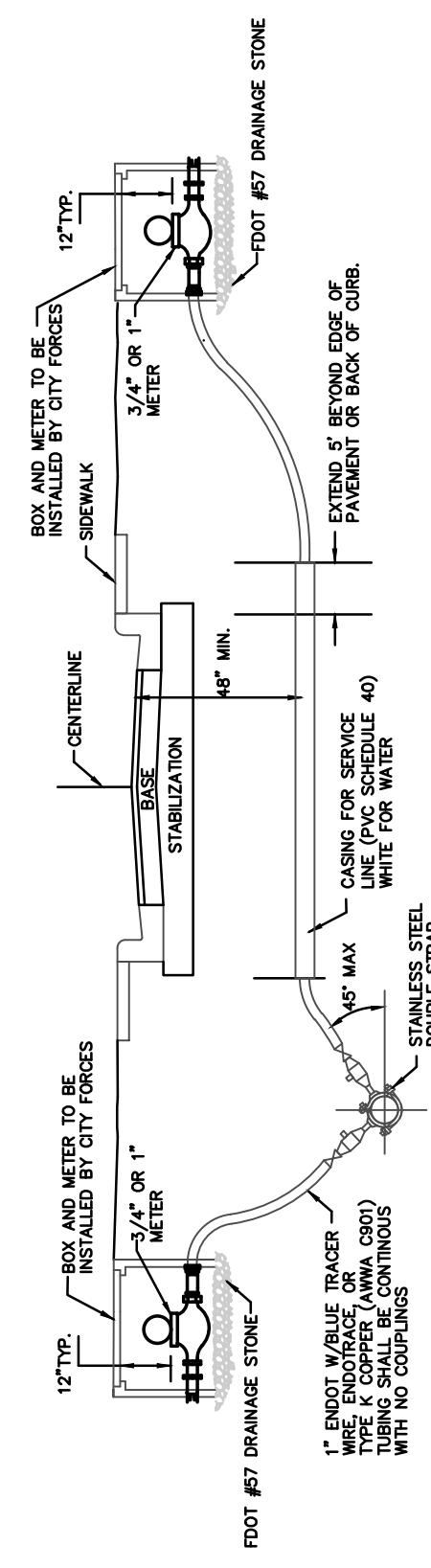
PROJECT NO. ZC 09062

DESIGNED BY: HK

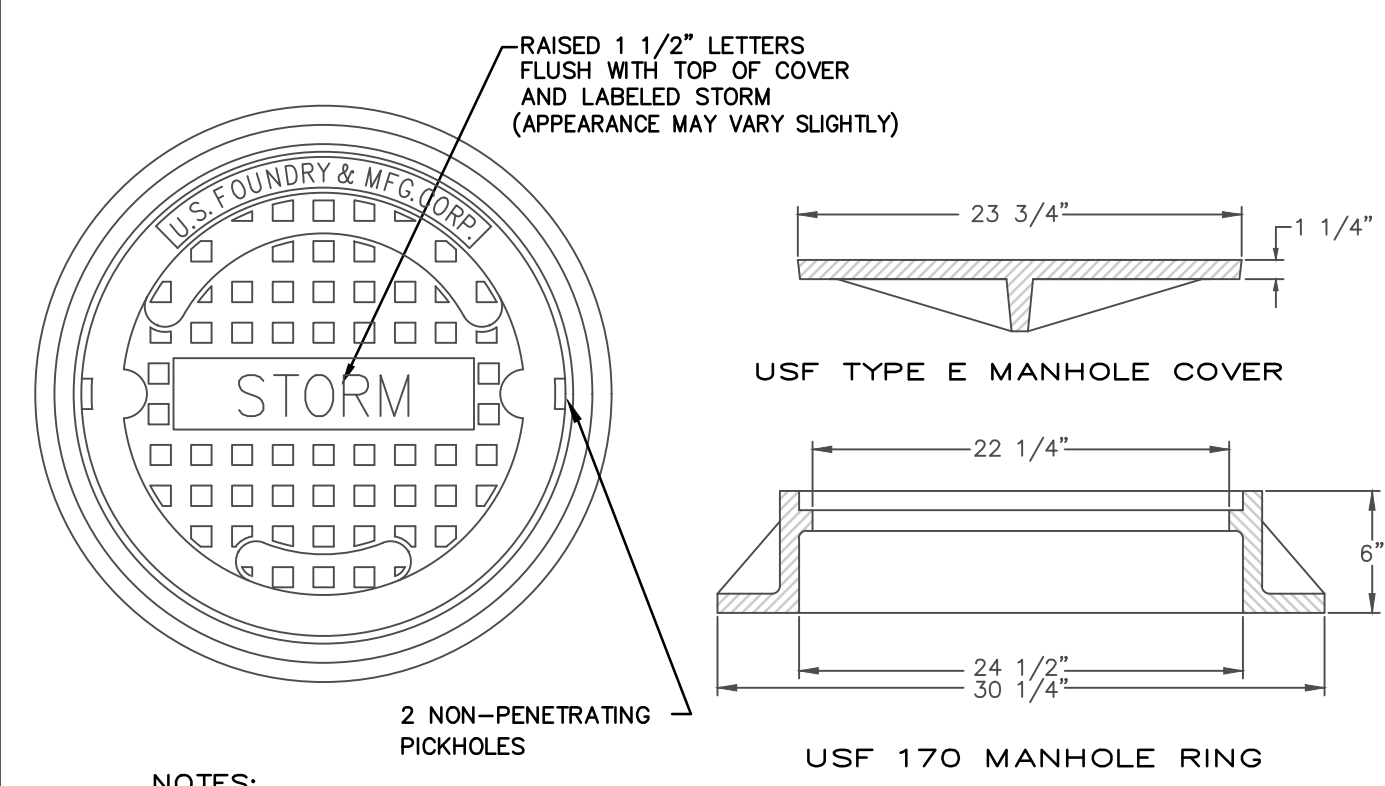
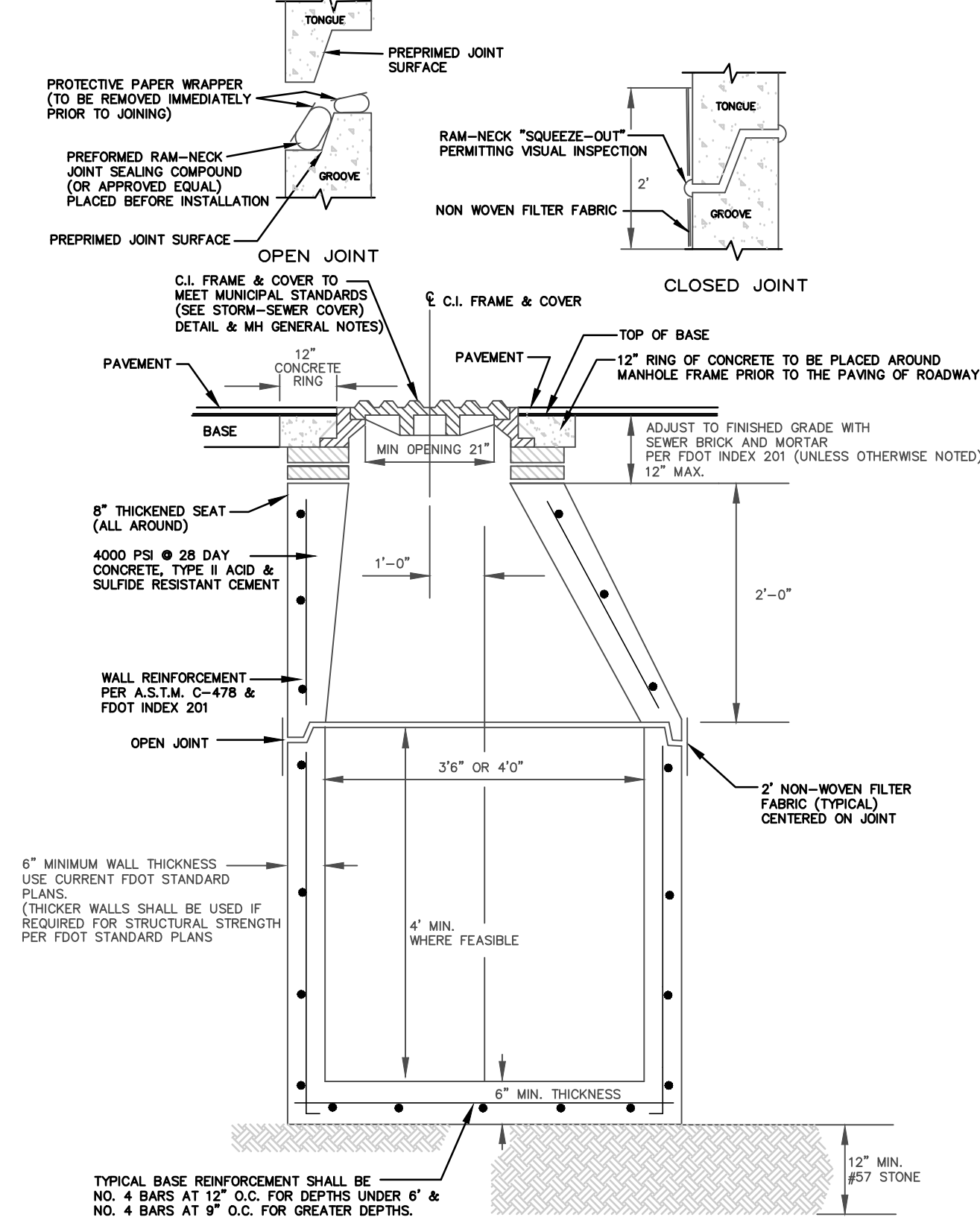
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CHECKED BY: HK/BB

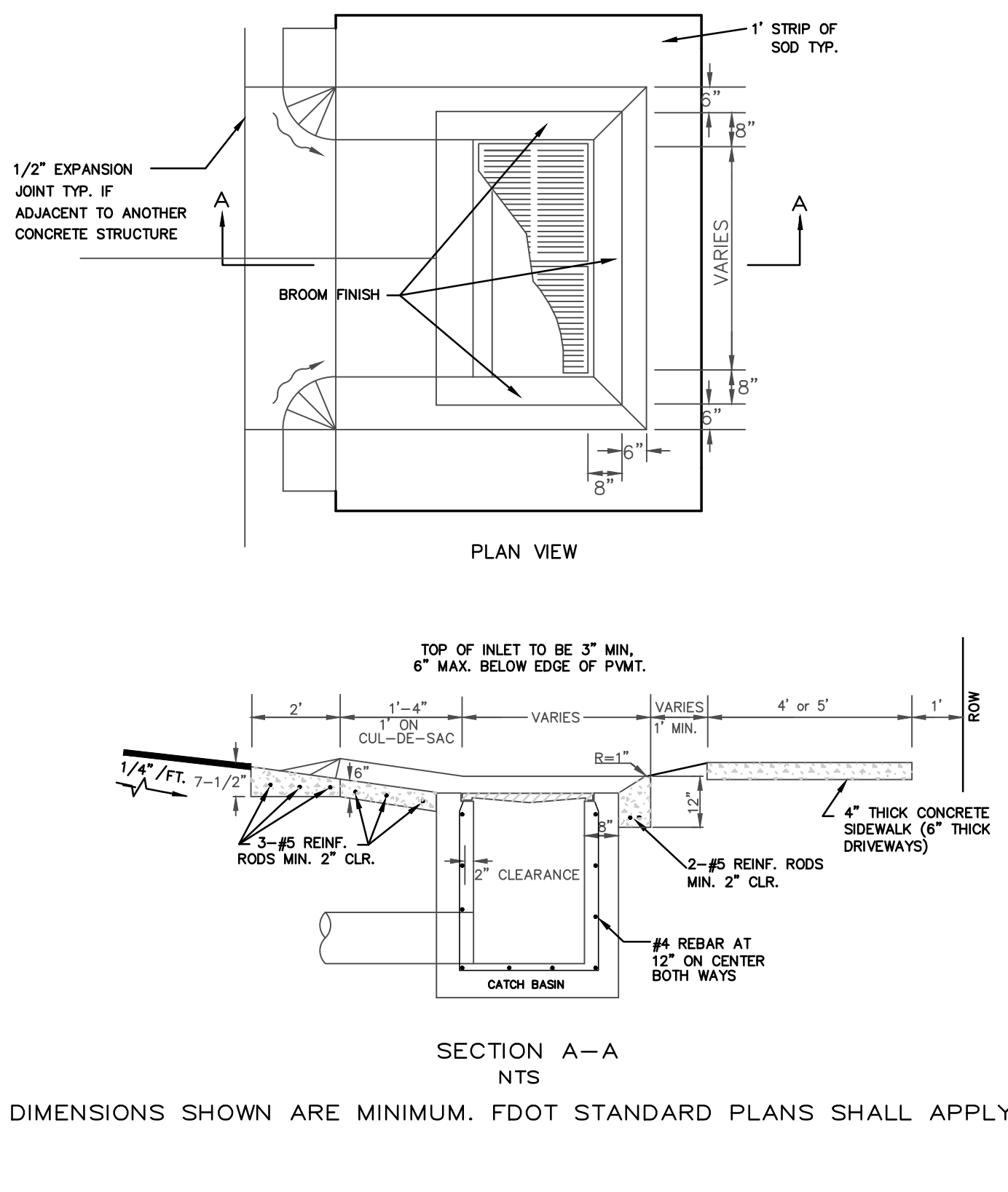
DRAWING FILE: 09062CV1
XREF'S: 09062BAS
XREF'S:



- NOTES:
1. BOX AND METERS TO BE INSTALLED BY CITY FORCES.
 2. METER SHALL BE INSTALLED 1' BEHIND THE C.V.M.
 3. MINIMUM SEPARATION BETWEEN CURB AND METER BOX AND BETWEEN CONCRETE SHALL BE 1/4" ON ALL SIDES.
 4. CONTRACTOR TO LOCATE CURB STOP BY PLACING A STRIKE (C.V.M.) AND WITH THE LOT NUMBERS IT SERVES.
 5. ALL COMMERCIAL PROPERTY METERS MUST BE SEED BY THE ENGINEER-OF-RECORD.
 6. THE MINIMUM BRIDGE CASING DIAMETER SHALL BE 2" FOR SERVICE LINES GREATER THAN 12" IN DIAMETER. THE CASING SHALL BE 2" THICK THE SIZE OF THE SERVICE LINE OUTSIDE DIAMETER.
 7. INSTALL A BLUE TRACER WIRE ALONG ALL NON-METALLIC SERVICE LINES.



