

CONTRACT PLANS

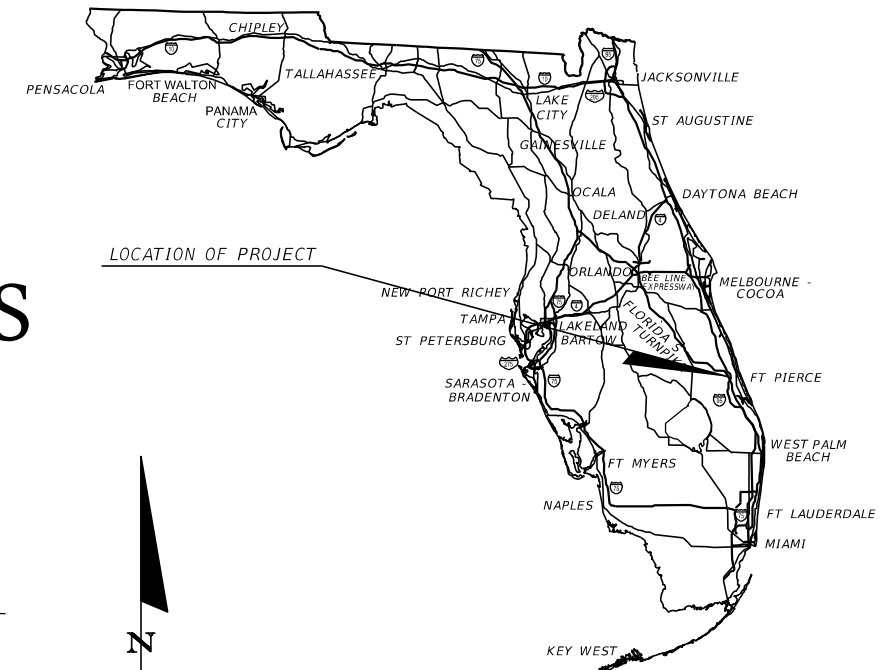
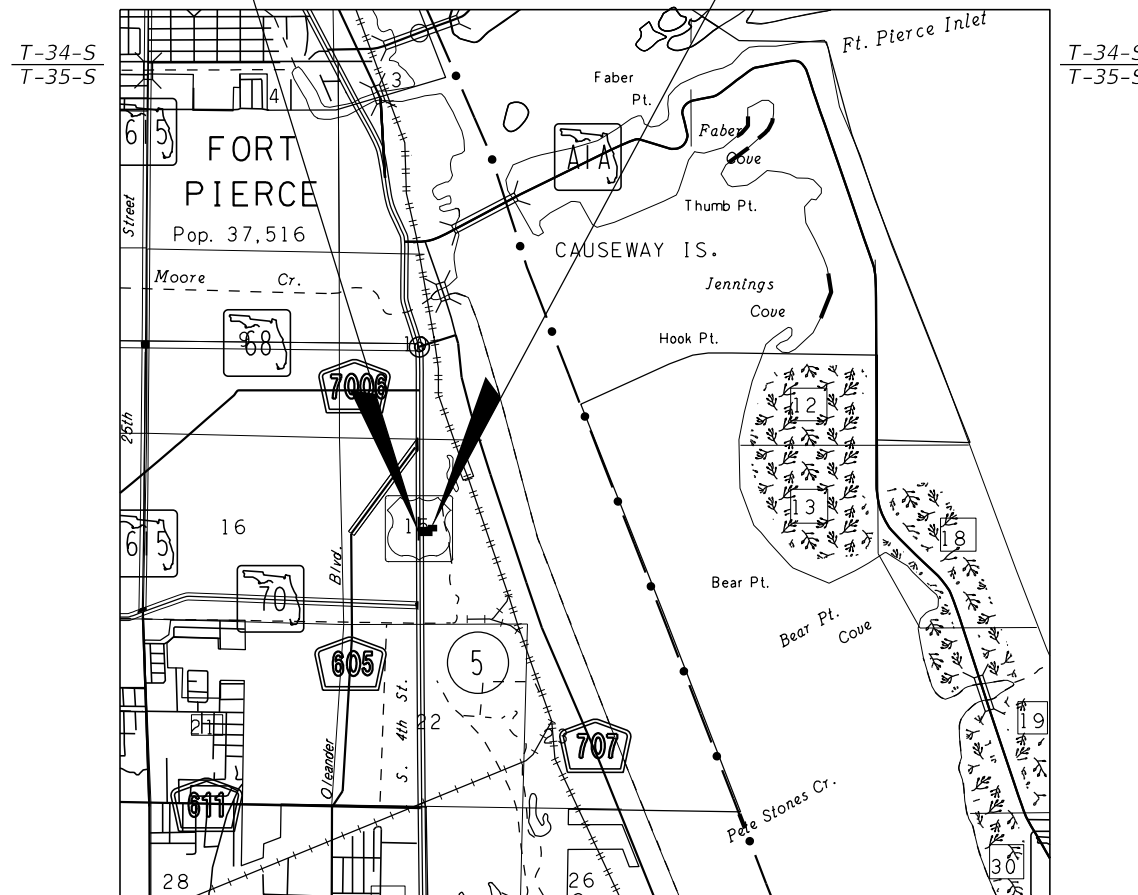
OHIO AVENUE ROADWAY IMPROVEMENTS

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BEGIN PROJECT
OHIO AVENUE
STA. 100+07.79

END PROJECT
OHIO AVENUE
STA. 105+30.98



ROADWAY SHOP DRAWINGS
TO BE SUBMITTED TO:

KIMLEY-HORN AND ASSOCIATES, INC.
BRIAN GOOD, P.E.
445 24th STREET, SUITE 200
VERO BEACH, FLORIDA 32960

PLANS PREPARED BY:

Kimley»Horn

445 24th STREET, SUITE 200
VERO BEACH, FL 32960
TEL (772) 794-4100
PROJECT NUMBER: 047922018
CERTIFICATE OF AUTHORIZATION: 00000696

ROADWAY PLANS
ENGINEER OF RECORD: BRIAN GOOD, P.E.

P.E. NO.: 56939

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

100%
SUBMITTAL
FEBRUARY 2018

PREPARED FOR:
CITY OF FORT PIERCE

SHEET
NO.

1

SUMMARY OF PAY ITEMS

ROADWAY PAY ITEMS			
101-1	MOBILIZATION	LS	1
102-1	MAINTENANCE OF TRAFFIC	LS	1
102-104A	TEMPORARY SIGNALIZATION AND MAINTENANCE, INTERSECTION	LS	1
102-107-1A	TEMPORARY TRAFFIC DETECTION AND MAINTENANCE, INTERSECTION	LS	1
104-10-3	SEDIMENT BARRIER (SILT FENCE TYPE III)	LF	775
104-18	INLET PROTECTION SYSTEM	EA	9
110-1-1	CLEARING & GRUBBING	LS	1
108-1	AS-BUILTS/ RECORD DRAWINGS (EXCLUDING POTABLE WATER MAIN)	LS	1
120-1	REGULAR EXCAVATION	CY	1,010
120-6	EMBANKMENT	CY	94
160-4	TYPE "B" STABILIZATION	SY	2,165
285-706	CEMENTED COQUINA LBR 100 (8")	SY	2,005
334-1-13A	SUPERPAVE ASPHALTIC CONCRETE (TYPE SP-9.5) (TRAFFIC C) (1.0")	TN	111
334-1-13B	SUPERPAVE ASPHALTIC CONCRETE (TYPE SP-12.5) (TRAFFIC C) (1.5")	TN	166
425-1-201	INLETS (CURB) (TYPE P-9) (<10')	EA	4
425-2-62	MANHOLE (P-8) (>10')	EA	2
425-5	MODIFY EXISTING STRUCTURE	EA	1
425-5-1	MANHOLE ADJUST (UTILITIES)	EA	2
425-6	VALVE BOX (ADJUST)	EA	6
430-171-125	CONC. PIPE CULVERT (18" SS) (CLASS III)	LF	237
430-174-124	CONC. PIPE CULVERT (24" SS) (CLASS III)	LF	236
430-175-218	CONC. PIPE CULVERT (14"x23" SS) (CLASS III)	LF	57
430-175-224	CONC. PIPE CULVERT (19"x30" SS) (CLASS III)	LF	71
520-1-10	CONCRETE CURB & GUTTER (TYPE F)	LF	730
520-2-2	CONCRETE CURB (TYPE B)	LF	81
520-2-4	CONCRETE CURB (TYPE D)	LF	484
522-1	CONCRETE SIDEWALK, 4" THICK (FIBER, 1.0 LB/CY)	SY	437
522-2	CONCRETE SIDEWALK, 6" THICK (FIBER, 1.0 LB/CY)	SY	200
523-1	PATTERNED PAVEMENT (8" THICK) (STAMPED CONCRETE)	SY	53
527-2	DETECTABLE WARNINGS	SF	47
1644-800	FIRE HYDRANT RELOCATE	EA	1
700-0-AA	MONUMENT SIGN	LS	1

LANDSCAPE PAY ITEMS			
162-1-13	PREPARED SOIL AMENDMENT	CY	204
570-1-2A	PERFORMANCE TURF, SOD (BAHIA)	SY	112
570-1-2B	PERFORMANCE TURF, SOD (FLORATAM ST. AUGUSTINE)	SY	1,700
580-1-A	MULCH (FLORIMULCH)	CY	22
580-4-392	LIVISTONA CHINENSIS / CHINESE FAN PALM 8' CT	EA	3
580-4-393	LIVISTONA CHINENSIS / CHINESE FAN PALM 10' CT	EA	3
580-5-993	LAGERSTROEMIA X 'MUSKOGEE' / LAVENDER CRAPE MYRTLE	EA	14
580-7-103	MUHLENBERGIA CAPILLARIS / PINK MUHLY	EA	64
580-7-253	FICUS MICROCARPA 'GREEN ISLAND' / GREEN ISLAND FICUS	EA	109
580-7-303	LOROPETALUM CHINESE 'PURPLE PIXIE' / PURPLE PIXIE LOROPETALUM	EA	37
580-7-983	RHAPHIOLEPIS INDICA 'ALBA' / WHITE INDIAN HAWTHORN	EA	27
580-7-993	TULBAGHIA VIOLACEA / SOCIETY GARLIC	EA	414
590-1	IRRIGATION SYSTEM (COMPLETE)	LS	1

SIGNING AND PAVEMENT MARKING PAY ITEMS			
700-1-11	SINGLE POST SIGN (F&I) (<12 SF)	EA	7
700-1-50	SINGLE POST SIGN (RELOCATE)	EA	1
706-3	RETRO-REFLECTIVE PAVEMENT MARKERS	EA	73
710-11-290	PAINTED PAVEMENT MARKING (ISLAND NOSE) (YELLOW)	SF	89
711-11-121	THERMOPLASTIC PAVEMENT MARKINGS (6" SOLID) (WHITE)	LF	830
711-11-123	THERMOPLASTIC PAVEMENT MARKINGS (12" SOLID) (WHITE)	LF	75
711-11-125	THERMOPLASTIC PAVEMENT MARKINGS (24" SOLID) (WHITE)	LF	682
711-11-170	THERMOPLASTIC PAVEMENT MARKING (ARROW)	EA	5
711-11-221	THERMOPLASTIC PAVEMENT MARKINGS (6" SOLID) (YELLOW)	LF	762
711-11-224	THERMOPLASTIC PAVEMENT MARKINGS (18" SOLID) (YELLOW)	LF	21
711-16-131B	THERMOPLASTIC PAVEMENT MARKINGS (6" SKIP, 10'-30') (WHITE)	LF	160
711-16-231A	THERMOPLASTIC PAVEMENT MARKINGS (6" SKIP, 6'-10') (YELLOW)	LF	348
711-16-231B	THERMOPLASTIC PAVEMENT MARKINGS (6" SKIP, 2'-4') (YELLOW)	LF	65

SIGNALIZATION PAY ITEMS			
630-2-11	CONDUIT (SIGNAL) (F & I) (OPEN TRENCH)	LF	198
630-2-12	CONDUIT (SIGNAL) (F & I) (DIRECTIONAL BORE)	LF	1,185
632-7-1	CABLE (SIGNAL) (F & I)	PI	1
632-7-6	SIGNAL CABLE (REMOVE) (INTERSECTION)	PI	1
633-1-121	FIBER OPTIC CABLE (F & I) (UNDERGROUND) (12 FIBERS)	LF	270
633-2-31	FIBER OPTIC CONNECTION (INSTALL) (SPLICE)	EA	12
633-2-32	FIBER OPTIC CONNECTION (INSTALL) (TERMINATION)	EA	12
635-2-11	PULL BOX (F & I) (TRAFFIC SIGNAL)	EA	21
635-2-12	PULL BOX (F & I) (FIBER OPTIC) (24" X 36")	EA	1
639-1-112	ELECTRICAL POWER SERVICE (SIGNALS) (ABOVE GROUND) (METER PURCHASED BY CONTRACTOR)	AS	1
639-1-610	ELECTRICAL POWER SERVICE (REMOVE) (OVERHEAD)	AS	1
639-2-1	ELECTRICAL SERVICE WIRE (F & I)	LS	1
639-3-11	ELECTRICAL SERVICE DISCONNECT (F & I) (POLE MOUNTED)	EA	1
641-2-12	PRESTRESSED CONC. POLE (F & I) (TYPE P-II SERVICE POLE)	EA	1
641-2-80	PRESTRESSED CONCRETE POLE (COMPLETE POLE REMOVAL)	EA	4
646-1-11	ALUMINUM SIGNALS POLE (PEDESTAL)	EA	5
646-1-60	ALUMINUM SIGNALS POLE (REMOVE)	EA	1
649-21-1	STEEL MAST ARM ASSEMBLY (F & I) (SINGLE ARM) (30')	EA	1
649-21-9	STEEL MAST ARM ASSEMBLY (F & I) (DOUBLE ARM) (50' - 50')	EA	1
649-21-10	STEEL MAST ARM ASSEMBLY (F & I) (SINGLE ARM) (60')	EA	1
650-1-24	TRAFFIC SIGNAL (F & I) (POLYCARBONATE W/ ALUM TOP) (3-SECTION) (1-WAY)	AS	4
650-1-29	TRAFFIC SIGNAL (F & I) (POLYCARBONATE W/ ALUM TOP) (5-SECTION) (1-WAY) (CLUSTER)	AS	4
653-1-11	PEDESTRIAN SIGNAL (F & I) (LED-COUNTDOWN) (1-WAY)	AS	8
660-4-11	VEHICLE DETECTION SYSTEM (F & I) (VIDEO) (CABINET EQUIPMENT)	EA	1
660-4-12	VEHICLE DETECTION SYSTEM (F & I) (VIDEO) (ABOVE GROUND EQUIPMENT)	EA	4
663-1-111	SIGNAL PRIORITY AND PREEMPTION (F & I) (OPTICAL) (CABINET ELECTRONICS)	EA	1
663-1-112	SIGNAL PRIORITY AND PREEMPTION (F & I) (OPTICAL) (DETECTOR)	EA	4
665-1-11	PEDESTRIAN DETECTOR (F & I) (STANDARD)	EA	8
670-5-111	TRAFFIC CONTROLLER ASSEMBLY (F & I) (NEMA) (ONE PREEMPTION PLAN)	AS	1
670-5-600	TRAFFIC CONTROLLER ASSEMBLY (REMOVE CONTROLLER WITH CABINET)	AS	1
684-1-1	MANAGED FIELD ETHERNET SWITCH (F & I)	EA	1
685-1-11	UNINTERRUPTIBLE POWER SUPPLY (F & I) (LINE INTERACTIVE)	EA	1
700-5-21	INTERNALLY ILLUMINATED SIGN (F & I) (OVERHEAD MOUNT, 12 - 18 SF)	EA	2
700-5-22	INTERNALLY ILLUMINATED SIGN (F & I) (OVERHEAD MOUNT, 12 - 18 SF)	EA	2
715-1-11	LIGHTING CONDUCTORS (F & I) (INSULATED, No. 10 OR <)	LF	1,149
715-5-11	LUMINAIRE & BRACKET ARM (F & I) (ALUMINUM)	EA	3

PAY ITEM FOOTNOTES

- 101-1 COST TO INCLUDE HYDRO BLASTING ALL CONFLICTING STRIPING
- 285-706 THE COST OF THE PRIME COAT SHALL BE INCLUDE IN THE PRICE OF THE BASE
- 334-1-1-13X THE COST OF THE TACK COAT SHALL BE INCLUDED IN THE PRICE OF THE ASPHALT
- 570-1-2X COST TO INCLUDE, SOD, FERTILIZER, MOWING, WATERING AND ALL INCIDENTAL ITEMS NECESSARY
- 590-1 COST TO INCLUDE, BUT NOT LIMITED TO, PVC CONDUIT, PVC SLEEVES, IRRIGATION HEADS, VALVE BOXES, FLEX PIPE, FITTINGS, PUMP, CONTROLLER, POWER SUPPLY, ETC. AND ALL ITEMS NECESSARY TO PROVIDE A FULLY FUNCTIONAL IRRIGATION SYSTEM.
- 700-00-AA COST TO INCLUDE BUT NOT LIMITED TO CONCRETE, STEEL, STUCCO, CORRAL VENEER PAINT, LETTERING, ACRYLIC LOGO SIGNAGE, CAPS, BUILDING PERMIT FEES AND ALL APPURTENANCES
- 711-XX-XXX COST TO INCLUDE TEMPORARY PAINT STRIPING

REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION
2/20/18	EJK	1. PER KHA CLARIFICATION			

Kimley»Horn
 BRIAN A. GOOD, P.E.
 P.E. LICENSE NUMBER 56939
 445 24th STREET, SUITE 200
 VERO BEACH, FL 32960
 (772) 794-4100
 CERTIFICATE OF AUTHORIZATION: 00000696

CITY OF FORT PIERCE
OHIO AVENUE
ROADWAY IMPROVEMENTS

SUMMARY OF PAY ITEMS

SHEET NO.
2

GENERAL NOTES

1. ALL CONSTRUCTION AND MATERIALS SHALL CONFORM TO APPLICABLE STANDARDS AND SPECIFICATIONS OF THE CITY OF FORT PIERCE, FLORIDA STANDARD CONTRACT DOCUMENTS AND SPECIFICATIONS FOR PUBLIC WORK PROJECTS, LATEST ISSUE.

2. CONSTRUCTION DETAILS SHALL BE IN ACCORDANCE WITH STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION ROADWAY AND TRAFFIC DESIGN STANDARDS FY 2017-2018, LATEST ISSUE.

3. THE INFORMATION PROVIDED IN THESE DRAWINGS IS SOLELY TO ASSIST THE CONTRACTOR IN ASSESSING THE NATURE AND EXTENT OF CONDITIONS WHICH WILL BE ENCOUNTERED DURING THE COURSE OF WORK. THE CONTRACTORS ARE DIRECTED, PRIOR TO BIDDING, TO CONDUCT WHATEVER INVESTIGATIONS THEY DEEM NECESSARY TO ARRIVE AT THEIR OWN CONCLUSION REGARDING THE ACTUAL CONDITIONS THAT WILL BE ENCOUNTERED, AND UPON WHICH BIDS WILL BE BASED.

4. LOCATIONS, ELEVATIONS AND DIMENSIONS OF EXISTING UTILITIES AND OTHER FEATURES ARE SHOWN ACCORDING TO THE BEST INFORMATION AVAILABLE AT THE TIME OF THE PREPARATION OF THESE PLANS. THE CONTRACTOR SHALL VERIFY THE LOCATIONS, ELEVATIONS, AND OTHER FEATURES AFFECTING HIS/HER WORK PRIOR TO CONSTRUCTION, AND NOTIFY THE CITY OF FORT PIERCE, ENGINEERING DEPARTMENT IMMEDIATELY WHEN CONFLICT BETWEEN DRAWINGS AND ACTUAL CONDITIONS ARE DISCOVERED. THE CONTRACTOR SHALL WORK AS NEEDED TO AVOID CONFLICT WITH EXISTING UTILITIES (NO ADDITIONAL COST SHALL BE PAID FOR THIS WORK). EXISTING UTILITIES SHALL BE MAINTAINED IN SERVICE DURING CONSTRUCTION UNLESS OTHERWISE APPROVED BY THE UTILITY OWNER.

PRE-TRENCHING IN THE ALIGNMENT AND GRADE OF PROPOSED PIPES, STRUCTURES, CONDUITS AND/OR SUB-GRADE SHALL BE PERFORMED FOURTEEN DAYS IN ADVANCE OF ITS CONSTRUCTION. THE CONTRACTOR SHALL PROVIDE UNDERGROUND UTILITY OWNERS AND THE CITY WITH A FOURTEEN DAY ADVANCE NOTICE OF ANY CONFLICT WITH PROPOSED CONSTRUCTION. PAYMENT FOR PRE-TRENCHING, SURVEY, AND BACKFILLING SHALL BE INCLUDED IN THE UNIT COST OF THE RELATED BID ITEM FOR WORK BEING DONE.

5. THE CONTRACTOR SHALL COORDINATE WITH UTILITIES TO ARRANGE RELOCATION AND TEMPORARY SUPPORT OF UTILITY FEATURES, ETC. AS NECESSARY TO COMPLETE THE WORK.

6. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO LOCATE AND PROTECT ANY AND ALL EXISTING UTILITIES ON THIS PROJECT. THE CONTRACTOR WILL RECEIVE NO DIRECT PAYMENT TO SUPPORT AND/OR PROTECT ANY AND ALL UTILITIES. PAYMENT FOR THIS WORK SHALL BE INCLUDED IN THE UNIT COST OF THE RELATED BID ITEM FOR WORK BEING DONE.

7. THE CONTRACTOR SHALL GIVE AT LEAST 48 HOURS NOTICE TO UTILITY COMPANIES TO PROVIDE FOR THE LOCATION OF EXISTING UNDERGROUND UTILITIES IN ADVANCE OF CONSTRUCTION. CONTACT UTILITIES NOTIFICATION CENTER AT 1-800-432-4770.

8. THE CONTRACTOR IS REQUIRED TO OBTAIN ALL APPLICABLE CONSTRUCTION PERMITS PRIOR TO START OF CONSTRUCTION.

9. THE CONTRACTOR SHALL NOTIFY THE CITY OF FORT PIERCE, ENGINEERING DEPARTMENT AND CITY'S FIELD REPRESENTATIVE, AT LEAST 48 HOURS PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL NOTIFY FDOT DISTRICT 4, AT LEAST 48 HOURS PRIOR TO CONSTRUCTION WITHIN FDOT RIGHT-OF-WAY, FDOT CONTACT: MR. DANIEL HIDEN, 3601 OLEANDER AVENUE, FORT PIERCE, FL 34982, 772-465-7396.

10. THE CONTRACTOR SHALL CONTACT THE CITY OF FORT PIERCE, ENGINEERING DEPARTMENT AND CITY'S FIELD REPRESENTATIVE IMMEDIATELY OF ANY CONFLICT ARISING DURING CONSTRUCTION OF ANY IMPROVEMENTS SHOWN ON THESE DRAWINGS.

11. B.M. DATA IS NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD 88).

ANY NAVD 88 MONUMENT WITHIN THE LIMITS OF CONSTRUCTION IS TO BE PROTECTED. IF IN DANGER OF BEING DAMAGED, NOTIFY:
 GEODETIC INFORMATION CENTER
 ATTN: MARK MAINTENANCE SECTION N/CG-162
 6001 EXECUTIVE BLVD.
 ROCKVILLE MARYLAND 20852

12. EXISTING SECTION CORNERS AND 1/4 SECTION CORNERS, AND OTHER LAND MARKERS OR MONUMENTS LOCATED WITHIN PROPOSED CONSTRUCTION ARE TO BE REFERENCED BY THE CONTRACTOR PRIOR TO CONSTRUCTION AND RESET AFTER CONSTRUCTION USING REGISTERED LAND SURVEYOR LICENSED IN THE STATE OF FLORIDA.

13. STORM SEWER PIPE LENGTHS SHOWN ARE APPROXIMATE, AND MAY BE ADJUSTED AS REQUIRED UPON APPROVAL BY THE CITY OF FORT PIERCE, ENGINEERING DEPARTMENT.

14. INSTALLATION OF ALL STORM SEWERS, INLETS, MANHOLES AND APPURTENANCES SHALL BE IN ACCORDANCE WITH THE REQUIREMENTS OF THE CITY OF FORT PIERCE, ENGINEERING DEPARTMENT AND FDOT DESIGN STANDARDS AS INDICATED ON THE DRAWINGS. ALL REINFORCED CONCRETE PIPE SHALL BE CLASS III PIPE.

15. ALL CATCH BASINS AND PIPE INVERTS SHALL BE AS INDICATED ON THE DRAWINGS.

16. CONTRACTOR SHALL ADJUST ALL UTILITY LIDS AND COVERS TO FINISHED GRADE AS REQUIRED.

17. ALL COMPLETED DRAINAGE STRUCTURES SHALL BE PROTECTED FROM CONTAMINATION BY SILT AND CONSTRUCTION DEBRIS. THE CONTRACTOR SHALL PLACE PLYWOOD ON, OR FILTER FABRIC BETWEEN FRAME AND INLET GRATE UNTIL CONSTRUCTION OPERATIONS ARE COMPLETED. ALL DRAINAGE STRUCTURES (EXISTING AND PROPOSED) WITHIN PROJECT LIMITS SHALL BE CLEANED PRIOR TO FINAL ACCEPTANCE. PAYMENT FOR THIS WORK SHALL BE INCLUDED IN THE UNIT COST OF THE RELATED BID ITEM FOR WORK BEING DONE.

18. CONTRACTOR TO COORDINATE WITH FDOT DISTRICT 4 CONSTRUCTION ENVIRONMENTAL COORDINATOR FOR LOCATION OF STAGING AND STOCKPILING AREAS.

19. THE CONTRACTOR SHALL REPLACE ALL PAVING, STABILIZING EARTH, DRIVEWAYS SIDEWALKS, ETC. WITH THE SAME TYPE OF MATERIAL THAT WAS REMOVED DURING CONSTRUCTION OR AS DIRECTED BY THE CITY OF FORT PIERCE FIELD ENGINEER OR FDOT FIELD REPRESENTATIVE.

20. THE CONTRACTOR SHALL NOT ENCROACH INTO PRIVATE PROPERTY WITH PERSONNEL, MATERIAL OR EQUIPMENT WITHOUT WRITTEN PERMISSION FROM THE PROPERTY OWNER.

21. THE CONTRACTOR SHALL BE RESPONSIBLE FOR DAMAGE, REMOVAL OR MODIFICATION, ACCIDENTALLY OR PURPOSELY, CAUSED TO ANY IRRIGATION SYSTEMS, PRIVATE OR PUBLIC. THE CONTRACTOR SHALL REPLACE ANY DAMAGED, REMOVED, OR MODIFIED IRRIGATION PIPES, SPRINKLER HEADS OR OTHER PERTINENT APPURTENANCES AT NO ADDITIONAL COST.