- NOTES:
1. MORTAR TO CONTAIN "HYDRATITE", OR APPROVED EQUAL, TO PREVENT SHRINKAGE.
 2. SUB-GRADE BENEATH MANHOLES SHALL BE FIRM UNDISTURBED GRANULAR UNSATURATED SOIL. NO. 57 AGGREGATE STONE SHALL BE USED IN WET CONDITIONS AND/OR WHERE UNSUITABLE MATERIAL IS ENCOUNTERED.
 3. UNLESS DETAILED PLANS SHOW OTHERWISE, ALL MANHOLE RING AND COVER CASTINGS IN PAVED AREAS ARE TO BE ADJUSTED TO FINAL GRADE, SEALED AND SECURED IN PLACE WITH A CONCRETE COLLAR AFTER THE ROAD BASE IS PLACED AND JUST PRIOR TO PLACEMENT OF ASPHALT WEARING SURFACE.
 4. CONTRACTOR SHALL PROVIDE THICKER MANHOLE WALLS AND BASES AS REQUIRED TO PREVENT FLOTATION BASED ON HISTORIC HIGH GROUND WATER TABLE ELEVATIONS AS DETERMINED USING ACCEPTED ENGINEERING PRACTICES AND/OR APPROVED BY THE UTILITIES DEPARTMENT.
 5. CONCRETE COLLAR AROUND MANHOLE FRAME IS REQUIRED IN PAVED AREAS ONLY.
 6. SHOP DRAWINGS FOR ALL STRUCTURES SHALL BE SUBMITTED TO AND APPROVED BY THE DESIGN ENGINEER PRIOR TO INSTALLATION.
 7. NO BUG HOLES OR HONEYCOMB WILL BE ACCEPTED.
 8. ENDS OF SECTION SHALL FIT FLUSH TOGETHER.
 9. MANHOLES SHALL BE CLEARED OF ALL DEBRIS PRIOR TO CITY ACCEPTANCE AND SYSTEM USE.



THE CITY OF DAYTONA BEACH
UTILITIES DEPARTMENT

WATER SERVICE CONNECTION (UNDER ROAD)
(PAGE 2 OF 2)
W-19

FY-19/20
Drawing Date: 01/08
Drawn By: KJH
Checked By: JMP
Scale: NTS
Revision Date: 01/19
File Name: Storm Inlet ST-21
Page 23

THE CITY OF DAYTONA BEACH
ENGINEERING DIVISION

STORMWATER MANHOLE DETAIL
ST-19

FY-19/20
Drawing Date: 01/08
Drawn By: KJH
Checked By: JMP
Scale: NTS
Revision Date: 01/19
File Name: Storm Cover ST-20
Page 19

THE CITY OF DAYTONA BEACH
ENGINEERING DIVISION

STORM-SEWER COVER DETAIL & MH GENERAL NOTES
ST-20

FY-19/20
Drawing Date: 01/08
Drawn By: KJH
Checked By: JMP
Scale: NTS
Revision Date: 01/19
File Name: Storm Cover ST-20
Page 19

THE CITY OF DAYTONA BEACH
ENGINEERING DIVISION

CONCRETE STORM INLET APRON DETAIL
ST-21

FY-19/20
Drawing Date: 01/08
Drawn By: KJH
Checked By: JMP
Scale: NTS
Revision Date: 01/19
File Name: Storm Inlet ST-21
Page 19

SECTION 15049
TRACER WIRE AND ALARMING TAPE

Rev 04/5/2017

PART 1 - GENERAL REQUIREMENTS

- 1.1 SUMMARY
- Furnish and install identification tape over the centerline of all buried potable water lines, wastewater force mains, gravity sewer and waste water effluent mains.
- 1.2 SUBMITTALS
- Submit manufacture's descriptive literature, illustrations, specifications and other pertinent data.

PART 2 - PRODUCTS

- 2.1 TRACER WIRE
- All pipe (HDPE, PVC and DI) 4-inches and greater installed by open cut shall have one (1) 12-gauge minimum copper tracer wire taped to the top of the pipe at intervals no greater than 4-feet. Copper wire shall have a minimum tensile strength/break load of 452 lbs.
 - All pipe (HDPE, PVC or DI) installed by directional bore shall have two (2) 12-gauge extra high strength (EHS) carbon steel inner core reinforcement directional drilling tracer wires taped to the top of the pipe at intervals no greater than 4-feet. The wire shall have a minimum tensile strength/break load of 1,150 lbs.
 - The tracer wires shall have colored insulation matching the type of service provided in the main and be acceptable for direct burial.
 - The wire shall be tied to all valves, tees and fittings.
 - The tracer wires shall be brought up to the surface through a valve box or a 2-inch PVC pipe under direction of a City's Representative.
 - The wires shall each be continuous throughout the project, with splices made only by methods approved by the City's Project Representative.

15066-1 of 3

THE CITY OF DAYTONA BEACH
UTILITIES DEPARTMENT

TRACER WIRE & ALARMING TAPE REQUIREMENTS
(SHEET 1 OF 3)

FY-19/20
Drawing Date: 02/19
Drawn By: KJH
Checked By: JMP
Scale: NTS
Revision Date: 02/19
File Name: Tracer Wire
Page 133

- All splices of the wires shall be made with watertight connections, utilizing direct bury splice kits as manufactured by 3M or approved equal. Bury splice kits shall be installed in accordance with manufacturer's recommendations.
- Tracer wire manufacturer shall be either Copperhead Industries or Proline Safety Products.

2.2 ALARMING TAPE

- Identification Tape for Ductile Iron and Steel Pipe: Identification tape shall be metallic and manufactured of polyethylene so as to be highly resistant to alkalis, acids and other destructive agents found in soil, and shall have a minimum thickness of 5 mils with a minimum tensile strength of 22 pounds per inch and maximum adhesive factor of 40 ounces per inch. Tape width shall be 3 inches and shall have background color specified below, imprinted with black letters. Imprint shall be as specified below and shall repeat itself a minimum of once every 2 feet for entire length of tape.
- Identification Tape for Polyvinyl Chloride Pipe: Identification tape shall be metallic and manufactured of polyethylene with minimum thickness of 4-mils. The width shall be 3 inches and shall have background color specified below, imprinted with black letters. Imprint shall be as specified below and shall repeat itself a minimum of once every 2 feet for entire length of tape.
- Tape background colors and imprints shall be as follows:

Imprint	Background Color
"Caution Caution-Potable Water Line Buried Below"	Blue
"Caution Caution-Wastewater Force Main Buried Below"	Green
"Caution Caution-Reclaimed Water Main Buried Below"	Lavender
"Caution Caution-Raw Water Main Buried Below"	White
- Identification tape shall be "Underground Detectable Warning Tape" as manufactured by Presco, can be purchased at Ferguson Supply 840 Jimmy Ann Drive, Daytona Beach (386) 274-4516 or approved equivalent.

PART 3-EXECUTION

- 3.1 INSTALLATION OF ALARMING TAPE
- Alarming tape shall be installed for all buried pressure mains in accordance with the manufacturer's installation instructions and specified herein.

15066-2 of 3

THE CITY OF DAYTONA BEACH
UTILITIES DEPARTMENT

TRACER WIRE & ALARMING TAPE REQUIREMENTS
(SHEET 2 OF 3)

FY-19/20
Drawing Date: 02/19
Drawn By: KJH
Checked By: JMP
Scale: NTS
Revision Date: 02/19
File Name: Tracer Wire
Page 134

- For potable, raw, reuse water, and force mains, alarming tape shall be installed 18" below final grade.

3.2 INSTALLATION OF TRACER WIRE

- Contractor shall perform a 12 volt DC electrical continuity test on all wires. No more than one volt of loss per 1000 feet of mainline pipe will be acceptable. A continuity test prior to final acceptance of the pipeline shall be required. Any cuts or breaks in the wire shall be repaired by the contractor at his expense.
- The tracer wire shall be tested by Contractor and with the City's Representative at the time of pressure testing. If the test fails, the Contractor is responsible for repairing the tracer wire

END OF SECTION

15066-3 of 3

THE CITY OF DAYTONA BEACH
UTILITIES DEPARTMENT

TRACER WIRE & ALARMING TAPE REQUIREMENTS
(SHEET 3 OF 3)

FY-19/20
Drawing Date: 02/19
Drawn By: KJH
Checked By: JMP
Scale: NTS
Revision Date: 02/19
File Name: Tracer Wire
Page 135



CIVIL ENGINEERING
LANDSCAPE ARCHITECTURE
ENVIRONMENTAL PLANNING
TRANSPORTATION

NO.	DATE	SUBMITTALS / REVISIONS
1	12-15-18	SUBMITTED TO DEP. OF DAYTONA BEACH
2	1-15-19	APPROVED TO CITY OF DAYTONA BEACH
3	4-30-19	SUBMITTED TO CITY OF DAYTONA BEACH

S. BEACH STREET
FORCE MAIN IMPROVEMENTS
CONSTRUCTION DETAILS

PROJECT NO. ZC 09062
DESIGNED BY: HK
DRAFTED BY: PEJ
CHECKED BY: HK/BB
DRAWING FILE: 09062CV1
XREF'S: 09062BAS
XREF'S:

HALUK KELIC, P.E. NO 84244
NOT VALID WITHOUT SEAL

SHEET 11

SHEET 9

SHEET 3

SHEET 4

SHEET 5

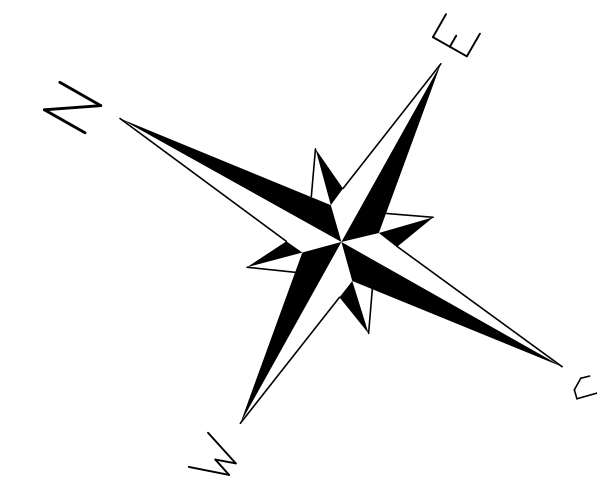
SHEET 6

SHEET 10

SHEET 8

SHEET 2

SHEET 7



GRAPHIC SCALE



(IN FEET)
1 inch = 20ft.

SURVEYORS NOTES

- NOTICE: THERE MAY BE ADDITIONAL RESTRICTIONS AND/OR OTHER MATTERS THAT ARE NOT SHOWN ON THIS PLAT OF SURVEY/SKETCH OF DESCRIPTION THAT MAY BE FOUND IN THE PUBLIC RECORDS OF THIS COUNTY. THIS SURVEY/SKETCH OF DESCRIPTION PREPARED WITHOUT BENEFIT OF AN ABSTRACT.
- DIMENSIONS ARE SHOWN IN FEET AND DECIMALS THEREOF.
- BEARING STRUCTURE BASED ON STATE PLANE COORDINATES FLORIDA EAST ZONE NORTH AMERICAN DATUM 1983/1990 WITH THE BEARING ON THE NORTH BASELINE BEING N60°31'32"E.
- UNDERGROUND FOUNDATIONS, IF ANY, NOT LOCATED.
- ELEVATIONS REFER TO N.A.V.D. OF 1988, PER FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION MONUMENT X-31 HAVING A PUBLISHED ELEVATION OF 3.921 FEET.
- NOT VALID WITHOUT THE SIGNATURE AND THE ORIGINAL RAISED SEAL OF A FLORIDA LICENSED SURVEYOR AND MAPPER.
- UNLESS OTHERWISE SHOWN, RECORD DISTANCES AND DIRECTIONS AND FIELD MEASURED DISTANCES AND DIRECTIONS ARE THE SAME.

UTILITY STATEMENT:

THE INACCESSIBLE UNDERGROUND UTILITIES SHOWN ON THIS SURVEY HAVE BEEN LOCATED FROM ABOVE GROUND FIELD UTILITY LOCATIONS PROVIDED BY SUNSHINE NETWORK, TICKET #'S 251901103, 251901185 AND 251901229 ON OR ABOUT 9-08-09 AND/OR EXISTING AS-BUILTS DRAWINGS PROVIDED BY THE CLIENT, SLIGER AND ASSOCIATES, INC. (S&A) MAKES NO GUARANTEES THAT THE UNDERGROUND UTILITIES SHOWN COMPRISE ALL SUCH UTILITIES IN THE AREA, EITHER IN-SERVICE OR ABANDONED. LIKEWISE S&A DOES NOT WARRANT THAT THE UNDERGROUND UTILITIES SHOWN ARE IN THE EXACT LOCATION INDICATED. ONLY THAT S&A HAS LOCATED THE UTILITIES AS ACCURATELY AS POSSIBLE FROM SAID FIELD LOCATIONS AND/OR AS-BUILTS PROVIDED BY OTHERS. S&A HAS NOT PHYSICALLY LOCATED THE ACTUAL INACCESSIBLE UNDERGROUND UTILITIES, EXCEPT AS SPECIFICALLY NOTED AND DEPICTED ON THIS DRAWING.

LEGEND

●	IRON ROD WITH CAP	○	IRON PIPE WITH CAP
○	IRON PIPE	□	CONCRETE MONUMENT
□	PERMANENT REFERENCE MONUMENT	■	PERMANENT CONTROL POINT
■	FORCE MAIN VALVE	■	WATER VALVE
■	WATER METER	■	FIRE HYDRANT
■	TELEPHONE BOX	■	TRAFFIC SIGNAL BOX
■	CABLE TELEVISION BOX	■	MAIL BOX
■	LIGHT POLE	■	UTILITY POLE
■	GUY ANCHOR	■	CLEAN OUT
■	SIGN	■	TREE
○	EXISTING ELEVATION	○	TELEPHONE MANHOLE
○	SANITARY MANHOLE	○	STORM MANHOLE

ADDITIONAL ABBREVIATIONS-TREE LEGEND

CP	CAMPHOR TREE	SB	SUGARBERRY TREE	TREE SIZE (INCHES)
MP	MAPLE TREE	CD	CEDAR TREE	DIAMETER AT BREAST HEIGHT
SYC	SYCAMORE TREE	ED	ELM TREE	MULTIPLE TRUNKS
OK	OAK TREE	CIT	CITRUS TREE	TREE SYMBOL
SG	SWEET GUM TREE	PN	PINE TREE	
HK	HICKORY TREE	PM	PALM TREE	
CB	CHINABERRY TREE	HY	HOLLY	

SLIGER & ASSOCIATES, INC.
PROFESSIONAL LAND SURVEYORS

3921 NDAVA ROAD
PORT ORANGE, FL 32127
(386) 761-5385
www.sligerassociates.com

LICENSED BUSINESS CERTIFICATION NUMBER 3019
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PLAT PREPARED FOR THE FOLLOWING: (ONLY THE LAST DATE IS CERTIFIED ON SEALED COPY)

TYPE OF SURVEY	SURVEY DATE	JOB NUMBER	PARTY CHIEF	DRAWN BY	CHECKED BY
TOPOGRAPHIC	5-29-2018	18-0696	K.HELMIK	T.JEFFREY	J.ZAPERT

THIS PLAT OF SURVEY IS CERTIFIED TO AND PREPARED FOR THE SOLE AND EXCLUSIVE BENEFIT OF THE ENTITIES AND/OR INDIVIDUALS LISTED BELOW, ON THE MOST CURRENT DATE, AND SHALL NOT BE RELIED UPON BY ANY OTHER ENTITY OR INDIVIDUAL, WHOMSOEVER.