22. REGARDING MAIL BOXES, WALLS, FENCES, SECURITY GATE TRACKING, OR OTHER PRIVATE PROPERTY OR IMPROVEMENTS THAT SHALL BE TEMPORARILY RELOCATED AND REPLACED, THE CONTRACTOR SHALL COORDINATE WITH THE APPROPRIATE OWNER. ANY AND ALL COSTS ASSOCIATED WITH COORDINATING, REMOVING, AND REPLACING ANY PROPERTY ITEMS SHALL BE INCLUDED IN THE UNIT COST OF THE RELATED BID ITEM FOR WORK BEING DONE.

23. CONTRACTOR SHALL PROVIDE MAINTENANCE OF TRAFFIC IN ACCORDANCE WITH FDOT INDEX 600 SERIES, MUTCD AND THESE PLANS. THE CONTRACTOR SHALL MAINTAIN AT ALL TIMES VEHICULAR AND PEDESTRIAN ACCESS TO ALL RESIDENCES AND/OR BUSINESS. CONTRACTOR SHALL PROVIDE A PEDESTRIAN DETOUR PLAN UTILIZING VIRGINIA AVENUE AND PARKWAY DRIVE AS ALTERNATE ROUTES.

24. NO TREES ARE TO BE REMOVED OR RELOCATED WITHOUT PRIOR APPROVAL FROM THE CITY OF FORT PIERCE FIELD ENGINEER (CITY PERMIT REQUIRED FOR ANY TREE REMOVAL).

25. COMPLETE 'AS-BUILT' INFORMATION RELATIVE TO LOCATION, SIZE AND DEPTH OF NEW PIPES, MANHOLES, INLETS, ETC., SHALL BE ACCURATELY RECORDED BY THE CONTRACTOR AND SUBMITTED (SIGNED AND SEALED BY A FLORIDA CERTIFIED P.L.S.) TO THE CITY OF FORT PIERCE, ENGINEERING DEPARTMENT PRIOR TO FINAL ACCEPTANCE OF THE WORK. ALL RECORD INFORMATION ON EXISTING UTILITY CROSSINGS ENCOUNTERED DURING CONSTRUCTION, INCLUDING BUT NOT LIMITED TO PIPES, INLETS, MANHOLE, ETC., SHALL BE RECORDED BY A FLORIDA REGISTERED SURVEYOR AND SHOWN ON THE RECORD DRAWINGS. THE COST OF SIGNED AND SEALED AS-BUILTS (5 COPIES) SHALL BE INCLUDED IN OVERALL BID AND NO ADDITIONAL COMPENSATION WILL BE ALLOWED.

26. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING THE INTEGRITY OF AND MAKING THE REPAIRS OF EXISTING PAVEMENT, SIDEWALKS, PIPES, CONDUITS, CURBS, CABLES, ETC., WHETHER OR NOT SHOWN ON THE PLANS DAMAGED AS A RESULT OF THE CONTRACTORS OPERATIONS AND/OR THOSE OF HIS SUBCONTRACTORS, AND SHALL RESTORE THEM PROMPTLY AT NO ADDITIONAL EXPENSE TO THE OWNER OR THE CITY OF FORT PIERCE OR FDOT. CONTRACTOR SHALL REPORT ANY DAMAGE TO SIDEWALK, DRIVEWAY, ETC., TO THE ENGINEER OF RECORD PRIOR TO BEGINNING WORK IN ANY AREA.

27. ALL DRAINAGE PIPES SHALL BE APPROVED BY CITY OF FORT PIERCE ENGINEERING DEPARTMENT. THE CONTRACTOR SHALL CONSTRUCT A FILTER FABRIC JACKET AT ALL PROPOSED STORM SEWER JOINTS AS PER FDOT STANDARDS. COST OF FILTER FABRIC JACKET SHALL BE INCLUDED IN UNIT PIPE COSTS.

28. EXISTING DRAINAGE STRUCTURES IN CONFLICT WITH PROPOSED DRAINAGE STRUCTURES SHALL BE REMOVED UNLESS OTHERWISE NOTED. ALL OTHER EXISTING DRAINAGE STRUCTURES WITHIN CONSTRUCTION LIMITS SHALL BE REMOVED UNLESS OTHERWISE NOTED. REMOVAL OF EXISTING DRAINAGE STRUCTURE IS TO INCLUDE ASSOCIATED PIPING TO DOWNSTREAM STRUCTURE OR TO TIE IN WITHIN PROPOSED STORM SEWER PIPING.

29. NO EXISTING BASE MATERIAL REMOVED IN EXCAVATION SHALL BE REUSED AS PROPOSED BASE MATERIAL.

30. STAGING AND MATERIAL STORAGE SHALL NOT BE CONDUCTED ON ABUTTING PRIVATE PROPERTY WITHOUT WRITTEN APPROVAL FROM THE OWNER. STAGING AND STORAGE SHALL BE CONDUCTED WITHIN PUBLIC R/W AND/OR CONSTRUCTION EASEMENTS (ACCESS LICENSE AGREEMENTS).

31. THE CONTRACTOR SHALL REFER TO THE LANDSCAPE PLAN TO DETERMINE IMPACTS TO EXISTING TREES AND VEGETATION. ALL TREES AND VEGETATION DESIGNATED TO REMAIN SHALL BE PROTECTED BY THE CONTRACTOR AT NO ADDITIONAL EXPENSE TO THE OWNER OR THE CITY.

32. PROPOSED DRAINAGE STRUCTURES HAVE BEEN SIZED BASED UPON THE AVAILABLE UTILITY INFORMATION. THE CONTRACTOR SHALL VERIFY THAT PROPOSED DIMENSIONS WILL ACCOMMODATE THE EXISTING AND PROPOSED STORM SEWER CONFIGURATION PRIOR TO SUBMITTING SHOP DRAWINGS. DRAINAGE CONNECTIONS TO EXISTING STRUCTURES SHALL BE CORE DRILLED AT THE SPECIFIED INVERT.

33. EXISTING UTILITY CONTACT INFORMATION:

UTILITY COMPANY	CONTACT	PHONE NUMBER	EMAIL
AT&T	MARK GUTIERREZ	772-460-4443	MARK.GUTIERREZ@ATT.COM
FPUA WATER & WASTEWATER	JAMES CARNES	772-466-1600X3472	JCARNES@FPUA.COM
FPUA GAS & ELECTRIC	JASON MITTLER	772-466-1600X630	JMITTLER@FPUA.COM
FORT PIERCE UTILITY AUTHORITY	VALERIE SCHULTE	772-466-1600	VSCHULTE@FPUA.COM
FP&L	ROB MORRIS	772-223-4215	ROB.MORRIS@FPL.COM

33. EROSION CONTROL MEASURES SHALL BE TAKEN BY CONTRACTOR DURING CONSTRUCTION AS PER FDOT STANDARDS:

- A. SILT FENCE SHALL BE INSTALLED ALONG THE ENTIRE PERIMETER OF THE PROJECT ADJACENT TO ANY SOIL DISTURBING ACTIVITIES.
- B. ALL DRAINAGE STRUCTURES ARE TO BE PROTECTED DURING CONSTRUCTION PER FDOT STANDARDS.
- C. ALL FENCING, GRADING, SIGNING AND SODDING SHALL BE MAINTAINED DURING THE CONTRACT LIFE. ALL DAMAGED WORK SHALL BE RESTORED AT NO COST TO THE CITY NOR FDOT.

34. DETECTABLE WARNING SURFACES WITHIN THE U.S. HIGHWAY RIGHT-OF-WAY SHALL CONSIST OF CAST-IN-PLACE COMPOSITE TACTILE UNITS MANUFACTURED BY ADA SOLUTIONS, INC (800-372-0519), OR APPROVED EQUAL. WARNING SURFACES SHALL EXTEND TWO FEET FROM BACK OF CURB AND SPAN RAMP RUN WIDTH. WARNING SURFACE COLOR SHALL BE "BRICK RED".

35. DETECTABLE WARNING SURFACES WITHIN THE CITY OF FORT PIERCE RIGHT-OF-WAY SHALL CONSIST OF A.D.A. TRUNCATED DOME CONCRETE PAVING UNITS (4"x8"x2-3/8") CONSTRUCTED ON CONCRETE SUB-SLAB USING EPOXY GROUT. WARNING SURFACES SHALL EXTEND TWO FEET FROM BACK OF CURB AND SPAN RAMP RUN WIDTH. WARNING SURFACE COLOR SHALL BE "BRICK RED".

36. NON-STRUCTURAL CONCRETE UTILIZED IN CURB AND GUTTER, SIDEWALK AND URBAN FLARED TURNOUT CONSTRUCTION SHALL CONSIST OF 3000 PSI FIBER REINFORCED MIX.

37. SELECT CLEARING AND GRUBBING AREAS ARE DESIGNATED AREAS THAT THE CONTRACTOR SHALL DETERMINE IF CLEARING AND GRUBBING IS NEEDED BUT NOT LIMITED TO GRADING. IF NEEDED, THE CONTRACTOR SHALL BE RESPONSIBLE FOR REMOVING, RESETTING, OR REPLACING LIKE VEGETATION TO EQUAL OR BETTER CONDITION, ALL EXISTING SIDEWALK FALLING IN THIS AREA SHALL BE REMOVED AS SHOWN IN THE PLANS.

38. WORK WITHIN THE FDOT RIGHT OF WAY SHALL BE RESTRICTED TO THE HOURS OF 9:00 AM TO 3:30 PM, (MONDAY-FRIDAY), UNLESS OTHERWISE APPROVED BY THE OPERATIONS ENGINEER, OR DISGNEE.

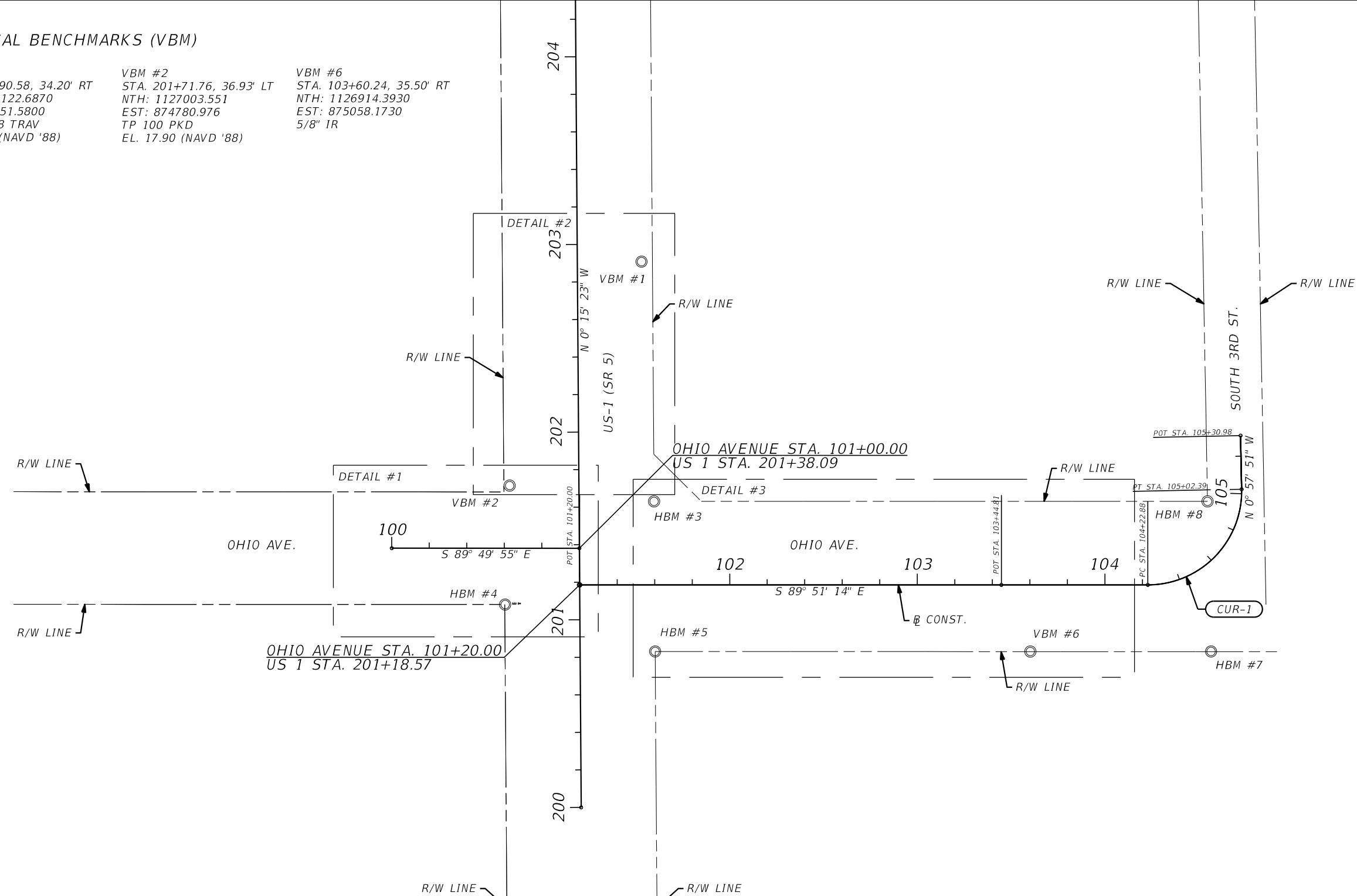
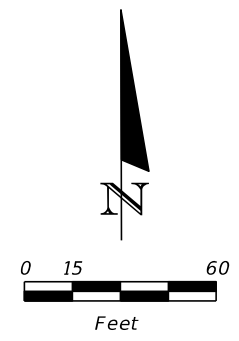
39. LANE CLOSURES ON THE STATE ROAD SYSTEM MUST BE COORDINATED WITH THE PUBLIC INFORMATION OFFICE AT LEAST TWO WEEKS PRIOR TO THE CLOSURE. THE CONTACT INFORMATION FOR THE PUBLIC INFORMATION OFFICE IS AS FOLLOWS:

BARBARA KELLEHER
 FLORIDA DEPARTMENT OF TRANSPORTATION
 PUBLIC INFORMATION OFFICE
 3400 WEST COMMERCIAL BLVD.
 FORT LAUDERDALE, FLORIDA 33309
 954-777-4090
 Barbara.Kelleher@dot.state.fl.us

REVISIONS							CITY OF FORT PIERCE OHIO AVENUE ROADWAY IMPROVEMENTS	GENERAL NOTES	SHEET NO.
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION				3
						BRIAN A. GOOD, P.E. P.E. LICENSE NUMBER 56939 445 24th STREET, SUITE 200 VERO BEACH, FL 32960 (772) 794-4100 CERTIFICATE OF AUTHORIZATION: 00000696	K:\VRB_Roadway\047922018 - Ohio Avenue Roadway Improvements\Cadd\Roadway\PLANS_ROADWAY\GNTRD01.DGN		

VERTICAL BENCHMARKS (VBM)

VBM #1 STA. 202+90.58, 34.20' RT NTH: 1127122.6870 EST: 874851.5800 PKD LB018 TRAV EL. 17.62 (NAVD '88)	VBM #2 STA. 201+71.76, 36.93' LT NTH: 1127003.551 EST: 874780.976 TP 100 PKD EL. 17.90 (NAVD '88)	VBM #6 STA. 103+60.24, 35.50' RT NTH: 1126914.3930 EST: 875058.1730 5/8" IR
--	--	---



CURVE DATA CUR-1
 PI STA. = 104+73.86
 Δ = 91° 06' 37" (LT)
 D = 114° 35' 30"
 T = 50.98
 L = 79.51
 R = 50.00
 PC STA. = 104+22.88
 PT STA. = 105+02.39

HORIZONTAL BENCHMARKS (HBM)

HBM #3 STA. 101+59.68, 44.50' LT NTH: 1126994.9230 EST: 874857.9620 5/8" IRC PRM LB 6018	HBM #4 STA. 100+60.43, 30.01' RT NTH: 1127122.6870 EST: 874851.5800 PKD LB 6018 TRAV	HBM #5 STA. 101+60.24, 35.49' RT NTH: 1126914.6050 EST: 874858.4110 5/8" IR	HBM #7 STA. 104+41.67, 41.89' RT NTH: 1126914.1850 EST: 875154.6600 PKD PSM 6330	HBM #8 STA. 104+92.88, 17.71' LT NTH: 1126914.1820 EST: 875152.9780 IRC 5/8" PRM LB 6018
--	--	---	--	--

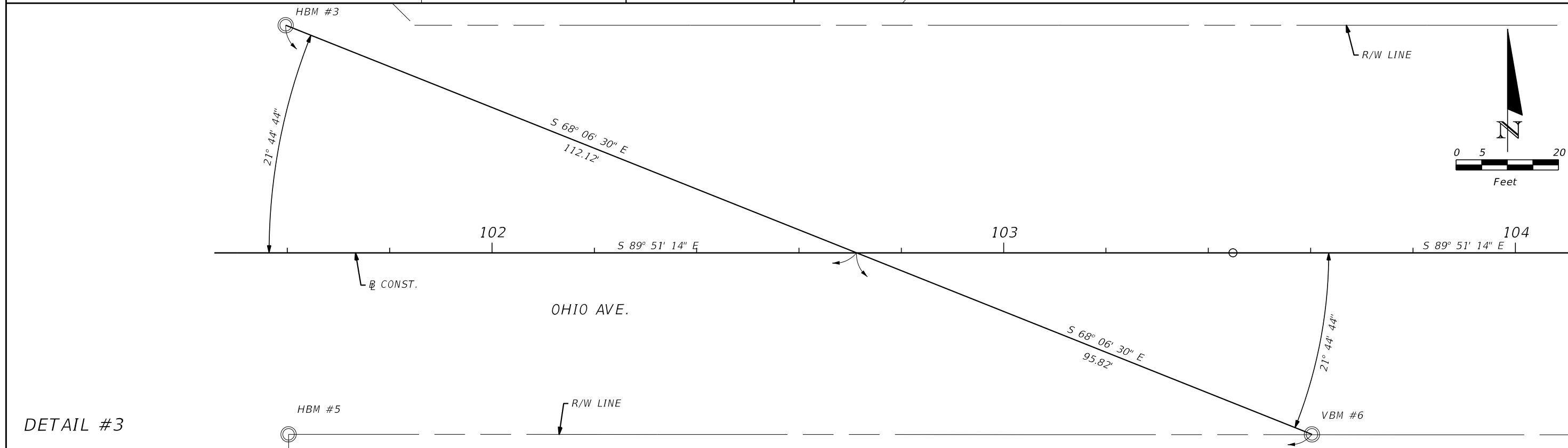
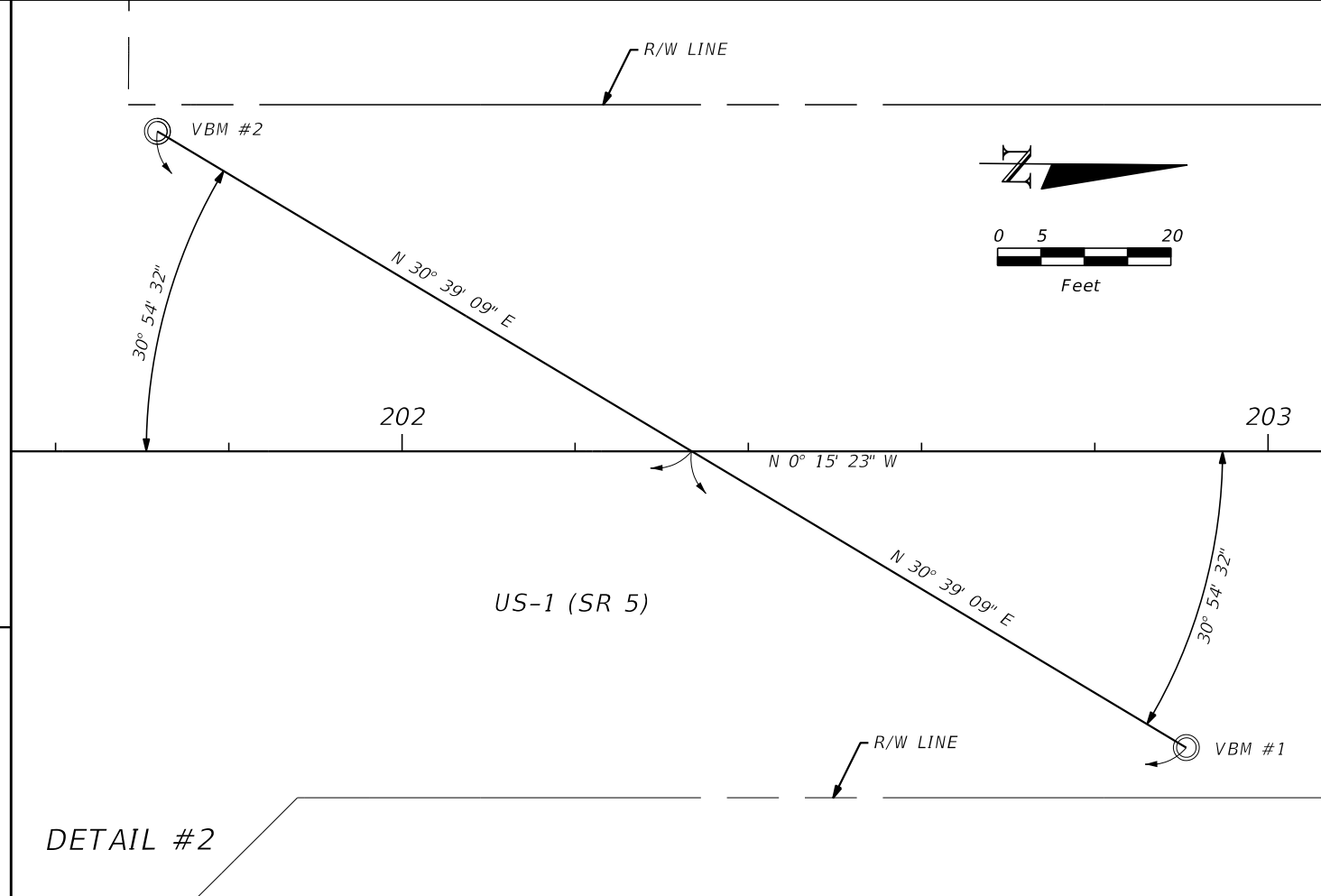
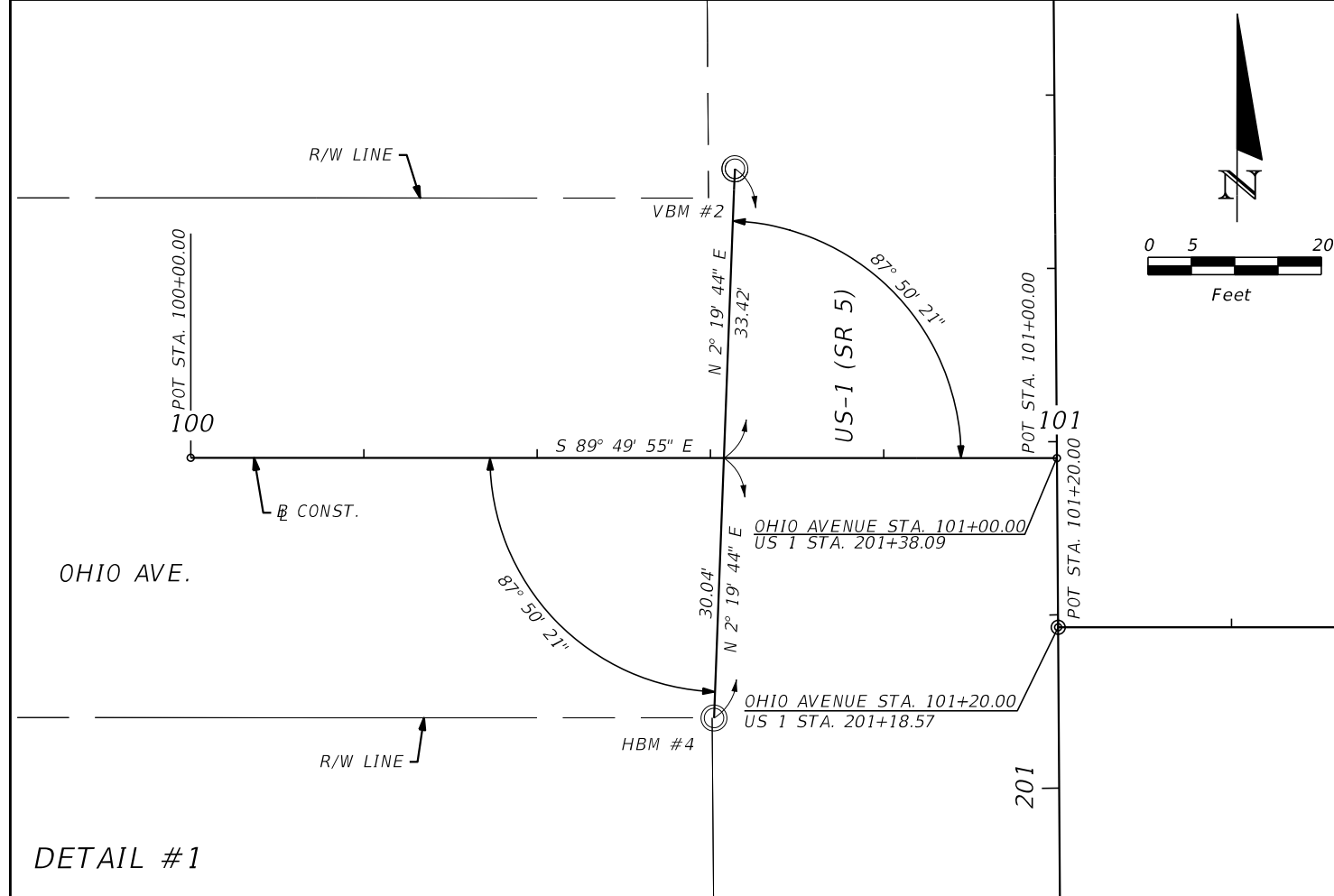
REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

Kimley Horn
 BRIAN A. GOOD, P.E.
 P.E. LICENSE NUMBER 56939
 445 24th STREET, SUITE 200
 VERO BEACH, FL 32960
 (772) 794-4100
 CERTIFICATE OF AUTHORIZATION: 00000696