TYPE OF SURVEY	CERTIFIED TO	SURVEY DATE	JOB NUMBER
TOPOGRAPHIC	ZEV COHEN & ASSOCIATES, INC.	5-29-2018	18-0696

NOT CERTIFIED TO ANY ENTITIES AND/OR INDIVIDUALS OTHER THAN THOSE LISTED ABOVE.

**BEACH STREET FORCE MAIN
DAYTONA BEACH, FLORIDA**

FOR: ZEV COHEN & ASSOCIATES INC.

**JOB NO.
18-0696**

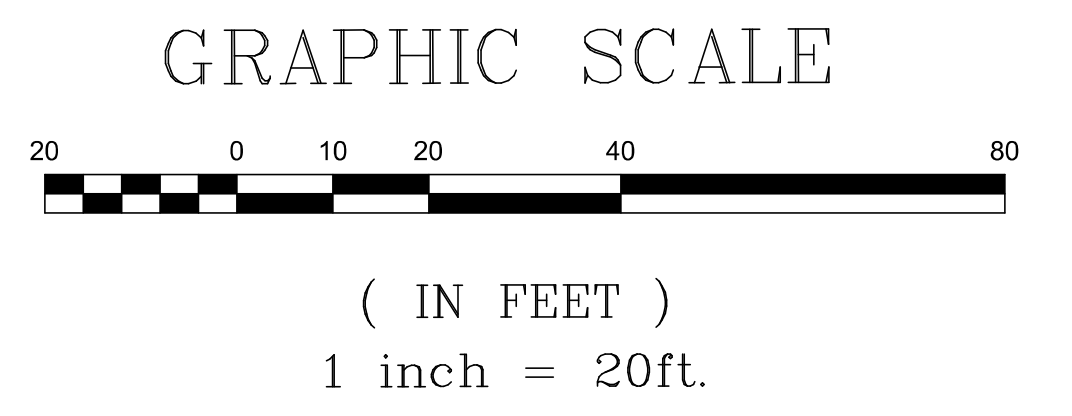
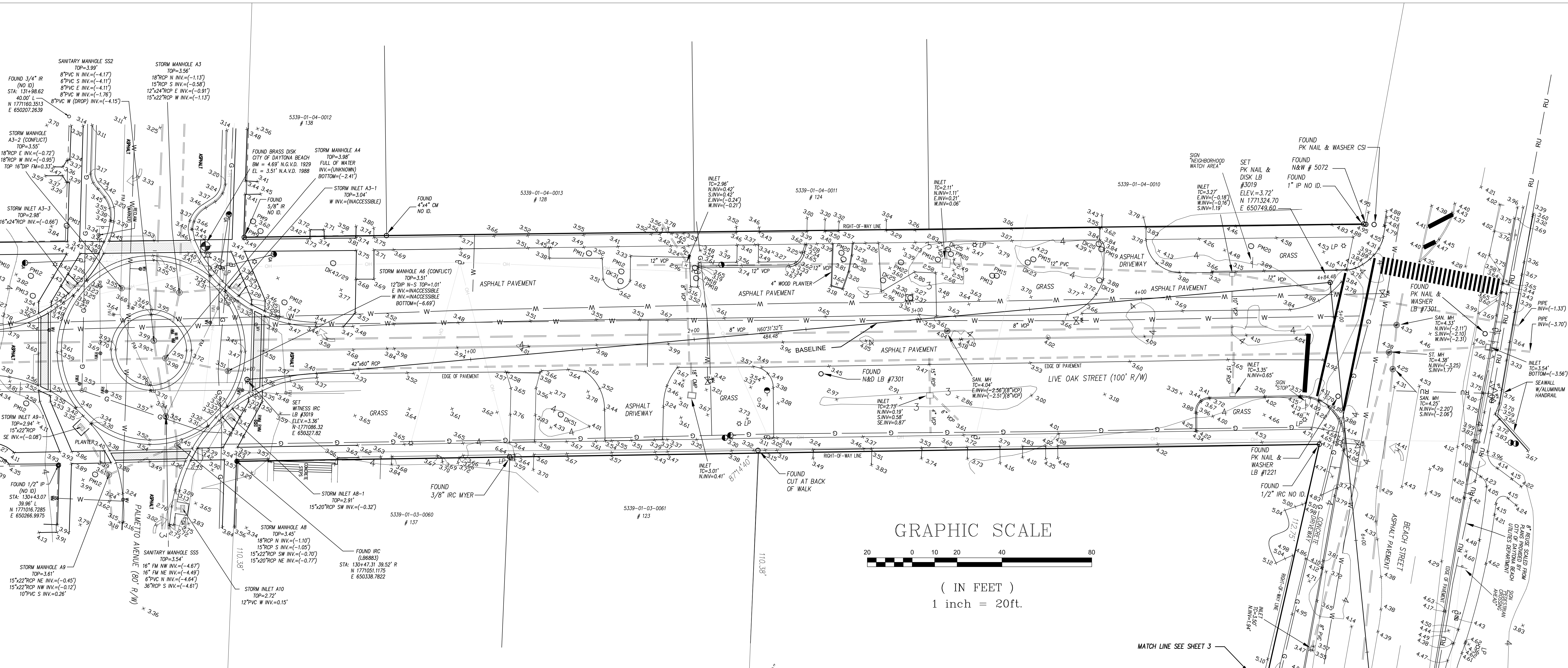
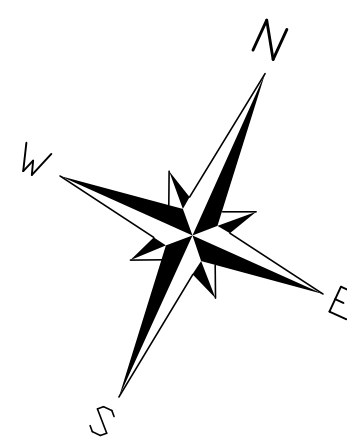
TOPOGRAPHIC SURVEY

SURVEYOR'S CERTIFICATE

I HEREBY CERTIFY THAT THIS PLAT MEETS THE MINIMUM TECHNICAL STANDARDS SET FORTH BY THE FLORIDA BOARD OF PROFESSIONAL LAND SURVEYORS IN CHAPTER 6107-6, FLORIDA ADMINISTRATIVE CODE, PURSUANT TO SECTION 472.027, FLORIDA STATUTES.

J.E. ZAPERT, P.L.S. NO. 4046
CLYDE O. VAN KLECK, JR., P.S.M. NO. 6149
STEVEN L. KRUGER, P.L.S. NO. 4722
MICHAEL S. MURPHY, P.S.M. NO. 6208

VALID WITH SIGNATURE & EMBOSSED SEAL ONLY



UTILITY STATEMENT:

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W/ WITH	TC TOP COVER	CONC	CONCRETE	RES RESIDENCE	IRC IRON ROD & CAP
CM CONCRETE MONUMENT	WV WATER VALVE	D	CENTRAL ANGLE	—FC— BURIED FIBER OPTIC CABLE	IRC IRON PIPE & CAP
TB TOP OF BANK	TSB TRAFFIC SIGNAL BOX	R	RADIUS	—T— BURIED TELEPHONE LINE	MEB METEORIC ID SECTION
TOE TOE OF SLOPE	FM FIRE HYDRANT	L	ARC LENGTH	—W— BURIED WATER LINE	RFC REINFORCED CONCRETE PIPE
CLS CENTERLINE OF SWALE	WM WATER METER	CS	CHORD BEARING	—E— BURIED ELECTRIC LINE	CMF CORRUGATED METAL PIPE
STA STATION	LP LIGHT POLE	CH	CHORD DISTANCE	—G— BURIED GAS LINE	MP MAP BOOK
CO CLEANOUT	IV IRRIGATION VALVE	FB&L CO	FLORIDA POWER & LIGHT COMPANY	—FM— BURIED FORCE MAIN	IP IRON PIPE
ES ELECTRIC SERVICE	GA GUY ANCHOR	EL ELEVATION	NON RADIAL	—(P)— PLATTED DIMENSION	ORB OFFICIAL RECORDS BOOK
HOPE HIGH DENSITY POLYETHYLENE PIPE	OMP CORRUGATED PLASTIC PIPE	NGS NATIONAL GEODETIC SURVEY CONTROL	UNITED STATES COAST AND GEODETIC SURVEY	—(R)— RADIAL	—(D)— DETEDED DIMENSION
VCP VITREOUS CLAY PIPE	DPF DUCTILE IRON PIPE	USC & GS	UNITED STATES COAST AND GEODETIC SURVEY	—(C)— CALCULATED DIMENSION	—(TP)— TYPICAL
CV CHECK VALVE	DW DRIVEWAY	ND&D NAIL AND DISK	ROUSE VALVE	—(FOT)— FLORIDA DEPARTMENT OF TRANSPORTATION	—(REC)— RECOVERED

LEGEND

● IRON ROD WITH CAP	○ TELEPHONE MANHOLE
● IRON ROD	○ SANITARY MANHOLE
● IRON PIPE WITH CAP	○ STORM MANHOLE
● IRON PIPE	
● FD "X" OUT IN CONCRETE	
■ CONCRETE MONUMENT	
■ PERMANENT REFERENCE MONUMENT	
■ PERMANENT CONTROL POINT	
■ FORCE MAIN VALVE	
■ WATER VALVE	
■ WATER METER	
■ FIRE HYDRANT	
■ TELEPHONE BOX	
■ TRAFFIC SIGNAL BOX	
■ ELECTRIC BOX	
■ CABLE TELEVISION BOX	
■ MAIL BOX	
■ LIGHT POLE	
■ GUY ANCHOR	
■ CLEAN OUT	
■ SIGN	
○ TREE	
○ EXISTING ELEVATION	

ADDITIONAL ABBREVIATIONS—TREE LEGEND

CP CAMPHOR TREE	SB SUGARBERRY TREE	TREE SIZE (INCHES)
MP MAPLE TREE	CD CEDAR TREE	DIAMETER AT BREAST HEIGHT
SYC SYCAMORE TREE	EM ELM TREE	TREE TYPE
OK OAK TREE	CIT CITRUS TREE	OK24"8
SG SWEET GUM TREE	PN PINE TREE	MULTIPLE TRUNKS
HK HICKORY TREE	PM PALM TREE	
CB CHINABERRY TREE	HY HOLLY	

SLIGER & ASSOCIATES, INC.

PROFESSIONAL LAND SURVEYORS

LICENSED SURVEYOR CERTIFICATION NUMBER 3019

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PORT ORANGE, FL 32127
(386) 761-5385
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PLAT PREPARED FOR THE FOLLOWING: (ONLY THE LAST DATE IS CERTIFIED ON SEALED COPY)

SCALE: 1"=20'	FIELD BOOK: 1397	PAGE(S): 50-58	SHEET 2 OF 11
TYPE OF SURVEY	SURVEY DATE	JOB NUMBER	PARTY CHIEF
SPECIFIC PURPOSE :			
TOPOGRAPHIC SURVEY :	5-29-2018	18-0696	K.HELMIK
FOUNDATION LOCATION :			T.JEFFREY
FINAL IMPROVEMENTS :			J.ZAPERT
RE-CERTIFICATION :			

BEACH STREET FORCE MAIN
DAYTONA BEACH, FLORIDA

FOR: ZEV COHEN & ASSOCIATES INC.

JOB NO.
18-0696

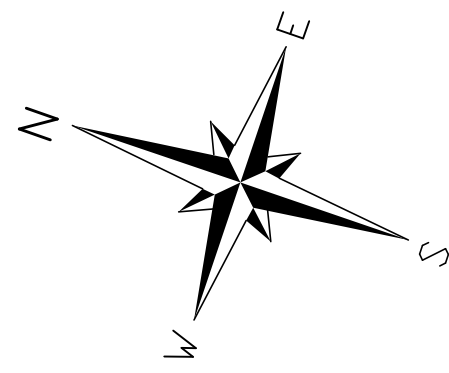
TOPOGRAPHIC SURVEY

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TYPE OF SURVEY	CERTIFIED TO	SURVEY DATE	JOB NUMBER
TOPOGRAPHIC	ZEV COHEN & ASSOCIATES, INC.	5-29-2018	18-0696
NOT CERTIFIED TO ANY ENTITIES AND/OR INDIVIDUALS OTHER THAN THOSE LISTED ABOVE.			

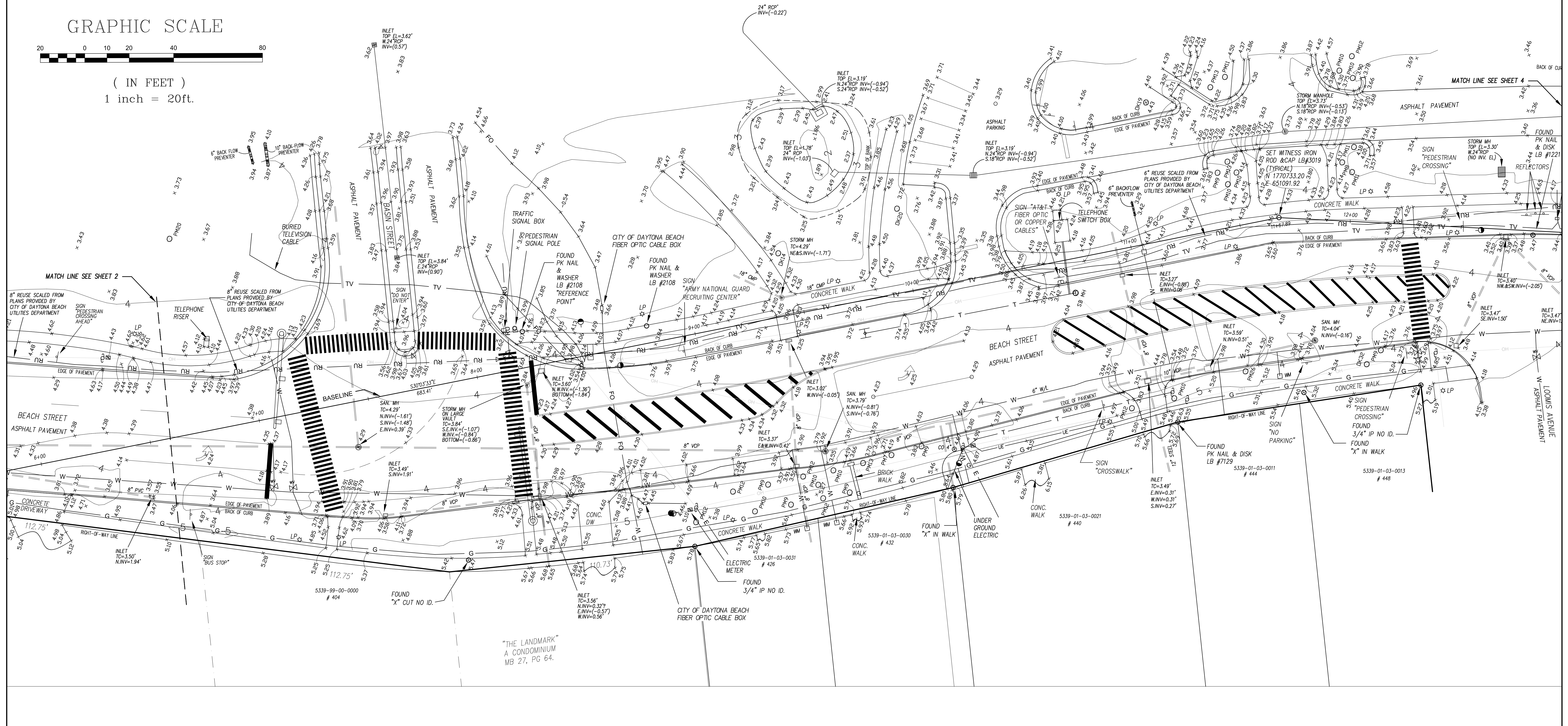
J.E. ZAPERT, P.L.S. NO. 4046
CLYDE O. VAN KLECK, JR., P.S.M. NO. 6149
STEVEN L. KRUEGER, P.L.S. NO. 4722
MICHAEL S. MURPHY, P.S.M. NO. 6208
VALID WITH SIGNATURE & EMBOSSED SEAL ONLY



GRAPHIC SCALE



(IN FEET)
1 inch = 20ft.



UTILITY STATEMENT:
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W/ WITH	TC TOP COVER	CONC	CONCRETE	ABBREVIATIONS	RES RESIDENCE	RC IRON ROD & CAP
CM CONCRETE MONUMENT	WV WATER VALVE	D	CENTRAL ANGLE	ILLEG. ILLEGIBLE	--- BURIED FIBER OPTIC CABLE	RC IRON PIPE & CAP
TDB TOP OF BANK	TSB TRAFFIC SIGNAL BOX	R	RADIUS	INV INVERT	--- BURIED WATER LINE	RC REINFORCED CONCRETE PIPE
TOE TOE OF SLOPE	FM FIRE HYDRANT	L	ARC LENGTH	SEC SECTION	--- BURIED ELECTRIC LINE	CM CORRUGATED METAL PIPE
CLS CENTERLINE OF SWALE	WM WATER METER	CB	CHORD BEARING	TMP TOWNSHIP	--- BURIED TELEVISION LINE	MH MANHOLE
STA STATION	LP LIGHT POLE	CH	CHORD DISTANCE	ROE RANGE	--- BURIED FORCE MAIN	MB MAP BOOK
CO CLEANOUT	IV IRRIGATION VALVE	FB&L CO	FLORIDA POWER & LIGHT COMPANY	H/W RIGHT OF WAY	--- AERIAL UTILITY LINE	IR IRON PIPE
SAN SANITARY	GA GUY ANCHOR	NSV	NATIONAL GEODETIC VERTICAL DATUM	(P) PLATTED DIMENSION	ORB OFFICIAL RECORDS BOOK	WV WATER METER
ES ELECTRIC SERVICE	OMP CORRUGATED PLASTIC PIPE	NGVD	NATIONAL GEODETIC VERTICAL DATUM	(NR) NON RADIAL	(C) CALCULATED DIMENSION	FDH FIRE HYDRANT
HOPE HIGH DENSITY POLYETHYLENE PIPE	DP DUCTILE IRON PIPE	USC & OS	UNITED STATES COAST AND GEODETIC SURVEY	(N) NON RADIAL	(D) DETEDED DIMENSION	WV WATER VALVE
VCP VITREOUS CLAY PIPE	PVC POLYVINYL CHLORIDE	USC & OS	UNITED STATES COAST AND GEODETIC SURVEY	(R) RADIAL	(M) MEASURED DIMENSION	WM WATER METER
CV CHECK VALVE	DW DRIVEWAY	©	CENTRELINE	(N&D) NAIL AND DISK	(TYP) TYPICAL	FDH FIRE HYDRANT
				(R&D) RAIL AND DISK	(PG) PAGE	FDH FIRE HYDRANT
				(N&D) NAIL AND DISK	(REC) RECOVERED	FDH FIRE HYDRANT

LEGEND

● IRON ROD WITH CAP	○ TELEPHONE MANHOLE
○ IRON ROD	○ SANITARY MANHOLE
○ IRON PIPE WITH CAP	○ STORM MANHOLE
○ IRON PIPE	
○ FD "X"/OUT IN CONCRETE	
□ CONCRETE MONUMENT	
■ PERMANENT REFERENCE MONUMENT	
▲ PERMANENT CONTROL POINT	
○ FORCE MAIN VALVE	
○ WATER VALVE	
○ WATER METER	
○ FIRE HYDRANT	
○ TELEPHONE BOX	
○ TELEPHONE SIGNAL BOX	
○ ELECTRIC BOX	
○ CABLE TELEVISION BOX	
○ MAIL BOX	
○ LIGHT POLE	
○ UTILITY POLE	
○ GUY ANCHOR	
○ CLEAN OUT	
○ SIGN	
○ TREE	
○ EXISTING ELEVATION	

ADDITIONAL ABBREVIATIONS-TREE LEGEND

CP CAMPOR TREE	SB SUGARBERRY TREE	○ TREE SIZE (INCHES)
MP MAPLE TREE	CD CEDAR TREE	○ DIAMETER AT BREAST HEIGHT
SYC SYCAMORE TREE	EM ELM TREE	○ TREE SYMBOL
OK OAK TREE	CIT CITRUS TREE	○ MULTIPLE TRUNKS
SG SWEET GUM TREE	PN PINE TREE	
HK HICKORY TREE	PM PALM TREE	
CB CHINABERRY TREE	HY HOLLY	

FOR: ZEV COHEN & ASSOCIATES, INC.

SCALE: 1"=20'

TYPE OF SURVEY	SURVEY DATE	JOB NUMBER	PARTY CHIEF	DRAWN BY	CHECKED BY
TOPOGRAPHIC SURVEY	5-29-2018	18-0696	K.HELMIK	T.JEFFREY	J.ZAPERT

SLIGER & ASSOCIATES, INC.
PROFESSIONAL LAND SURVEYORS

3921 NOVA ROAD
PORT ORANGE, FL 32127
(386) 761-5385

LICENSED BUSINESS CERTIFICATION NUMBER 3019
www.sligerassociates.com
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PLAT PREPARED FOR THE FOLLOWING: (ONLY THE LAST DATE IS CERTIFIED ON SEALED COPY)

TYPE OF SURVEY	CERTIFIED TO	SURVEY DATE	JOB NUMBER
TOPOGRAPHIC	ZEV COHEN & ASSOCIATES, INC.	5-29-2018	18-0696

THIS PLAT OF SURVEY IS CERTIFIED TO AND PREPARED FOR THE SOLE AND EXCLUSIVE BENEFIT OF THE ENTITIES AND/OR INDIVIDUALS LISTED BELOW, ON THE MOST CURRENT DATE, AND SHALL NOT BE RELIED UPON BY ANY OTHER ENTITY OR INDIVIDUAL WHOMSOEVER.

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BEACH STREET FORCE MAIN
DAYTONA BEACH, FLORIDA

FOR: ZEV COHEN & ASSOCIATES INC.

JOB NO. 18-0696

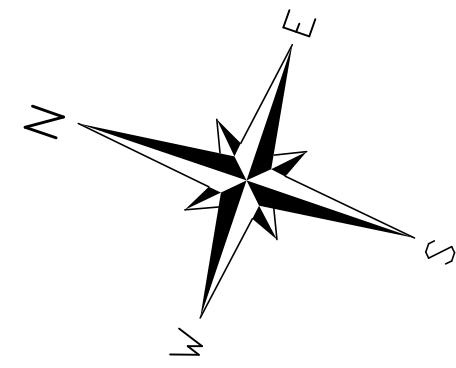
SURVEYOR'S CERTIFICATE

I HEREBY CERTIFY THAT THIS PLAT MEETS THE MINIMUM TECHNICAL STANDARDS SET FORTH BY THE FLORIDA BOARD OF PROFESSIONAL LAND SURVEYORS IN CHAPTER 63G17-6, FLORIDA ADMINISTRATIVE CODE, PURSUANT TO SECTION 472.027, FLORIDA STATUTES.

TOPOGRAPHIC SURVEY

J.E. ZAPERT, P.L.S. NO. 4046
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GRAPHIC SCALE



(IN FEET)
1 inch = 20ft.



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W/ WITH	TC TOP COVER	CONC	CONCRETE	ABBREVIATIONS	RES	RESIDENCE	IRC	IRON ROD & CAP
CM CONCRETE MONUMENT	WV WATER VALVE	D	CENTRAL ANGLE	ILLEG. ILLEGIBLE	---	BURIED FIBER OPTIC CABLE	IRC	IRON PIPE & CAP
TDB TOP OF BANK	TSS TRAFFIC SIGNAL BOX	R	RADIUS	INV INVERT	---	BURIED WATER LINE	MR	METERED PNO SECTION
TOE TOE OF SLOPE	FM FIRE HYDRANT	L	ARC LENGTH	SEC SECTION	---	BURIED ELECTRIC LINE	CM	CORRUGATED METAL PIPE
CLS CENTERLINE OF SWALE	WM WATER METER	CB	CHORD BEARING	TWP TOWNSHIP	---	BURIED GAS LINE	MH	MANHOLE
STA STATION	LP LIGHT POLE	CH	CHORD DISTANCE	ROE RANGE	---	BURIED TELEVISION LINE	TV	TELEVISION LINE
CO CLOSURE	IV IRRIGATION VALVE	FB&L CO	FLORIDA POWER & LIGHT COMPANY	EL ELEVATION	---	BURIED FORCE MAIN	FM	FORCE MAIN
SAN SANITARY	GA GUY ANCHOR	N/A	NON RADIAL	(NR)	---	AERIAL UTILITY LINE	AUL	AERIAL UTILITY LINE
ES ELECTRIC SERVICE	OMP CORRUGATED PLASTIC PIPE	NGVD	NATIONAL GEODETIC VERTICAL DATUM	(P)	---	PLATED DIMENSION	ORB	OFFICIAL RECORDS BOOK
HOPE HIGH DENSITY POLYETHYLENE PIPE	DP DUCTILE IRON PIPE	USC & GS	UNITED STATES COAST AND GEODETIC SURVEY	(R)	---	CALCULATED DIMENSION	(TYP)	TYPICAL
VCP VITREOUS CLAY PIPE	PVC POLYVINYL CHLORIDE	N&D	NAIL AND DISK	RV	---	FLORIDA DEPARTMENT OF TRANSPORTATION	REC	RECOVERED
CV CHECK VALVE	DW DRIVEWAY	©	CENTERLINE					

LEGEND

● IRON ROD WITH CAP	○ TELEPHONE MANHOLE
● IRON ROD	○ SANITARY MANHOLE
● IRON PIPE WITH CAP	○ STORM MANHOLE
● IRON PIPE	
○ FD "X" OUT IN CONCRETE	
□ CONCRETE MONUMENT	
■ PERMANENT REFERENCE MONUMENT	
▲ PERMANENT CONTROL POINT	
○ FMV FORCE MAIN VALVE	
○ WM WATER METER	
○ FHY FIRE HYDRANT	
○ TB TELEPHONE BOX	
○ TSSB TRAFFIC SIGNAL BOX	
○ ESB ELECTRIC BOX	
○ TV CABLE TELEVISION BOX	
○ MB MAIL BOX	
○ LPP LIGHT POLE	
○ UG UTILITY GUY ANCHOR	
○ CU CLEAN OUT	
○ S SIGN	
○ T TREE	
○ EX EXISTING ELEVATION	

ADDITIONAL ABBREVIATIONS-TREE LEGEND

CP CAMPOR TREE	SB SUGARBERRY TREE	TREE SIZE (INCHES)
MP MAPLE TREE	CD CEDAR TREE	DIAMETER AT BREAST HEIGHT
SYC SYCAMORE TREE	EM ELM TREE	
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SG SWEET GUM TREE	PN PINE TREE	
HK HICKORY TREE	PM PALM TREE	
CB CHINABERRY TREE	HY HOLLY	

OK24'8" TREE SYMBOL MULTIPLE TRUNKS

FOR: ZEV COHEN & ASSOCIATES, INC.

SCALE: 1"=20'

TYPE OF SURVEY	SURVEY DATE	JOB NUMBER	PARTY CHIEF	DRAWN BY	CHECKED BY
TOPOGRAPHIC SURVEY	5-29-2018	18-0696	K.HELMIK	T.JEFFREY	J.ZAPERT

SLIGER & ASSOCIATES, INC.
PROFESSIONAL LAND SURVEYORS

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(386) 761-5385
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TOPOGRAPHIC	ZEV COHEN & ASSOCIATES, INC.	5-29-2018	18-0696

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BEACH STREET FORCE MAIN DAYTONA BEACH, FLORIDA

FOR: ZEV COHEN & ASSOCIATES INC.