CITY OF FORT PIERCE
OHIO AVENUE
ROADWAY IMPROVEMENTS

HORIZONTAL & VERTICAL
CONTROL

SHEET NO.
5



REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

Kimley»Horn

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CITY OF FORT PIERCE

OHIO AVENUE

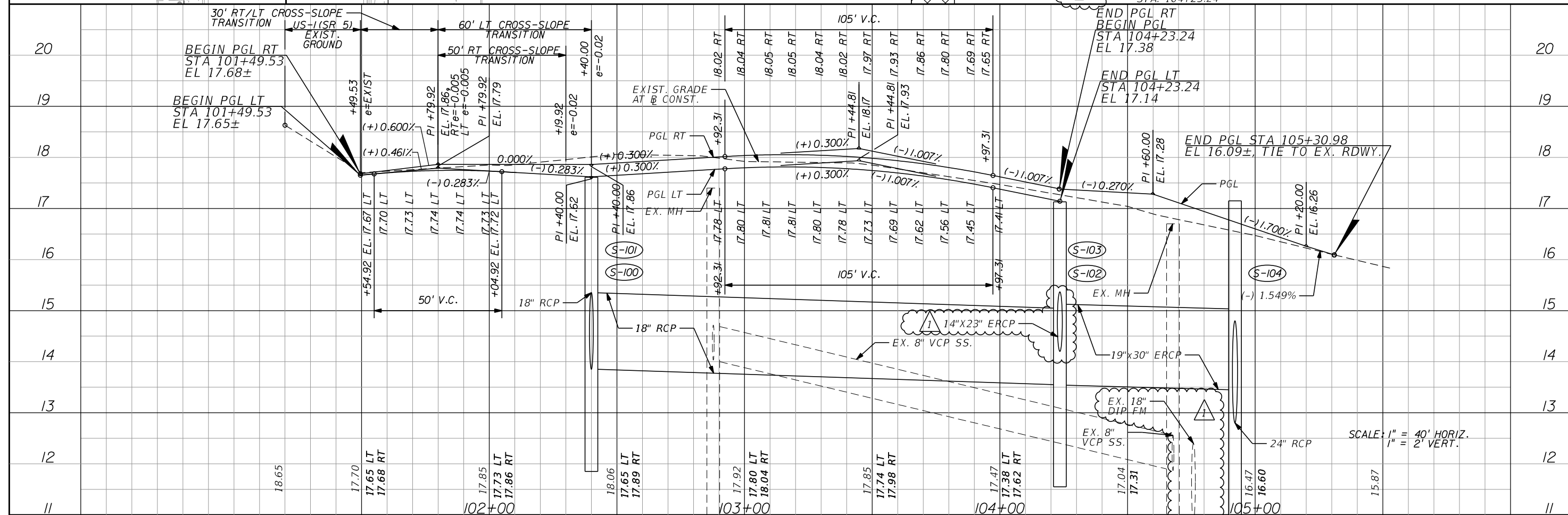
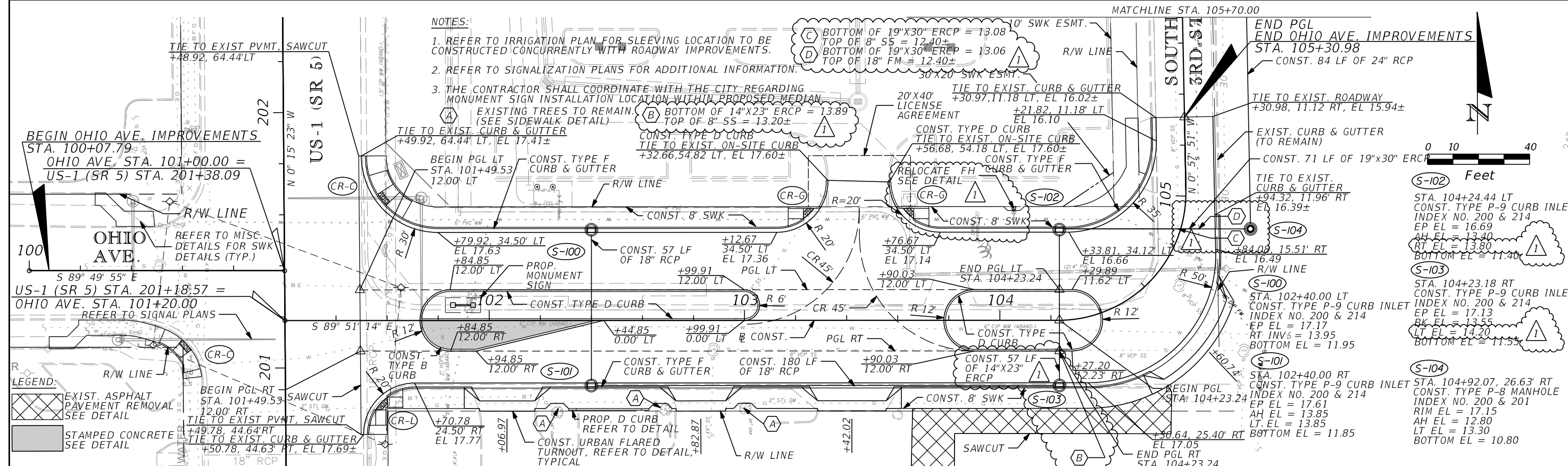
ROADWAY IMPROVEMENTS

HORIZONTAL & VERTICAL

CONTROL DETAIL

SHEET NO.

6



REVISIONS			
DATE	BY	DESCRIPTION	
2/20/18	EJK	1. PER KHA CLAIRIFICATION	

Kimley»Horn

BRIAN A. GOOD, P.E.
 P.E. LICENSE NUMBER 56939
 445 24th STREET, SUITE 200
 VERO BEACH, FL 32960
 (772) 794-4100
 CERTIFICATE OF AUTHORIZATION: 00000696

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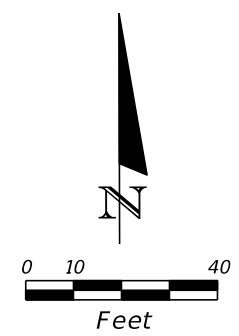
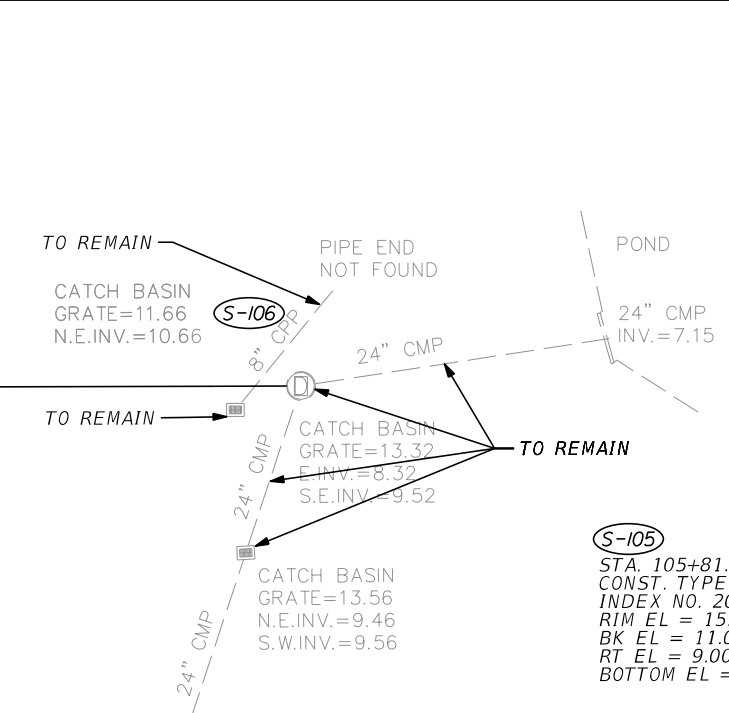
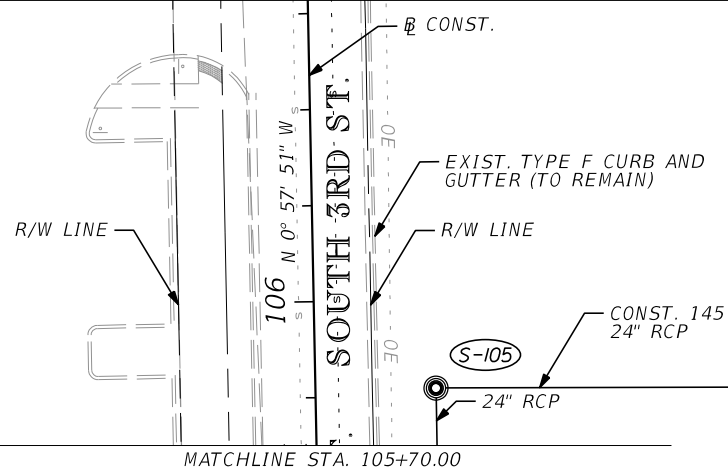
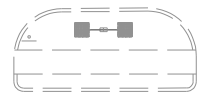
CITY OF FORT PIERCE

OHIO AVENUE

ROADWAY IMPROVEMENTS

PLAN & PROFILE

SHEET NO. 7



MATCHLINE STA. 105+70.00

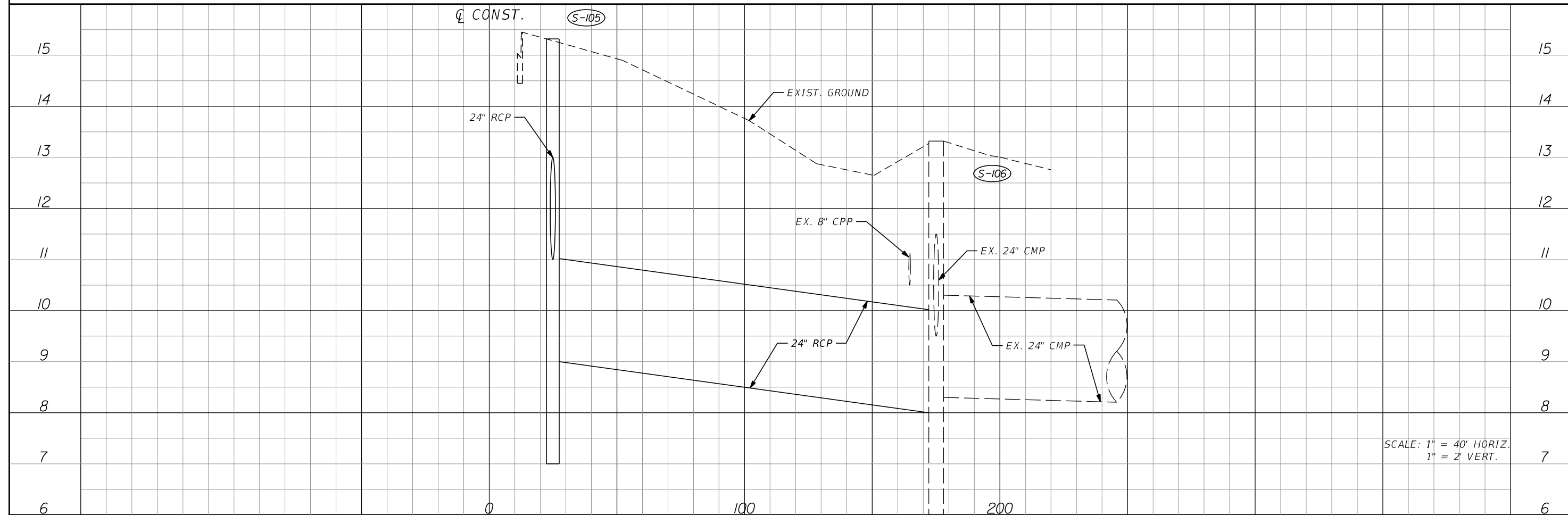
STA. 105+81.49, 25.13' RT
 CONST. TYPE P-8 MANHOLE
 INDEX NO. 200 & 201
 RIM EL = 15.35
 BK EL = 11.00
 RT EL = 9.00
 BOTTOM EL = 7.00

CATCH BASIN
 GRATE=13.32
 E.INV.=8.32
 S.E.INV.=9.52

CATCH BASIN
 GRATE=13.56
 N.E.INV.=9.46
 S.W.INV.=9.56

S-105
 STA. 105+81.49, 25.13' RT
 CONST. TYPE P-8 MANHOLE
 INDEX NO. 200 & 201
 RIM EL = 15.35
 BK EL = 11.00
 RT EL = 9.00
 BOTTOM EL = 7.00

S-106
 STA. 105+81.49, 175.16' RT
 MODIFY EXIST. STRUCTURE
 RIM EL = 13.32±
 BK EL = 9.52±
 RT EL = 8.32±
 LT EL = 8.00
 BOTTOM EL = EXIST.



SCALE: 1" = 40' HORIZ.
 1" = 2' VERT.