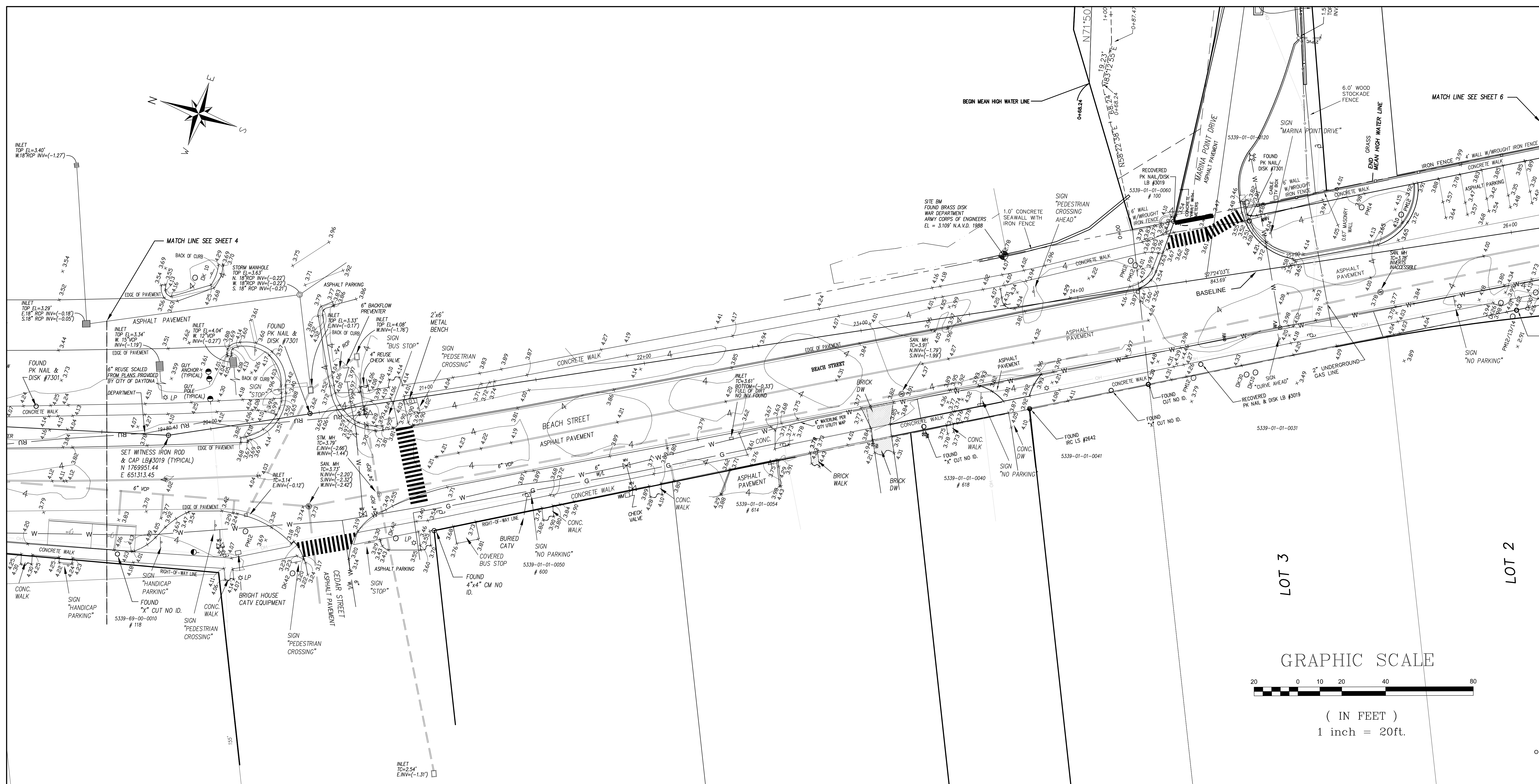
JOB NO. 18-0696

TOPOGRAPHIC SURVEY

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J.E. ZAPERT, P.L.S. NO. 4046
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STEVEN L. KRUEGER, P.L.S. NO. 4722
MICHAEL S. MURPHY, P.S.M. NO. 6208
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LOT 3

LOT 2

GRAPHIC SCALE



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CM CONCRETE MONUMENT	WV WATER VALVE	D	CENTRAL ANGLE	ILLEG ILLEGIBLE	—FC— BURIED FIBER OPTIC CABLE	IRC IRON PIPE & CAP
TDB TOP OF BANK	TSH TRAFFIC SIGNAL BOX	R	RADIUS	INV INVERT	—W— BURIED WATER LINE	MEB METRIC P&O SECTION
TOE TOE OF SLOPE	FN FIRE HYDRANT	L	ARC LENGTH	SEC SECTION	—E— BURIED ELECTRIC LINE	RCP REINFORCED CONCRETE PIPE
CLS CENTERLINE OF SWALE	WM WATER METER	CS	CHORD BEARING	TMP TOWNSHIP	—G— BURIED GAS LINE	CM CORRUGATED METAL PIPE
STA STATION	LP LIGHT POLE	CH	CHORD DISTANCE	ROE RANGE	—TV— BURIED TELEVISION LINE	MH MANHOLE
CO CLEANTO	IV IRRIGATION VALVE	FB&L CO	FLORIDA POWER & LIGHT COMPANY	R/W RIGHT OF WAY	—FM— BURIED FORCE MAIN	MB MAP BOOK
SN SANITARY	GA GUY ANCHOR	USC & OS	UNITED STATES COAST AND GEODIC SURVEY	EL ELEVATION	—A— AERIAL UTILITY LINE	IP IRON PIPE
ES ELECTRIC SERVICE	OMP CORRUGATED PLASTIC PIPE	NGVD	NATIONAL GEODETIC VERTICAL DATUM	(NR) NON RADIAL	(D) DETEED DIMENSION	ORB OFFICIAL RECORDS BOOK
HOPE HIGH DENSITY POLYETHYLENE PIPE	DIP DUCTILE IRON PIPE	USC & OS	UNITED STATES COAST AND GEODIC SURVEY	(R) RADIAL	(C) CALCULATED DIMENSION	PG PAGE
VCP VITREOUS CLAY PIPE	PVC POLYVINYL CHLORIDE	USC & OS	UNITED STATES COAST AND GEODIC SURVEY	(N) NAIL AND DISK	(TYP) TYPICAL	ID IDENTIFICATION
CV CHECK VALVE	DW DRIVEWAY	©	CENTERLINE	RD ROAD VALVE	FOT FLORIDA DEPARTMENT OF TRANSPORTATION	REC RECOVERED

LEGEND

● IRON ROD WITH CAP	○ TELEPHONE MANHOLE
● IRON ROD	○ SANITARY MANHOLE
● IRON PIPE WITH CAP	○ STORM MANHOLE
● IRON PIPE	
● FD "X" OUT IN CONCRETE	
▲ CONCRETE MONUMENT	
■ PERMANENT REFERENCE MONUMENT	
▲ PERMANENT CONTROL POINT	
○ FM FORCE MAIN VALVE	
○ WV WATER VALVE	
○ WM WATER METER	
○ FH FIRE HYDRANT	
○ TB TELEPHONE BOX	
○ TSH TRAFFIC SIGNAL BOX	
○ EMBR ELECTRIC BOX	
○ TV CABLE TELEVISION BOX	
○ MB MAIL BOX	
○ CLP LIGHT POLE	
○ UG UTILITY POLE	
○ GA GUY ANCHOR	
○ CO CLEAN OUT	
○ S SIGN	
○ T TREE	
○ EX EXISTING ELEVATION	

ADDITIONAL ABBREVIATIONS—TREE LEGEND

CP CAMPOR TREE	SB SUGARBERRY TREE	TREE SIZE (INCHES)
MP MAPLE TREE	CD CEDAR TREE	DIAMETER AT BREAST HEIGHT
SYC SYCAMORE TREE	EM ELM TREE	
OK OAK TREE	CIT CITRUS TREE	
SG SWEET GUM TREE	PN PINE TREE	
HK HICKORY TREE	PM PALM TREE	
CB CHINABERRY TREE	HY HOLLY	

OK24'8" TREE SYMBOL MULTIPLE TRUNKS

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BEACH STREET FORCE MAIN DAYTONA BEACH, FLORIDA

FOR: ZEV COHEN & ASSOCIATES INC. JOB NO. 18-0696

PLAT PREPARED FOR THE FOLLOWING: (ONLY THE LAST DATE IS CERTIFIED ON SEALED COPY)

SCALE: 1"=20'	FIELD BOOK: 1397	PAGE(S): 50-58	SHEET 5 OF 11
TYPE OF SURVEY	SURVEY DATE	JOB NUMBER	PARTY CHIEF
SPECIFIC PURPOSE :			
BOUNDARY SURVEY :			
TOPOGRAPHIC SURVEY :	5-29-2018	18-0696	K.HELWICK
FOUNDATION LOCATION :			T.JEFFREY
FINAL IMPROVEMENTS :			J.ZAPERT
RE-CERTIFICATION :			

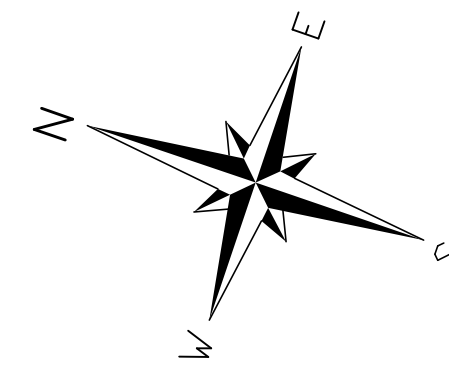
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TYPE OF SURVEY	CERTIFIED TO	SURVEY DATE	JOB NUMBER
TOPOGRAPHIC	ZEV COHEN & ASSOCIATES, INC.	5-29-2018	18-0696
NOT CERTIFIED TO ANY ENTITIES AND/OR INDIVIDUALS OTHER THAN THOSE LISTED ABOVE.			

TOPOGRAPHIC SURVEY

SURVEYOR'S CERTIFICATE
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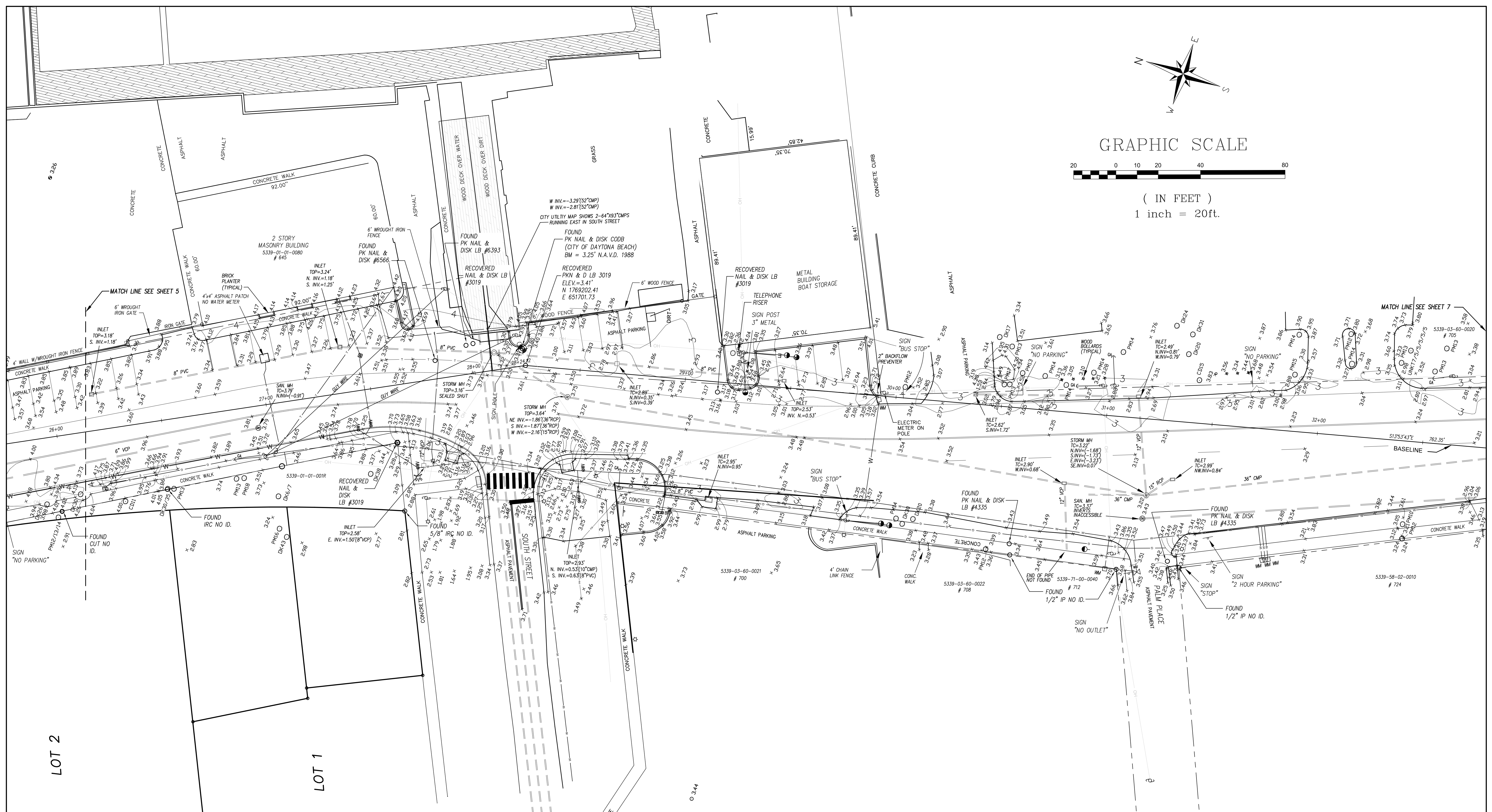
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GRAPHIC SCALE



(IN FEET)
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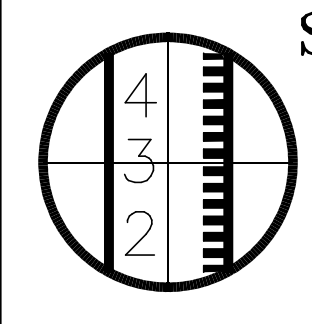
Table with columns for symbols and abbreviations. Includes symbols for top cover, concrete, iron rod, etc., and abbreviations for various utility types like water valve, fire hydrant, etc.

LEGEND

- IRON ROD WITH CAP
IRON ROD
IRON PIPE WITH CAP
IRON PIPE
FD 'X'/OUT IN CONCRETE
CONCRETE MONUMENT
PERMANENT REFERENCE MONUMENT
PERMANENT CONTROL POINT
FORCE MAIN VALVE
WATER VALVE
WATER METER
FIRE HYDRANT
TELEPHONE MANHOLE
SANITARY MANHOLE
STORM MANHOLE

ADDITIONAL ABBREVIATIONS-TREE LEGEND

Table mapping tree abbreviations to tree types and sizes. Includes abbreviations like CP (CAMPOR TREE), MP (MAPLE TREE), SYC (SYCAMORE TREE), etc., and symbols for tree types and sizes.



SLIGER & ASSOCIATES, INC.

PROFESSIONAL LAND SURVEYORS

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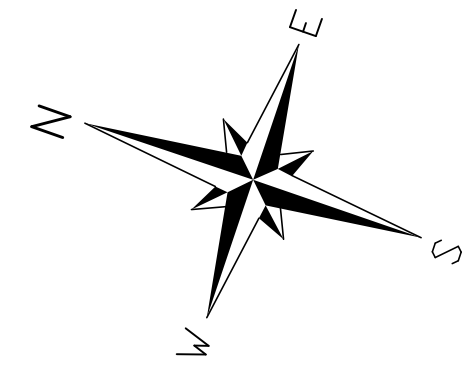
BEACH STREET FORCE MAIN
DAYTONA BEACH, FLORIDA

FOR: ZEV COHEN & ASSOCIATES INC.
JOB NO. 18-0696

Table with columns: TYPE OF SURVEY, SURVEY DATE, JOB NUMBER, PARTY CHIEF, DRAWN BY, CHECKED BY. Includes specific survey details for this project.

Table with columns: TYPE OF SURVEY, CERTIFIED TO, SURVEY DATE, JOB NUMBER. Includes certification information for the survey.

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GRAPHIC SCALE



(IN FEET)
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USE
NTS
NUM
PG 32



UTILITY STATEMENT:
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W/ WITH	TC TOP COVER	CONC CONCRETE	RES RESIDENCE	ARC IRON ROD & CAP
CM CONCRETE MONUMENT	TV WATER VALVE	D CENTRAL ANGLE	—FC BURIED FIBER OPTIC CABLE	RC IRON PIPE & CAP
TDB TOP OF BANK	T8 TRAFFIC SIGNAL BOX	R RADIUS	—W BURIED WATER LINE	MS METEORIC IRON SECTION
TOE TOE OF SLOPE	FH FIRE HYDRANT	L ARC LENGTH	—E BURIED ELECTRIC LINE	RFC REINFORCED CONCRETE PIPE
CLS CENTERLINE OF SWALE	WM WATER METER	SEC SECTION	—G BURIED GAS LINE	CM CORRUGATED METAL PIPE
STA STATION	LP LIGHT POLE	CH CHORD DISTANCE	—TV BURIED TELEVISION LINE	MH MANHOLE
CO CLEANOUT	IV IRRIGATION VALVE	R/R RANGE	—FM BURIED FORCE MAIN	MB MAP BOOK
SAN SANITARY	GA GUY ANCHOR	FL&L CO FLORIDA POWER & LIGHT COMPANY	—AP AERIAL UTILITY LINE	IP IRON PIPE
ES ELECTRIC SERVICE	OP CORRUGATED PLASTIC PIPE	NGVD NATIONAL GEODETIC VERTICAL DATUM	(P) PLATTED DIMENSION	ORB OFFICIAL RECORDS BOOK
HP HIGH DENSITY POLYETHYLENE PIPE	DP DUCTILE IRON PIPE	USC & GS UNITED STATES COAST AND GEODETIC SURVEY	(NR) NON RADIAL	PG PAGE
VCP VITREOUS CLAY PIPE	PVC POLYVINYL CHLORIDE	USC & GS UNITED STATES COAST AND GEODETIC SURVEY	(R) RADIAL	(D) MEASURED DIMENSION
CV CHECK VALVE	DW DRIVEWAY	N&D NAIL AND DISK	(C) CALCULATED DIMENSION	(TYP) TYPICAL
		RD ROADS VALVE	(FOT) FLORIDA DEPARTMENT OF TRANSPORTATION	REC RECOVERED

LEGEND

● IRON ROD WITH CAP	○ TELEPHONE MANHOLE
● IRON ROD	○ SANITARY MANHOLE
● IRON PIPE WITH CAP	○ STORM MANHOLE
● IRON PIPE	
● FD "X" OUT IN CONCRETE	
■ CONCRETE MONUMENT	
■ PERMANENT REFERENCE MONUMENT	
■ PERMANENT CONTROL POINT	
FMV FORCE MAIN VALVE	
WM WATER METER	
WD WATER METER	
FDH FIRE HYDRANT	
TM TELEPHONE BOX	
TSB TRAFFIC SIGNAL BOX	
ESB ELECTRIC BOX	
CEB CABLE TELEVISION BOX	
MB MAIL BOX	
OP OPERATIONAL POINT	
IP IRON PIPE	
ORB OFFICIAL RECORDS BOOK	
PG PAGE	
(D) MEASURED DIMENSION	
(C) CALCULATED DIMENSION	
(TYP) TYPICAL	
○ TREE	
○ EXISTING ELEVATION	

ADDITIONAL ABBREVIATIONS—TREE LEGEND

CP CAMPOR TREE	SB SUGARBERRY TREE	TR TREE SIZE (INCHES)
MP MAPLE TREE	CD CEDAR TREE	DI DIAMETER AT BREAST HEIGHT
SYC SYCAMORE TREE	EM ELM TREE	MS MULTIPLE TRUNKS
OK OAK TREE	CIT CITRUS TREE	
SG SWEET GUM TREE	PN PINE TREE	
HK HICKORY TREE	PM PALM TREE	
CB CHINABERRY TREE	HY HOLLY	

FOR: ZEV COHEN & ASSOCIATES, INC.

SCALE: 1"=20'

TYPE OF SURVEY	SURVEY DATE	JOB NUMBER	PARTY CHIEF	DRAWN BY	CHECKED BY
TOPOGRAPHIC SURVEY	5-29-2018	18-0696	K.HELMIK	T.JEFFREY	J.ZAPERT

SLIGER & ASSOCIATES, INC.
PROFESSIONAL LAND SURVEYORS
3921 NOVA ROAD
PORT ORANGE, FL 32127
(386) 761-5385
LICENSED BUSINESS CERTIFICATION NUMBER 3019
www.sligerassociates.com
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PLAT PREPARED FOR THE FOLLOWING: (ONLY THE LAST DATE IS CERTIFIED ON SEALED COPY)

TYPE OF SURVEY	CERTIFIED TO	SURVEY DATE	JOB NUMBER
TOPOGRAPHIC	ZEV COHEN & ASSOCIATES, INC.	5-29-2018	18-0696

THIS PLAT OF SURVEY IS CERTIFIED TO AND PREPARED FOR THE SOLE AND EXCLUSIVE BENEFIT OF THE ENTITIES AND/OR INDIVIDUALS LISTED BELOW, ON THE MOST CURRENT DATE, AND SHALL NOT BE RELIED UPON BY ANY OTHER ENTITY OR INDIVIDUAL WHOMSOEVER.

NOT CERTIFIED TO ANY ENTITIES AND/OR INDIVIDUALS OTHER THAN THOSE LISTED ABOVE.

BEACH STREET FORCE MAIN DAYTONA BEACH, FLORIDA

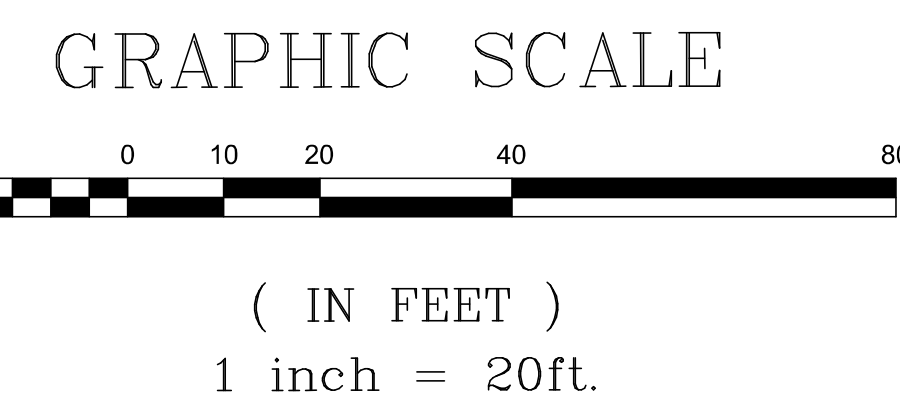
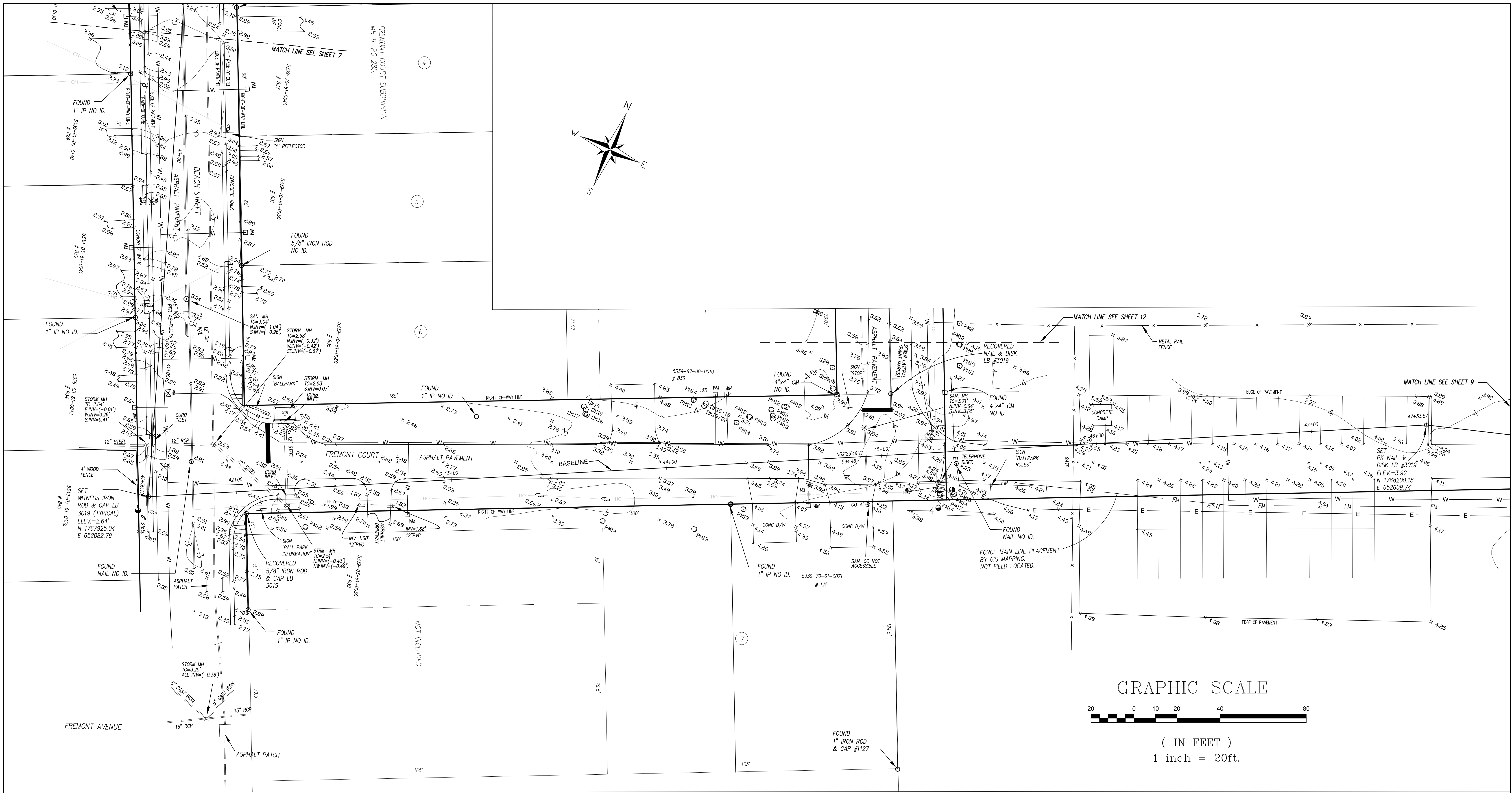
FOR: ZEV COHEN & ASSOCIATES INC.

JOB NO. 18-0696

TOPOGRAPHIC SURVEY

SURVEYOR'S CERTIFICATE
I HEREBY CERTIFY THAT THIS PLAT MEETS THE MINIMUM TECHNICAL STANDARDS SET FORTH BY THE FLORIDA BOARD OF PROFESSIONAL LAND SURVEYORS IN CHAPTER 61G17-6, FLORIDA ADMINISTRATIVE CODE, PURSUANT TO SECTION 472.027, FLORIDA STATUTES.

J.E. ZAPERT, P.L.S. NO. 4046
CLYDE O. VAN KLECK, JR., P.S.M. NO. 6149
STEVEN L. KRUEGER, P.L.S. NO. 4722
MICHAEL S. MURPHY, P.S.M. NO. 6208
VALID WITH SIGNATURE & EMBOSSED SEAL ONLY



UTILITY STATEMENT:

THE INACCESSIBLE UNDERGROUND UTILITIES SHOWN ON THIS SURVEY HAVE BEEN LOCATED FROM ABOVE GROUND FIELD UTILITY LOCATIONS PROVIDED BY SUNSHINE NETWORK, TICKET #'S 25190103, 251901185 AND 251901229 ON OR ABOUT 9-08-09 AND/OR EXISTING AS-BUILT DRAWINGS PROVIDED BY THE CLIENT, SUNSHINE AND ASSOCIATES, INC. (S&A) MAKES NO GUARANTEES THAT THE UNDERGROUND UTILITIES SHOWN COMPRISE ALL SUCH UTILITIES IN THE AREA, EITHER IN-SERVICE OR ABANDONED. LIKEWISE S&A DOES NOT WARRANT THAT THE UNDERGROUND UTILITIES SHOWN ARE IN THE EXACT LOCATION INDICATED. ONLY THAT S&A HAS LOCATED THE UTILITIES AS ACCURATELY AS POSSIBLE FROM SAID FIELD LOCATIONS AND/OR AS-BUILTS PROVIDED BY OTHERS. S&A HAS NOT PHYSICALLY LOCATED THE ACTUAL INACCESSIBLE UNDERGROUND UTILITIES, EXCEPT AS SPECIFICALLY NOTED AND DEPICTED ON THIS DRAWING.

W/ WITH	TC TOP COVER	CONC	CONCRETE	RES	RESIDENCE	IRC	IRON ROD & CAP
CM	CONCRETE MONUMENT	WV	WATER VALVE	FC	BURIED FIBER OPTIC CABLE	PC	IRON PIPE & CAP
TDB	TOP OF BANK	D	CENTRAL ANGLE	IL	ILLEGIBLE	W	BURIED WATER LINE
TOE	TOE OF SLOPE	R	RADIUS	INV	INVERT	ME	METRIC DIMENSION
CLS	CENTRELINE OF SWALE	L	ARC LENGTH	SEC	SECTION	EH	EMERGENCY LIGHT
STA	STATION	LP	LIGHT POLE	CH	CHORD BEARING	TV	BURIED TELEVISION LINE
CO	CLEANOUT	IV	IRRIGATION VALVE	FM	BURIED FORCE MAIN	IP	IRON PIPE
SAN	SANITARY	GA	GUY ANCHOR	FLAL	FLORIDA POWER & LIGHT COMPANY	MB	MAP BOOK
ES	ELECTRIC SERVICE	OP	CORROGATED PLASTIC PIPE	NGVD	NATIONAL GEODETIC VERTICAL DATUM	ORB	OFFICIAL RECORDS BOOK
HOPE	HIGH DENSITY POLYETHYLENE PIPE	DP	DUCTILE IRON PIPE	USC & OS	UNITED STATES COAST AND GEODETIC SURVEY	PG	PAGE
VCP	VITREOUS CLAY PIPE	PVC	POLYVINYL CHLORIDE	USC & OS	UNITED STATES COAST AND GEODETIC SURVEY	Q	QUANTITY
CV	CHECK VALVE	DW	DRIVEWAY	N&D	NAIL AND DISK	REC	RECOVERED

LEGEND

●	IRON ROD WITH CAP	○	TELEPHONE MANHOLE
●	IRON ROD	○	SANITARY MANHOLE
○	IRON PIPE WITH CAP	○	STORM MANHOLE
○	IRON PIPE		
○	FD "X"/OUT IN CONCRETE		
□	CONCRETE MONUMENT		
■	PERMANENT REFERENCE MONUMENT		
▲	PERMANENT CONTROL POINT		
FMV	FORCE MAIN VALVE		
WMV	WATER VALVE		
WM	WATER METER		
FDH	FIRE HYDRANT		
TEB	TELEPHONE BOX		
TSB	TRAFFIC SIGNAL BOX		
EB	ELECTRIC BOX		
TEB	TELEVISION BOX		
MB	MAIL BOX		
LP	LIGHT POLE		
UPL	UTILITY POLE		
GA	GUY ANCHOR		
○	CLEAN OUT		
○	SIGN		
○	TREE		
○	EXISTING ELEVATION		

ADDITIONAL ABBREVIATIONS-TREE LEGEND

CP	CAMPOR TREE	SB	SUGARBERRY TREE	○	TREE SIZE (INCHES)
MP	MAPLE TREE	CD	CEDAR TREE	○	DIAMETER AT BREAST HEIGHT
SYC	SYCAMORE TREE	EM	ELM TREE	○	MULTIPLE TRUNKS
OK	OAK TREE	CIT	CITRUS TREE	○	
SG	SWEET GUM TREE	PN	PINE TREE	○	
HK	HICKORY TREE	PM	PALM TREE	○	
CB	CHINABERRY TREE	HY	HOLLY	○	

FOR: ZEV COHEN & ASSOCIATES, INC.