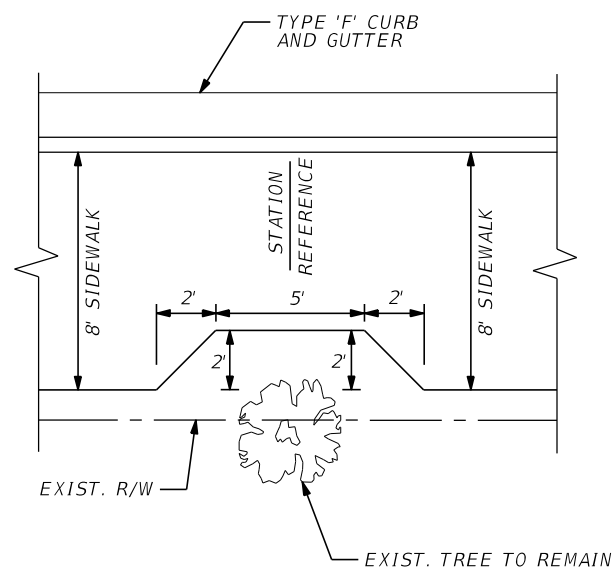
REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

Kimley»Horn
 BRIAN A. GOOD, P.E.
 P.E. LICENSE NUMBER 56939
 445 24th STREET, SUITE 200
 VERO BEACH, FL 32960
 (772) 794-4100
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 Mike.Forman 3/22/2018 7:38:16 AM

CITY OF FORT PIERCE
 OHIO AVENUE
 ROADWAY IMPROVEMENTS

PLAN & PROFILE

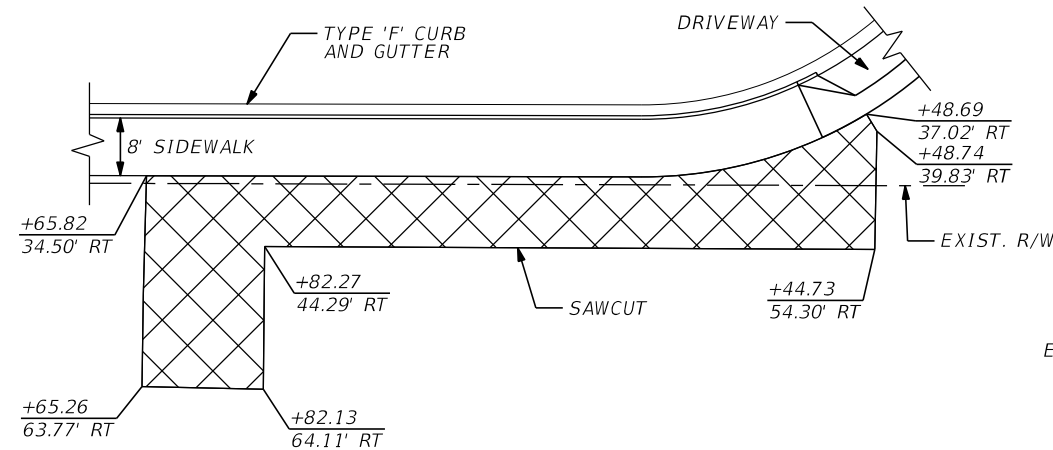
SHEET NO.
 8



NOTE:

- CENTERLINE STATION REFERENCE:

102+26.55, RT
102+67.08, RT
103+00.19, RT

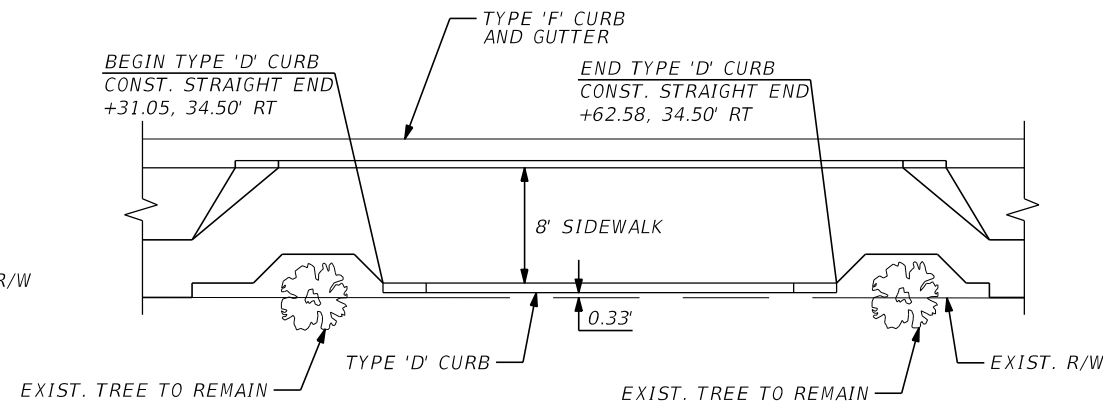


PAVEMENT REMOVAL DETAIL

NOTES:

- THE CONTRACTOR SHALL REMOVE THE EXISTING PAVEMENT TO A DEPTH OF 12" AND BACKFILL WITH TOPSOIL.

N.T.S.

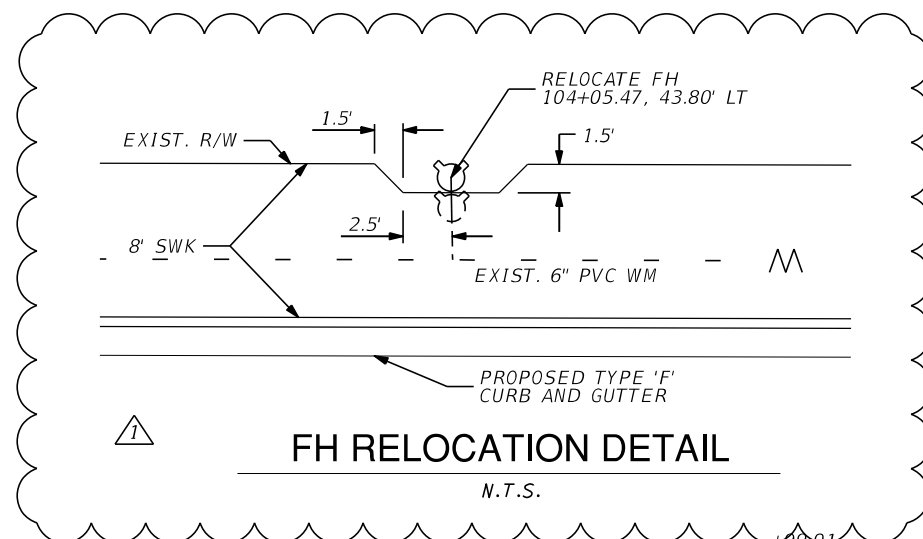


TYPE 'D' CURB LOCATION DETAIL

N.T.S.

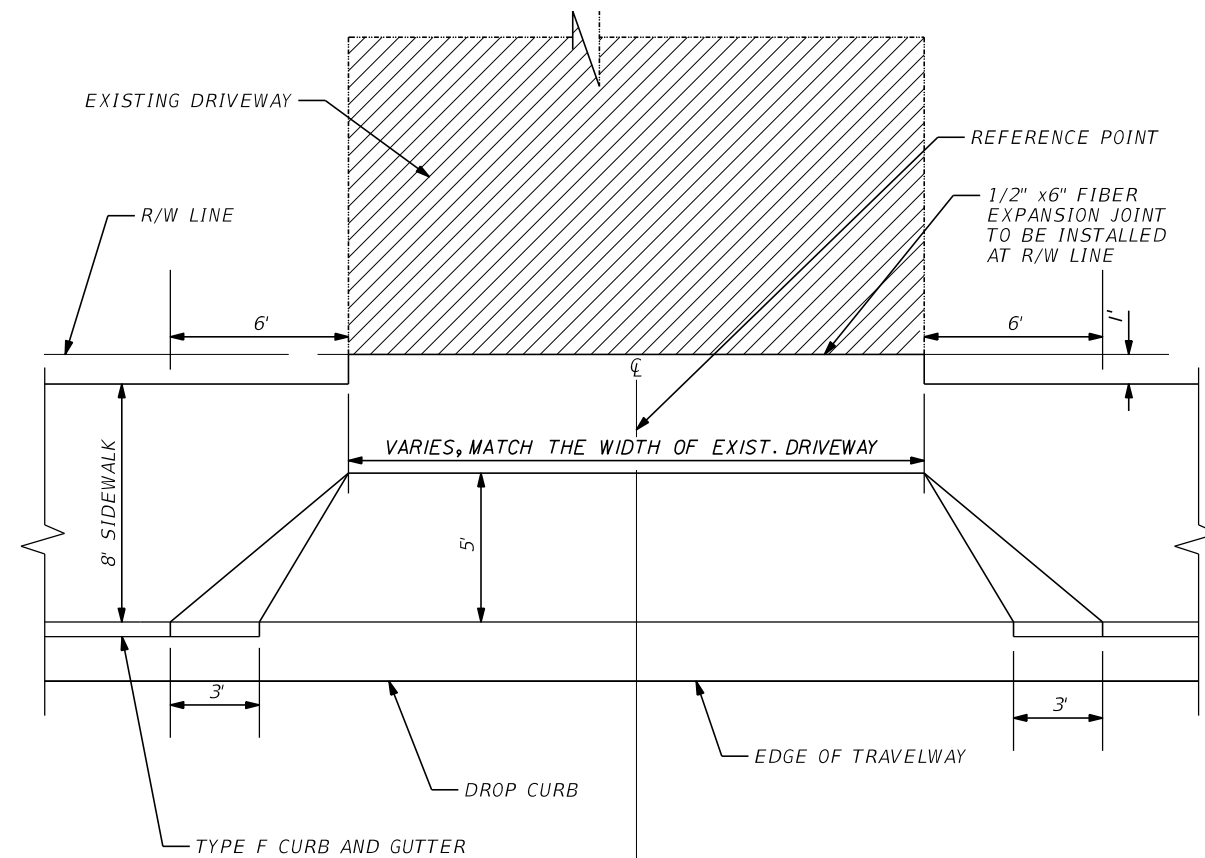
A EXIST. TREE DETAIL

N.T.S.



FH RELOCATION DETAIL

N.T.S.

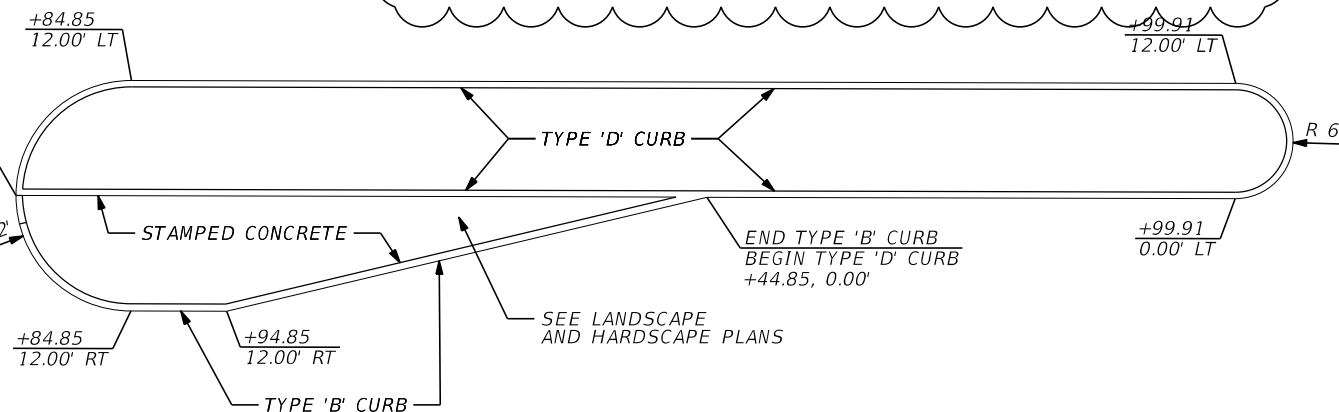


URBAN FLARED TURNOUT DETAIL

N.T.S.

NOTES:

- SURFACE SPECIFICATIONS:
A. CONCRETE DRIVEWAY EXTENDING INTO RIGHT-OF-WAY OR PUBLIC EASEMENT SHALL BE A MINIMUM OF 6" THICK, 3000 P.S.I. CONCRETE INCORPORATING A FLARE AS SHOWN IN THE PLAN VIEW. REINFORCE CONCRETE WITH FIBER MESH @ 1.0 LB/CY. SUBGRADE SHALL BE 12" SAND OR OTHER APPROVED MATERIAL COMPACTED TO 98% AASHTO T-180 MAXIMUM DENSITY.



B MEDIAN DETAIL

N.T.S.

REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION
2/20/18	EJK	1. PER KHA CLARIFICATION			

Kimley»Horn

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445 24th STREET, SUITE 200
VERO BEACH, FL 32960
(772) 794-4100
CERTIFICATE OF AUTHORIZATION: 00000696

Mike.Forman 3/22/2018 7:38:17 AM

CITY OF FORT PIERCE

OHIO AVENUE
ROADWAY IMPROVEMENTS

MISCELLANEOUS
DETAILS

SHEET
NO.

9

K:\VRB_Roadway\047922018 - Ohio Avenue Roadway Improvements\Cadd\Roadway\PLANS_ROADWAY\SPDTRD01.DGN

EXIST. R/W

EXIST. SWK TO REMAIN

TIE TO EXIST. SWK., SAWCUT

+25.81
30.47' LT

+29.95
30.44' LT

EXIST. R/W

+25.77
25.58' LT

+37.11
23.32' LT

+48.48
23.25' LT

+34.02
19.34' LT

+49.18
17.42' LT

EXIST. EOP

POT. STA. 100+00.00

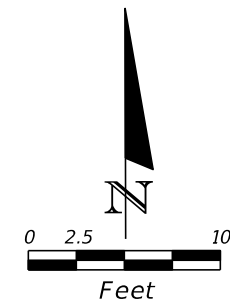
OHIO AVE. STA. 101+00.00 =
US-1 (SR 5) STA. 201+38.09

OHIO AVE.

CONST.

S 89° 49' 55" E

US-1 (SR 5)



POT. STA. 101+00.00

101

US-1

POT. STA. 101+20.00

US-1 (SR 5) STA. 201+18.57 =
OHIO AVE. STA. 101+20.00

LEGEND



REMOVE EXIST. SWK, BACKFILL AND SOD (BAHIA).