SCALE: 1"=20'

TYPE OF SURVEY	SURVEY DATE	JOB NUMBER	PARTY CHIEF	DRAWN BY	CHECKED BY
TOPOGRAPHIC SURVEY	5-29-2018	18-0696	K.HELWICK	T.JEFFREY	J.ZAPERT

SLIGER & ASSOCIATES, INC.
PROFESSIONAL LAND SURVEYORS

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LICENSED BUSINESS CERTIFICATION NUMBER 3019

PLAT PREPARED FOR THE FOLLOWING: (ONLY THE LAST DATE IS CERTIFIED ON SEALED COPY)

TYPE OF SURVEY	CERTIFIED TO	SURVEY DATE	JOB NUMBER
TOPOGRAPHIC	ZEV COHEN & ASSOCIATES, INC.	5-29-2018	18-0696

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NOT CERTIFIED TO ANY ENTITIES AND/OR INDIVIDUALS OTHER THAN THOSE LISTED ABOVE.

BEACH STREET FORCE MAIN
DAYTONA BEACH, FLORIDA

FOR: ZEV COHEN & ASSOCIATES INC.

JOB NO. 18-0696

TOPOGRAPHIC SURVEY

SURVEYOR'S CERTIFICATE

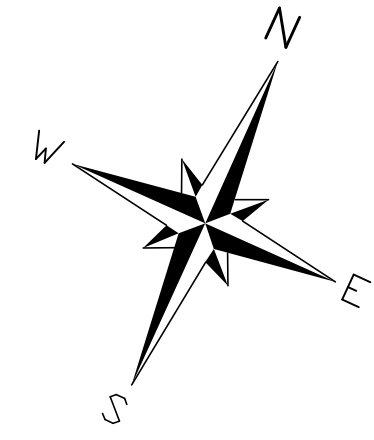
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GRAPHIC SCALE

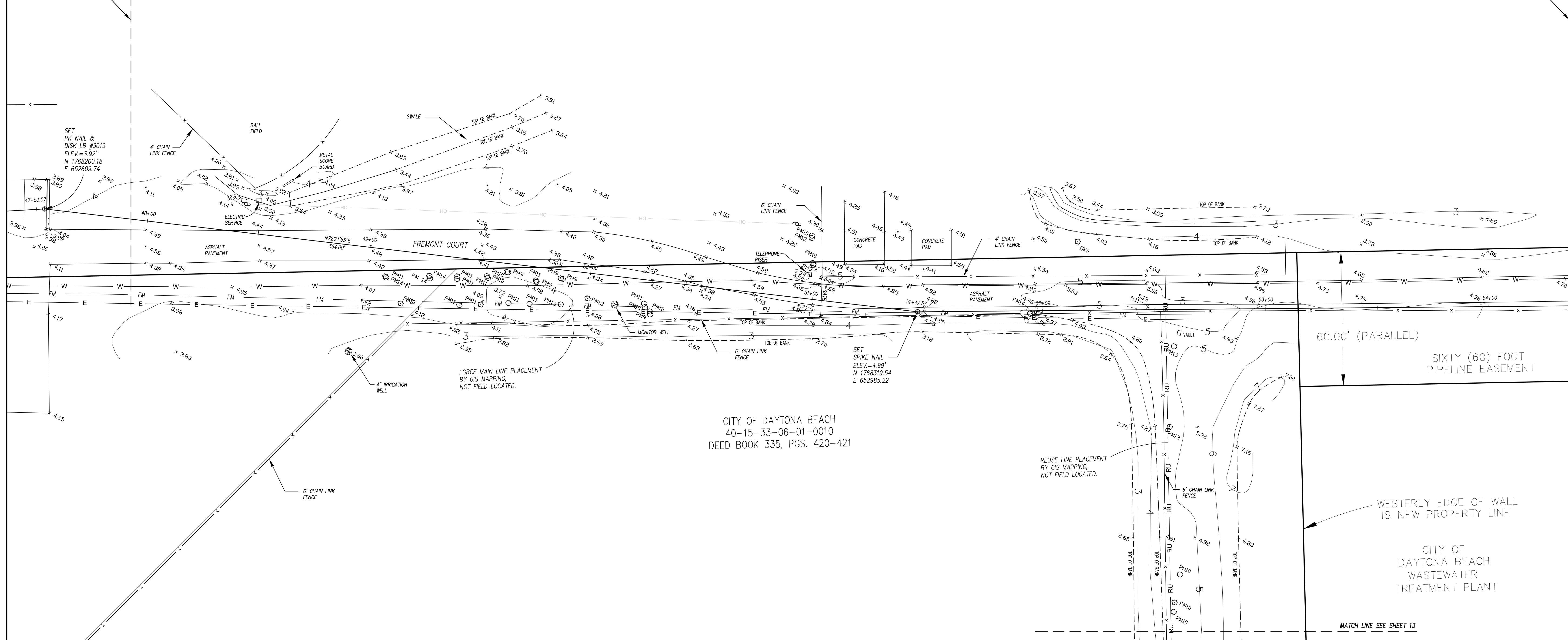


(IN FEET)
1 inch = 20ft.



MATCH LINE SEE SHEET 8

MATCH LINE SEE SHEET 10



CITY OF DAYTONA BEACH
40-15-33-06-01-0010
DEED BOOK 335, PGS. 420-421

60.00' (PARALLEL)
SIXTY (60) FOOT
PIPELINE EASEMENT

WESTERLY EDGE OF WALL
IS NEW PROPERTY LINE

CITY OF
DAYTONA BEACH
WASTEWATER
TREATMENT PLANT

MATCH LINE SEE SHEET 13

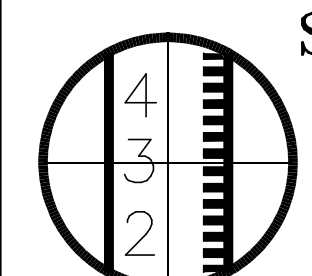
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LEGEND

● IRON ROD WITH CAP	○ TELEPHONE MANHOLE
○ IRON ROD	⊙ SANITARY MANHOLE
● IRON PIPE WITH CAP	⊙ STORM MANHOLE
○ IRON PIPE	
○ FD "X" OUT IN CONCRETE	
□ CONCRETE MONUMENT	
■ PERMANENT REFERENCE MONUMENT	
▲ PERMANENT CONTROL POINT	
FMV FORCE MAIN VALVE	
WV WATER VALVE	
WM WATER METER	
WH FIRE HYDRANT	
TVB TELEPHONE BOX	
TSB TRAFFIC SIGNAL BOX	
EBB ELECTRIC BOX	
CTV CABLE TELEVISION BOX	
MB MAIL BOX	
ULP LIGHT POLE	
UA GUY ANCHOR	
CO CLEAN OUT	
SIGN	
○ TREE	
○OX EXISTING ELEVATION	

ADDITIONAL ABBREVIATIONS-TREE LEGEND

CP CAMPHOR TREE	SB SUGARBERRY TREE	TREE SIZE (INCHES)
MP MAPLE TREE	CD CEDAR TREE	DIAMETER AT BREAST HEIGHT
SYC SYCAMORE TREE	EM ELM TREE	MULTIPLE TRUNKS
OK OAK TREE	CIT CITRUS TREE	
SG SWEET GUM TREE	PN PINE TREE	
HK HICKORY TREE	PM PALM TREE	
CB CHINABERRY TREE	HY HOLLY	



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(386) 761-5385
LICENSED BUSINESS CERTIFICATION NUMBER 3019
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**BEACH STREET FORCE MAIN
DAYTONA BEACH, FLORIDA**

FOR: ZEV COHEN & ASSOCIATES INC. **JOB NO. 18-0696**

ABBREVIATIONS

W/ WITH	TC TOP COVER	CONC CONCRETE	RES RESIDENCE	IRC IRON ROD & CAP
CM CONCRETE MONUMENT	WV WATER VALVE	D CENTRAL ANGLE	—FC— BURIED FIBER OPTIC CABLE	IRC IRON PIPE & CAP
TDB TOP OF BANK	TSB TRAFFIC SIGNAL BOX	R RADIUS	—W— BURIED WATER LINE	MEB METEOD PDS SECTION
TOE TOE OF SLOPE	FM FIRE HYDRANT	L ARC LENGTH	—E— BURIED ELECTRIC LINE	RFC REINFORCED CONCRETE PIPE
CLS CENTERLINE OF SWALE	WM WATER METER	SEC SECTION	—G— BURIED GAS LINE	CMF CORRUGATED METAL PIPE
STA STATION	LP LIGHT POLE	CHORD BEARING	—TV— BURIED TELEVISION LINE	MB MAP BOOK
CO CLEANOUT	IV IRRIGATION VALVE	CHORD DISTANCE	—FM— BURIED FORCE MAIN	IP IRON PIPE
SAN SANITARY	GA GUY ANCHOR	RISE RANGE	—OH— AERIAL UTILITY LINE	ORB OFFICIAL RECORDS BOOK
ES ELECTRIC SERVICE	OMP CORRUGATED PLASTIC PIPE	EL ELEVATION	(P) PLATTED DIMENSION	PG PAGE
HOPE HIGH DENSITY POLYETHYLENE PIPE	DP DUCTILE IRON PIPE	NATIONAL GEODETIC VERTICAL DATUM	(NR) NON RADIAL	(D) DETEED DIMENSION
VCP VITREOUS CLAY PIPE	PVC POLYVINYL CHLORIDE	USC & OS UNITED STATES COAST AND GEODETIC SURVEY	(NR) NON RADIAL	(M) MEASURED DIMENSION
CV CHECK VALVE	DW DRIVEWAY	N&D NAIL AND DISK	(R) RADIAL	(U) UNITED STATES COAST AND GEODETIC SURVEY
		REC RECOVERED	(C) CALCULATED DIMENSION	(TYP) TYPICAL
			(FOT) FLORIDA DEPARTMENT OF TRANSPORTATION	

FOR: ZEV COHEN & ASSOCIATES, INC.

SCALE: 1"=20'

FIELD BOOK: 1397	PAGE(S): 50-58	SHEET 9 OF 11			
TYPE OF SURVEY	SURVEY DATE	JOB NUMBER	PARTY CHIEF	DRAWN BY	CHECKED BY
BOUNDARY SURVEY	5-29-2018	18-0696	K.HELMIK	T.JEFFREY	J.ZAPERT
TOPOGRAPHIC SURVEY					
FOUNDATION LOCATION					
FINAL IMPROVEMENTS					
RE-CERTIFICATION					

PLAT PREPARED FOR THE FOLLOWING: (ONLY THE LAST DATE IS CERTIFIED ON SEALED COPY)

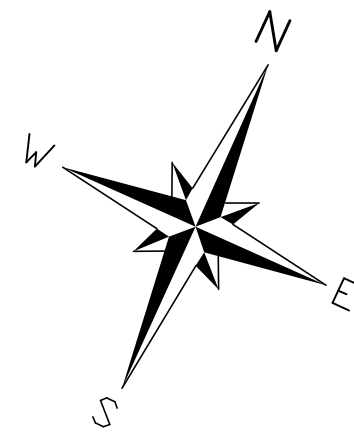
TYPE OF SURVEY	CERTIFIED TO	SURVEY DATE	JOB NUMBER
TOPOGRAPHIC	ZEV COHEN & ASSOCIATES, INC.	5-29-2018	18-0696
NOT CERTIFIED TO ANY ENTITIES AND/OR INDIVIDUALS OTHER THAN THOSE LISTED ABOVE.			

TOPOGRAPHIC SURVEY

SURVEYOR'S CERTIFICATE

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MICHAEL S. MURPHY, P.S.M. NO. 6208
VALID WITH SIGNATURE & EMBOSSED SEAL ONLY



GRAPHIC SCALE



(IN FEET)
1 inch = 20ft.

MATCH LINE SEE SHEET 10

CITY OF DAYTONA BEACH
40-15-33-06-01-0010
DEED BOOK 335, PGS. 420-421

WESTERLY EDGE OF WALL
IS NEW PROPERTY LINE

CITY OF
DAYTONA BEACH
WASTEWATER
TREATMENT PLANT

REUSE LINE PLACEMENT
BY GIS MAPPING,
NOT FIELD LOCATED.

MATCH LINE SEE SHEET 14

UTILITY STATEMENT:
THE INACCESSIBLE UNDERGROUND UTILITIES SHOWN ON THIS SURVEY HAVE BEEN LOCATED FROM ABOVE GROUND FIELD UTILITY LOCATIONS PROVIDED BY SUNSHINE NETWORK, TICKET #'S 251901103, 251901185 AND 251901229 ON OR ABOUT 9-08-09 AND/OR EXISTING AS-BUILT DRAWINGS PROVIDED BY THE CLIENT, SLIGER AND ASSOCIATES, INC. (S&A) MAKES NO WARRANTIES THAT THE UNDERGROUND UTILITIES SHOWN COMPRISE ALL SUCH UTILITIES IN THE AREA, EITHER IN-SERVICE OR ABANDONED. LIKEWISE S&A DOES NOT WARRANT THAT THE UNDERGROUND UTILITIES SHOWN ARE IN THE EXACT LOCATION INDICATED. ONLY THAT S&A HAS LOCATED THE UTILITIES AS ACCURATELY AS POSSIBLE FROM SAID FIELD LOCATIONS AND/OR AS-BUILTS PROVIDED BY OTHERS. S&A HAS NOT PHYSICALLY LOCATED THE ACTUAL INACCESSIBLE UNDERGROUND UTILITIES, EXCEPT AS SPECIFICALLY NOTED AND DEPICTED ON THIS DRAWING.