EXIST. EOP

+19.34
21.33' RT

+19.34
19.33' RT

+36.36
25.29' RT

+07.79
25.81' RT

+14.90
25.80' RT

+22.43
25.33' RT

+50.84
28.44' RT

TIE TO EXIST. SWK., SAWCUT

+07.81
30.62' RT

+17.19
30.59' RT

EXIST. R/W

+60.01
36.77' RT

+60.12
40.12' RT

+60.18
42.25' RT

+67.53
41.46' RT

EXIST. R/W

TIE TO EXIST. SWK., SAWCUT

CR-C

US-1 (SR 5)

201

REVISIONS

DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

Kimley Horn

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VERO BEACH, FL 32960
(772) 794-4100
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CITY OF FORT PIERCE

OHIO AVENUE
ROADWAY IMPROVEMENTS

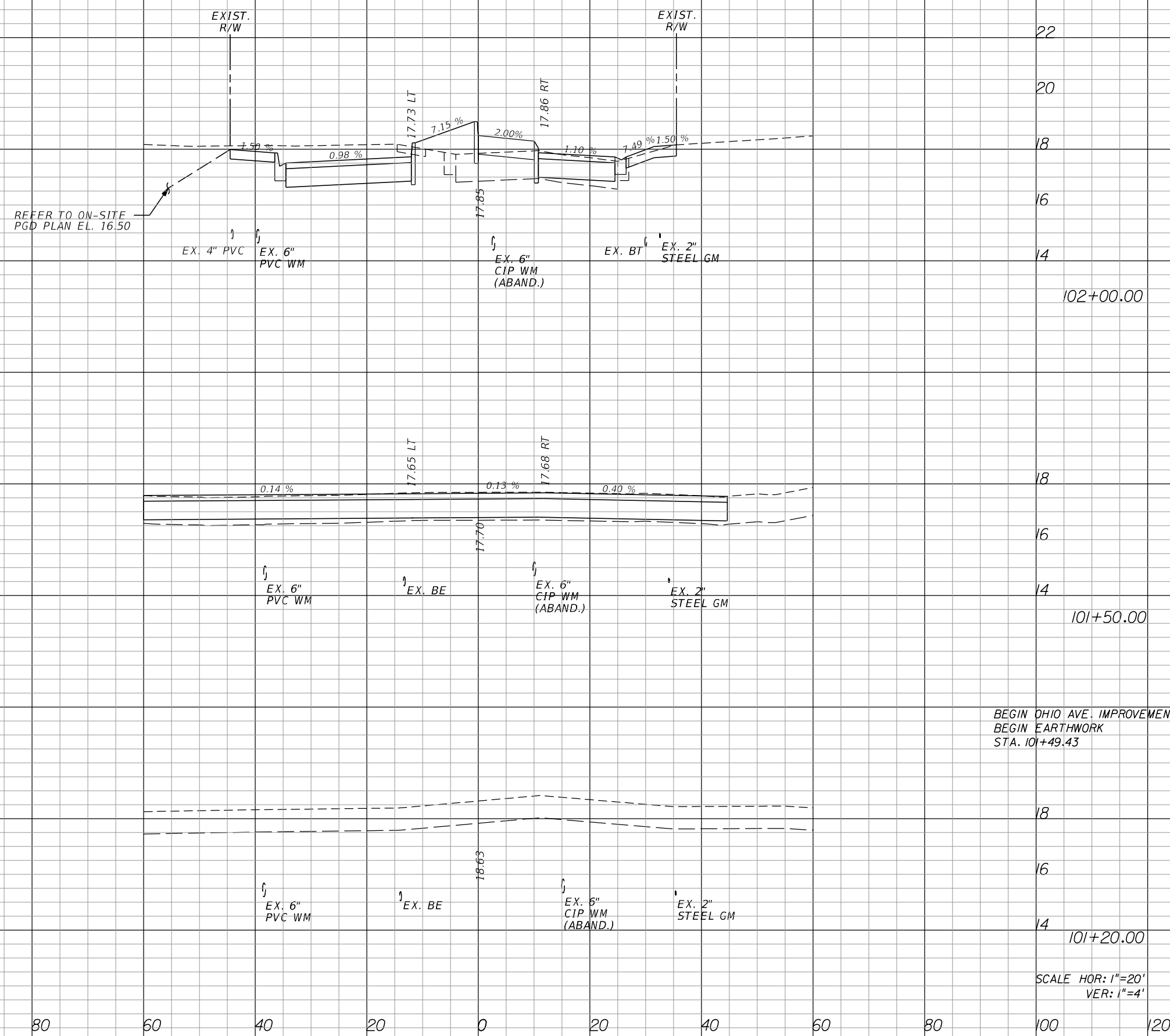
MISCELLANEOUS
DETAILS

SHEET
NO.

10

Regular Exc. Embankment

A V A V



Station	Regular Exc. A	Regular Exc. V	Embankment A	Embankment V
102+00.00	51	121	11	10
101+50.00	80	2	0	0
101+20.00	80	0	0	0

BEGIN OHIO AVE. IMPROVEMENTS
BEGIN EARTHWORK
STA. 101+49.43

SCALE HOR: 1"=20'
VER: 1"=4'

120 100 80 60 40 20 0 20 40 60 80 100 120

REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

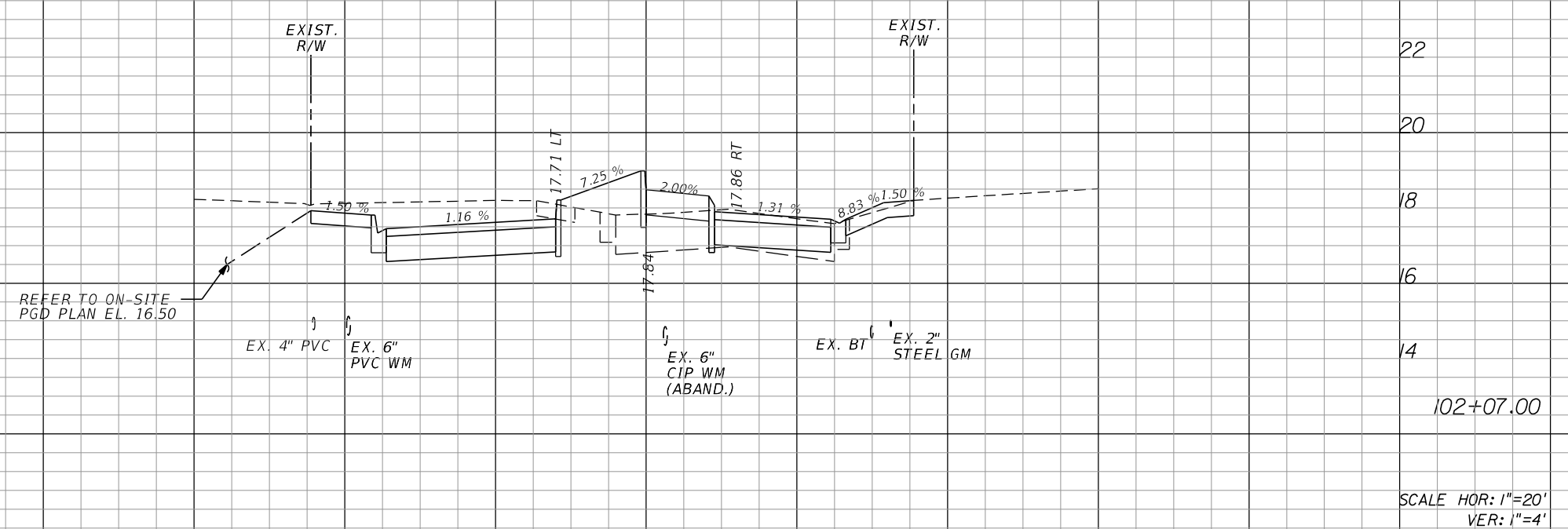
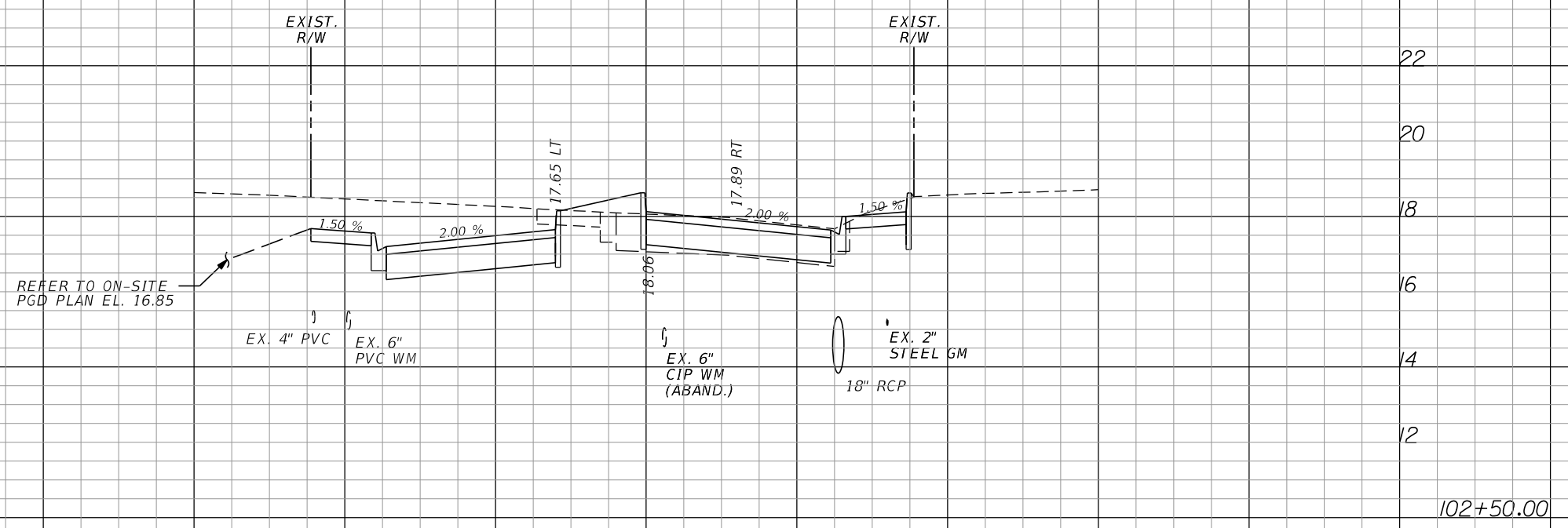
Kimley»Horn
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CITY OF FORT PIERCE
 OHIO AVENUE
 ROADWAY IMPROVEMENTS

OHIO AVENUE
 CROSS SECTIONS

SHEET NO.
 11

Regular		Exc.		Embankment	
A	V	A	V	A	V



83	III	3	10
56	14	3	10

SCALE HOR: 1"=20'
VER: 1"=4'

120 100 80 60 40 20 0 20 40 60 80 100 120

REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

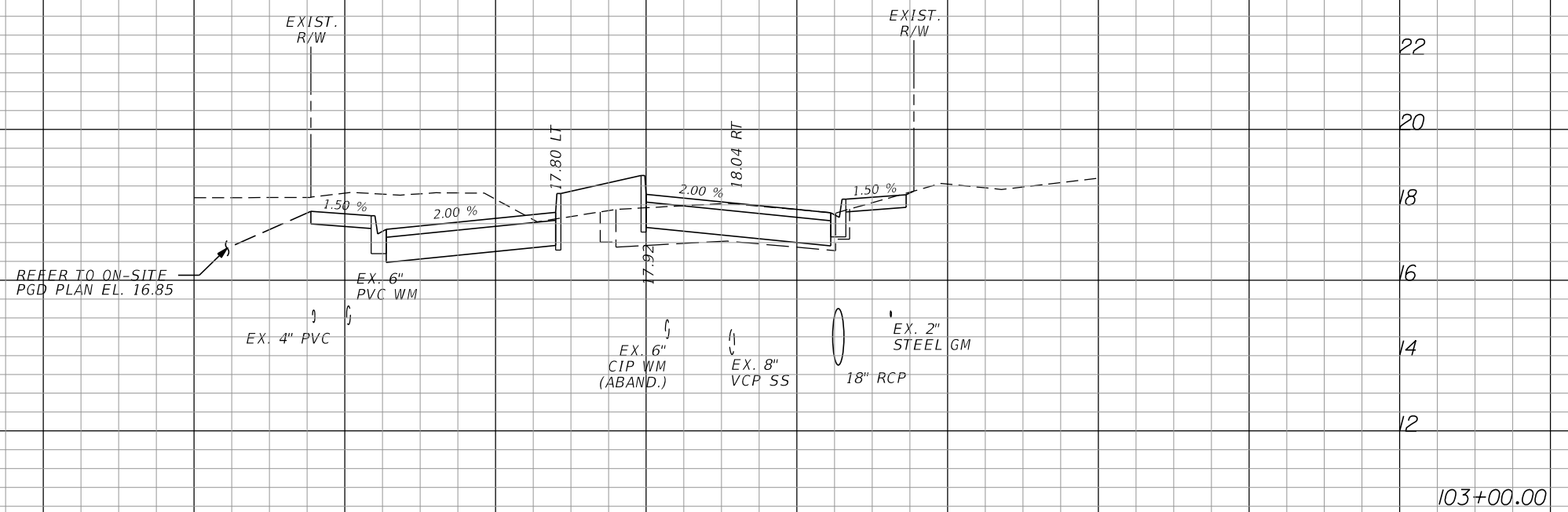
Kimley»Horn
 BRIAN A. GOOD, P.E.
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 445 24TH STREET, SUITE 200
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 Mike.Forman 3/22/2018 7:38:18 AM