W/ WITH	TC TOP COVER	CONC	CONCRETE	ABBREVIATIONS	RES RESIDENCE	RC IRON ROD & CAP
CM CONCRETE MONUMENT	WV WATER VALVE	D	CENTRAL ANGLE	ILLEG. ILLEGIBLE	—FC— BURIED FIBER OPTIC CABLE	IRC IRON ROD & CAP
TDB TOP OF BANK	TSH TRAFFIC SIGNAL BOX	R	RADIUS	INV INVERT	—W— BURIED WATER LINE	IRC IRON PIPE & CAP
TOE TOE OF SLOPE	FM FIRE HYDRANT	L	ARC LENGTH	SEC SECTION	—E— BURIED ELECTRIC LINE	MFC METRIC FPO SECTION
CLS CENTERLINE OF SWALE	WM WATER METER	CB	CHORD BEARING	TWP TOWNSHIP	—G— BURIED GAS LINE	RFC REINFORCED CONCRETE PIPE
STA STATION	LP LIGHT POLE	CH	CHORD DISTANCE	RISE RANGE	—TV— BURIED TELEVISION LINE	CMF CORRUGATED METAL PIPE
CO CLEANOUT	IV IRRIGATION VALVE	FL&L CO	FLORIDA POWER & LIGHT COMPANY	R/W RIGHT OF WAY	—FM— BURIED FORCE MAIN	MH MANHOLE
SAN SANITARY	GA GUY ANCHOR	FL&L CO	FLORIDA POWER & LIGHT COMPANY	EL ELEVATION	—OH— AERIAL UTILITY LINE	MB MAP BOOK
ES ELECTRIC SERVICE	OMP CORRUGATED PLASTIC PIPE	NGVD	NATIONAL GEODETIC VERTICAL DATUM	(NR) NON RADIAL	(D) DETEED DIMENSION	IP IRON PIPE
HOPE HIGH DENSITY POLYETHYLENE PIPE	DIP DUCTILE IRON PIPE	USC & OS	UNITED STATES COAST AND GEODETIC SURVEY	(P) RADIAL	(M) MEASURED DIMENSION	ORB OFFICIAL RECORDS BOOK
VCP VITREOUS CLAY PIPE	PVC POLYVINYL CHLORIDE	(P) RADIAL	(C) CALCULATED DIMENSION	(TYP) TYPICAL	(D) IDENTIFICATION	PG PAGE
CV CHECK VALVE	DW DRIVEWAY	©	CENTERLINE	N&D NAIL AND DISK	RV ROUSE VALVE	REC RECOVERED

LEGEND

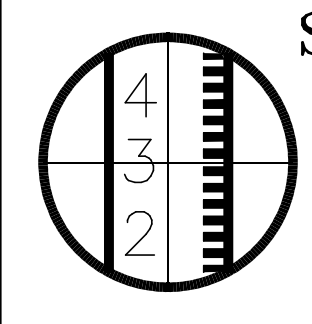
● IRON ROD WITH CAP	○ TELEPHONE MANHOLE
○ IRON ROD	⊙ SANITARY MANHOLE
● IRON PIPE WITH CAP	⊙ STORM MANHOLE
○ IRON PIPE	
○ FD "X"/OUT IN CONCRETE	
□ CONCRETE MONUMENT	
■ PERMANENT REFERENCE MONUMENT	
▲ PERMANENT CONTROL POINT	
⊕ FORCE MAIN VALVE	
⊕ WATER VALVE	
⊕ WATER METER	
⊕ FIRE HYDRANT	
⊕ TELEPHONE BOX	
⊕ TRAFFIC SIGNAL BOX	
⊕ ELECTRIC BOX	
⊕ CABLE TELEVISION BOX	
⊕ MAIL BOX	
⊕ LIGHT POLE	
⊕ UTILITY POLE	
⊕ GUY ANCHOR	
⊕ CLEAN OUT	
⊕ SIGN	
○ TREE	
○ EXISTING ELEVATION	

ADDITIONAL ABBREVIATIONS—TREE LEGEND

CP CAMPHOR TREE	SB SUGARBERRY TREE	TREE TYPE	TREE SIZE (INCHES) DIAMETER AT BREAST HEIGHT
MP MAPLE TREE	CD CEDAR TREE	OK24"8	MULTIPLE TRUNKS
SYC SYCAMORE TREE	EM ELM TREE		
OK OAK TREE	CIT CITRUS TREE		
SG SWEET GUM TREE	PN PINE TREE		
HK HICKORY TREE	PM PALM TREE		
CB CHINABERRY TREE	HY HOLLY		

FOR: ZEV COHEN & ASSOCIATES, INC.
SCALE: 1"=20'
FIELD BOOK: 1397 PAGE(S): 50-58 SHEET 10 OF 11

TYPE OF SURVEY	SURVEY DATE	JOB NUMBER	PARTY CHIEF	DRAWN BY	CHECKED BY
TOPOGRAPHIC SURVEY	5-29-2018	18-0696	K.HELMIK	T.JEFFREY	J.ZAPERT



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**BEACH STREET FORCE MAIN
DAYTONA BEACH, FLORIDA**

FOR: ZEV COHEN & ASSOCIATES INC. JOB NO. 18-0696

PLAT PREPARED FOR THE FOLLOWING: (ONLY THE LAST DATE IS CERTIFIED ON SEALED COPY)

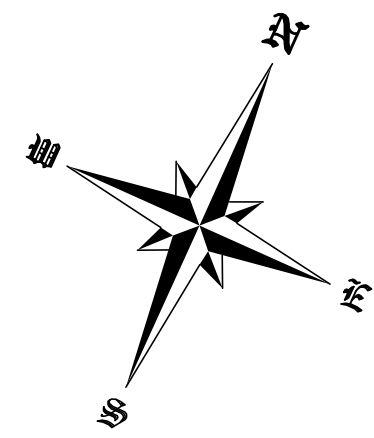
THIS PLAT OF SURVEY IS CERTIFIED TO AND PREPARED FOR THE SOLE AND EXCLUSIVE BENEFIT OF THE ENTITIES AND/OR INDIVIDUALS LISTED BELOW, ON THE MOST CURRENT DATE, AND SHALL NOT BE RELIED UPON BY ANY OTHER ENTITY OR INDIVIDUAL WHOMSOEVER.

TYPE OF SURVEY	CERTIFIED TO	SURVEY DATE	JOB NUMBER
TOPOGRAPHIC	ZEV COHEN & ASSOCIATES, INC.	5-29-2018	18-0696
NOT CERTIFIED TO ANY ENTITIES AND/OR INDIVIDUALS OTHER THAN THOSE LISTED ABOVE.			

TOPOGRAPHIC SURVEY

SURVEYOR'S CERTIFICATE
I HEREBY CERTIFY THAT THIS PLAT MEETS THE MINIMUM TECHNICAL STANDARDS SET FORTH BY THE FLORIDA BOARD OF PROFESSIONAL LAND SURVEYORS IN CHAPTER 61G17-6, FLORIDA ADMINISTRATIVE CODE, PURSUANT TO SECTION 472.027, FLORIDA STATUTES.

J.E. ZAPERT, P.L.S. NO. 4046
CLYDE O. VAN KLECK, JR., P.S.M. NO. 6149
STEVEN L. KRUEGER, P.L.S. NO. 4722
MICHAEL S. MURPHY, P.S.M. NO. 6208
VALID WITH SIGNATURE & EMBOSSED SEAL ONLY



GRAPHIC SCALE



(IN FEET)
1 inch = 20ft.

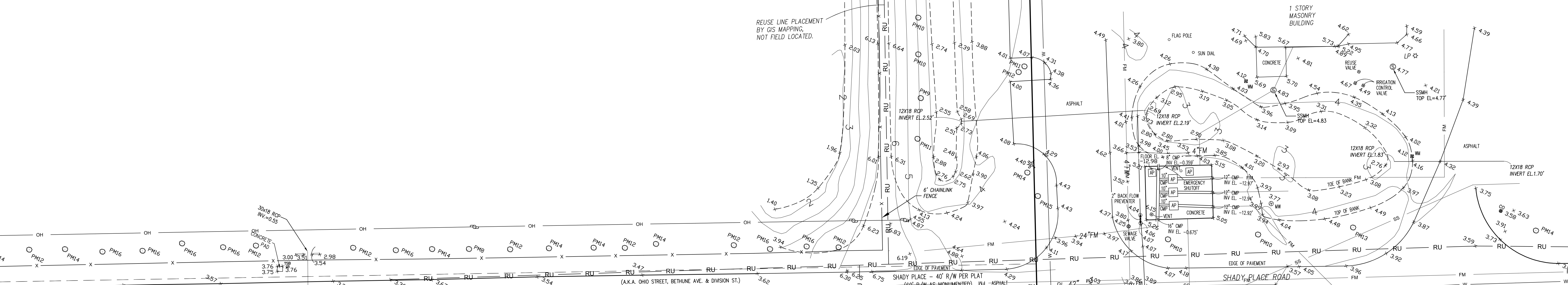
CITY OF DAYTONA BEACH
40-15-33-06-01-0010
DEED BOOK 335, PGS. 420-421

MATCH LINE SEE SHEET 10

WESTERLY EDGE OF WALL
IS NEW PROPERTY LINE

CITY OF
DAYTONA BEACH
WASTEWATER
TREATMENT PLANT

REUSE LINE PLACEMENT
BY GIS MAPPING,
NOT FIELD LOCATED.



UTILITY STATEMENT:
THE INACCESSIBLE UNDERGROUND UTILITIES SHOWN ON THIS SURVEY HAVE BEEN LOCATED FROM ABOVE GROUND FIELD UTILITY LOCATIONS PROVIDED BY SUNSHINE NETWORK, TICKET #'S 251901103, 251901185 AND 251901229 ON OR ABOUT 9-08-09 AND/OR EXISTING AS-BUILT DRAWINGS PROVIDED BY THE CLIENT, SLIGER AND ASSOCIATES, INC. (S&A) MAKES NO GUARANTEES THAT THE UNDERGROUND UTILITIES SHOWN COMPRISE ALL SUCH UTILITIES IN THE AREA, EITHER IN-SERVICE OR ABANDONED. LIKEWISE S&A DOES NOT WARRANT THAT THE UNDERGROUND UTILITIES SHOWN ARE IN THE EXACT LOCATION INDICATED. ONLY THAT S&A HAS LOCATED THE UTILITIES AS ACCURATELY AS POSSIBLE FROM SAID FIELD LOCATIONS AND/OR AS-BUILTS PROVIDED BY OTHERS. S&A HAS NOT PHYSICALLY LOCATED THE ACTUAL INACCESSIBLE UNDERGROUND UTILITIES, EXCEPT AS SPECIFICALLY NOTED AND DEPICTED ON THIS DRAWING.

LEGEND

● IRON ROD WITH CAP	○ TELEPHONE MANHOLE
○ IRON ROD	○ SANITARY MANHOLE
● IRON PIPE WITH CAP	○ STORM MANHOLE
○ IRON PIPE	⊠ ACCESS PANEL
○ FD "X" OUT IN CONCRETE	
□ CONCRETE MONUMENT	
■ PERMANENT REFERENCE MONUMENT	
▲ PERMANENT CONTROL POINT	
⊕ FORCE MAIN VALVE	
⊕ WATER VALVE	
⊕ WATER METER	
⊕ FIRE HYDRANT	
⊕ TELEPHONE BOX	
⊕ TRAFFIC SIGNAL BOX	
⊕ ELECTRIC BOX	
⊕ CABLE TELEVISION BOX	
⊕ MAIL BOX	
⊕ LIGHT POLE	
⊕ UTILITY POLE	
⊕ GUY ANCHOR	
⊕ CLEAN OUT	
⊕ SIGN	
⊕ TREE	
⊕ EXISTING ELEVATION	

ADDITIONAL ABBREVIATIONS-TREE LEGEND

CP CAMPHOR TREE	SB SUGARBERRY TREE	TREE SIZE (INCHES)
MP MAPLE TREE	CD CEDAR TREE	DIAMETER AT BREAST HEIGHT
SYC SYCAMORE TREE	EM ELM TREE	
OK OAK TREE	CIT CITRUS TREE	
SG SWEET GUM TREE	PN PINE TREE	
HK HICKORY TREE	PM PALM TREE	
CB CHINABERRY TREE	HY HOLLY	

OK24" 8" TREE SYMBOL MULTIPLE TRUNKS

SLIGER & ASSOCIATES, INC.
PROFESSIONAL LAND SURVEYORS
3921 NOVA ROAD
PORT ORANGE, FL 32127
(386) 761-5385
LICENSED SURVEYOR CERTIFICATION NUMBER 3019
www.sligerassociates.com
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**BEACH STREET FORCE MAIN
DAYTONA BEACH, FLORIDA**

FOR: ZEV COHEN & ASSOCIATES INC.

**JOB NO.
18-0696**

W/ WITH	TC TOP COVER	CONC CONCRETE	RES RESIDENCE	IRC IRON ROD & CAP
OM CONCRETE MONUMENT	WV WATER VALVE	D CENTRAL ANGLE	—FC— BURIED FIBER OPTIC CABLE	IRC IRON PIPE & CAP
TDB TOP OF BANK	TSH TRAFFIC SIGNAL BOX	R RADIUS	—W— BURIED WATER LINE	MFC METRIC P&G SECTION
TOE TOE OF SLOPE	FR FIRE HYDRANT	L ARC LENGTH	—E— BURIED ELECTRIC LINE	RCP REINFORCED CONCRETE PIPE
CLS CENTERLINE OF SWALE	WM WATER METER	SEC SECTION	—G— BURIED GAS LINE	CMF CORRUGATED METAL PIPE
STA STATION	LP LIGHT POLE	CH CHORD BEARING	—TV— BURIED TELEVISION LINE	MB MAP BOOK
CO CLEANOUT	IV IRRIGATION VALVE	CHD CHORD DISTANCE	—FM— BURIED FORCE MAIN	IP IRON PIPE
SAN SANITARY	GA GUY ANCHOR	CHD CHORD DISTANCE	—OH— AERIAL UTILITY LINE	ORB OFFICIAL RECORDS BOOK
ES ELECTRIC SERVICE	OPP CORRUGATED PLASTIC PIPE	NSD NATIONAL GEODETIC	(P) PLATTED DIMENSION	PG PAGE
HOPE HIGH DENSITY POLYETHYLENE PIPE	DIR DUCTILE IRON PIPE	USC & OS UNITED STATES COAST AND GEODETIC SURVEY	(R) RADIAL	(D) DETEED DIMENSION
VCP VITREOUS CLAY PIPE	PVC POLYVINYL CHLORIDE	USC & OS UNITED STATES COAST AND GEODETIC SURVEY	(N&D) NAIL AND DISK	(M) MEASURED DIMENSION
CV CHECK VALVE	DW DRIVEWAY	USC & OS UNITED STATES COAST AND GEODETIC SURVEY	(R) RADIAL	(C) CALCULATED DIMENSION
		USC & OS UNITED STATES COAST AND GEODETIC SURVEY	(N&D) NAIL AND DISK	(TYP) TYPICAL
		USC & OS UNITED STATES COAST AND GEODETIC SURVEY	(R) RADIAL	(D) DETEED DIMENSION
		USC & OS UNITED STATES COAST AND GEODETIC SURVEY	(N&D) NAIL AND DISK	(M) MEASURED DIMENSION
		USC & OS UNITED STATES COAST AND GEODETIC SURVEY	(R) RADIAL	(C) CALCULATED DIMENSION
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FOR: ZEV COHEN & ASSOCIATES, INC.

SCALE: 1"=20'

FIELD BOOK: 1397 PAGE(S): 50-58 SHEET 11 OF 11

TYPE OF SURVEY	SURVEY DATE	JOB NUMBER	PARTY CHIEF	DRAWN BY	CHECKED BY
SPECIFIC PURPOSE :					
BOUNDARY SURVEY :					
TOPOGRAPHIC SURVEY :	5-29-2018	18-0696	K.HELMIK	T.JEFFREY	J.ZAPERT
FOUNDATION LOCATION :					
FINAL IMPROVEMENTS :					
RE-CERTIFICATION :					

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