CITY OF FORT PIERCE
 OHIO AVENUE
 ROADWAY IMPROVEMENTS

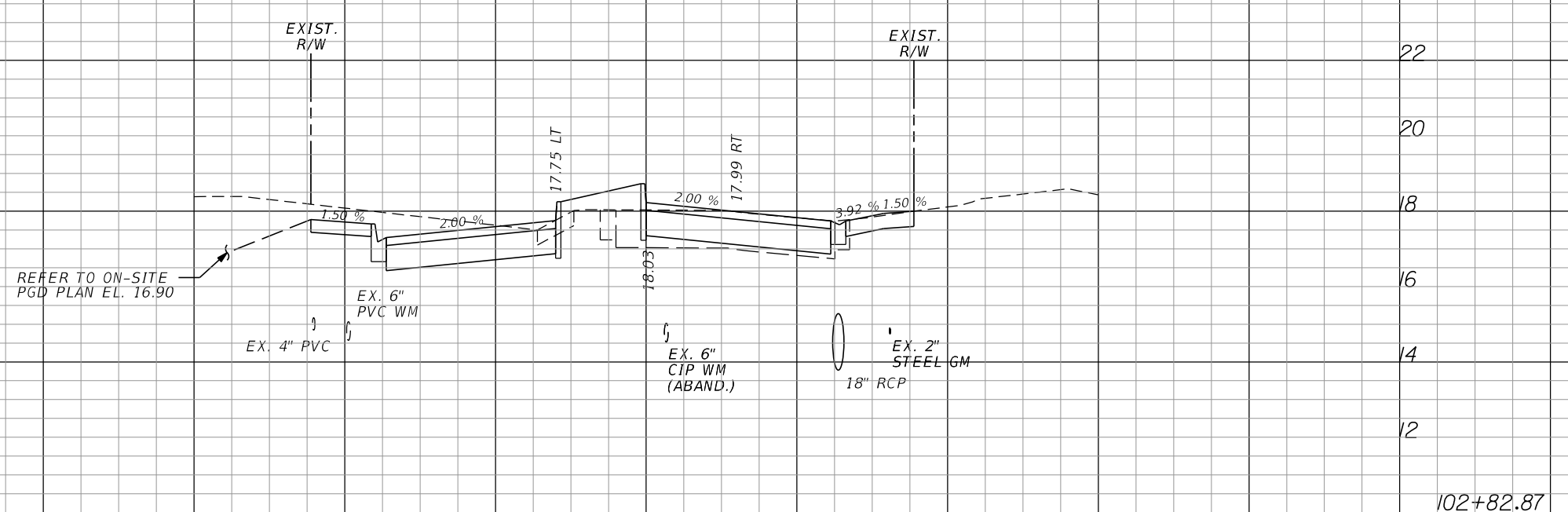
OHIO AVENUE
 CROSS SECTIONS

SHEET NO.
 12

Regular		Exc.		Embankment	
A	V	A	V	A	V



66		8	
	40		4



59		5	
	86		5

SCALE HOR: 1"=20'
VER: 1"=4'

120 100 80 60 40 20 0 20 40 60 80 100 120

REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

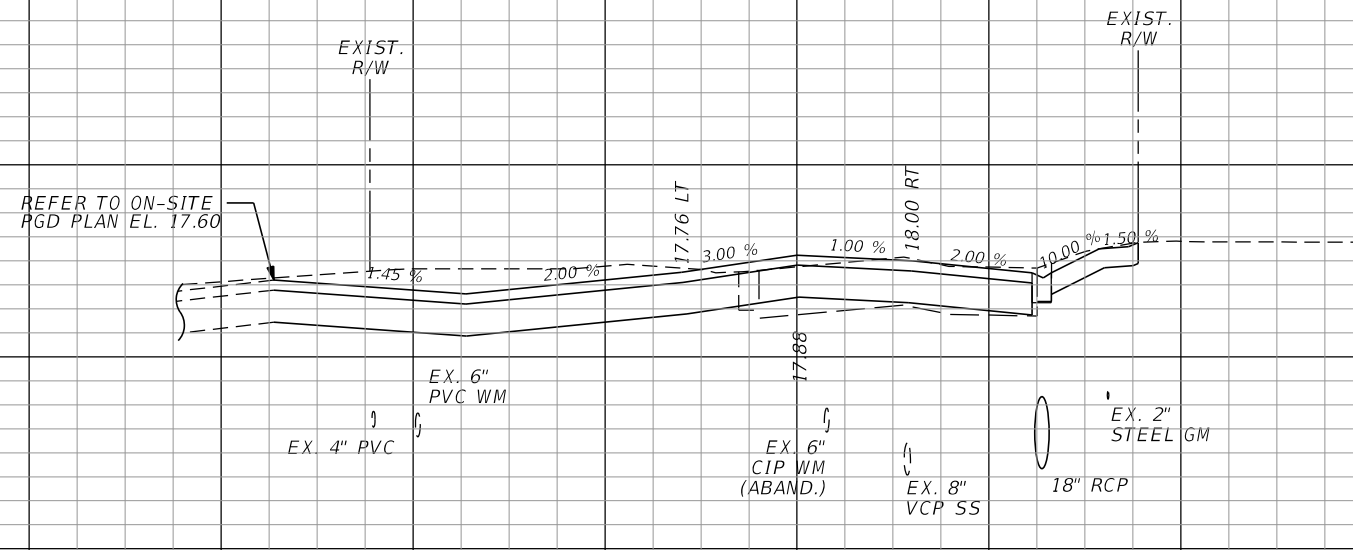
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CITY OF FORT PIERCE
OHIO AVENUE
ROADWAY IMPROVEMENTS

OHIO AVENUE
CROSS SECTIONS

SHEET NO.
13

Regular		Exc.		Embankment	
A	V	A	V	A	V



22
20
18
16
14
12

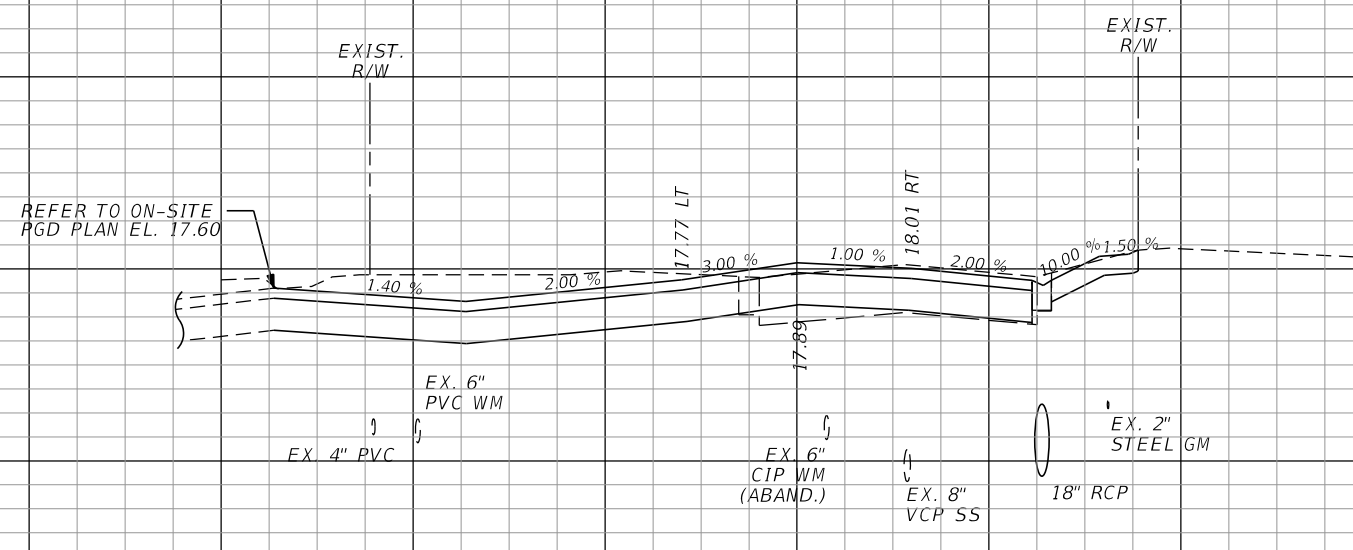
103+44.67

74

8

0

0



22
20
18
16
14
12

103+42.02

93

124

0

6

SCALE HOR: 1"=20'
VER: 1"=4'

120 100 80 60 40 20 0 20 40 60 80 100 120

REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

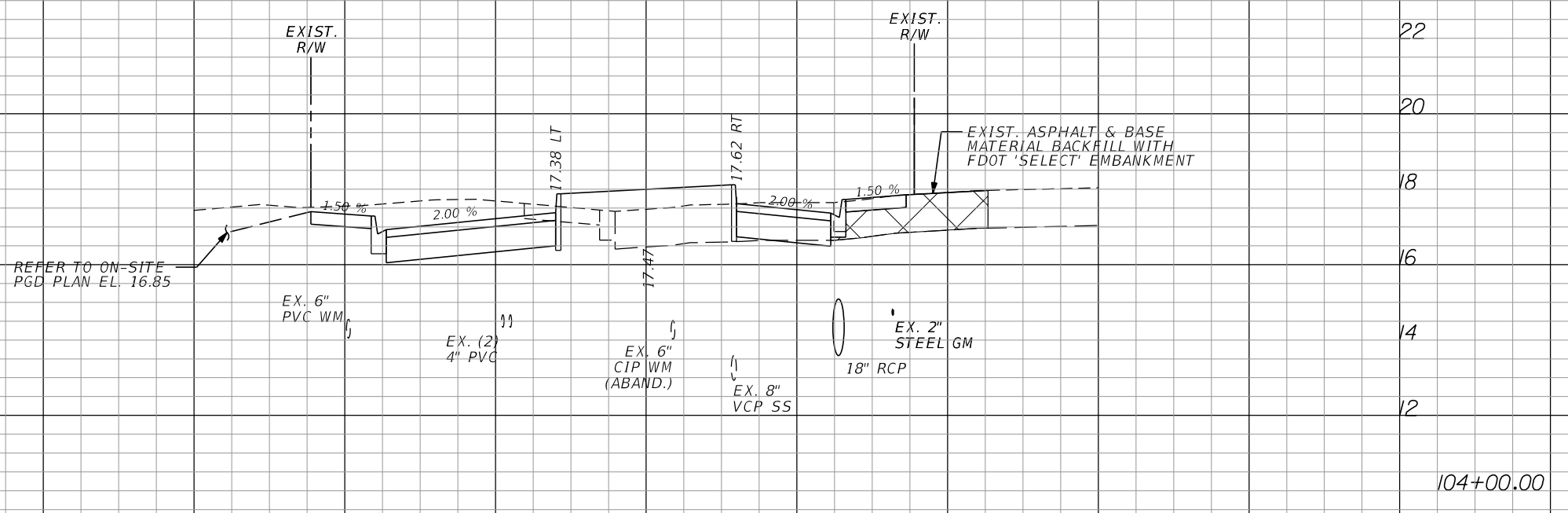
Kimley»Horn
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CITY OF FORT PIERCE
 OHIO AVENUE
 ROADWAY IMPROVEMENTS

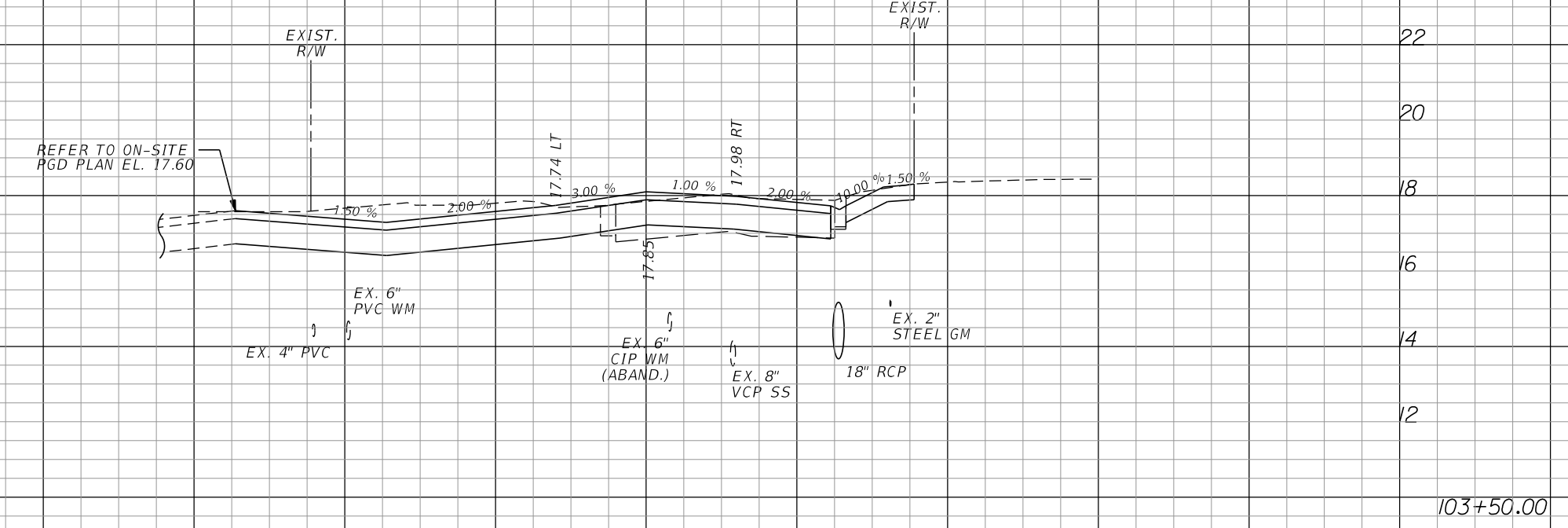
OHIO AVENUE
 CROSS SECTIONS

SHEET NO.
 14

Regular		Exc.		Embankment	
A	V	A	V	A	V



57	131	11	10
----	-----	----	----



84	16	0	0
----	----	---	---

SCALE HOR: 1"=20'
VER: 1"=4'

120 100 80 60 40 20 0 20 40 60 80 100 120

REVISIONS			
DATE	BY	DESCRIPTION	

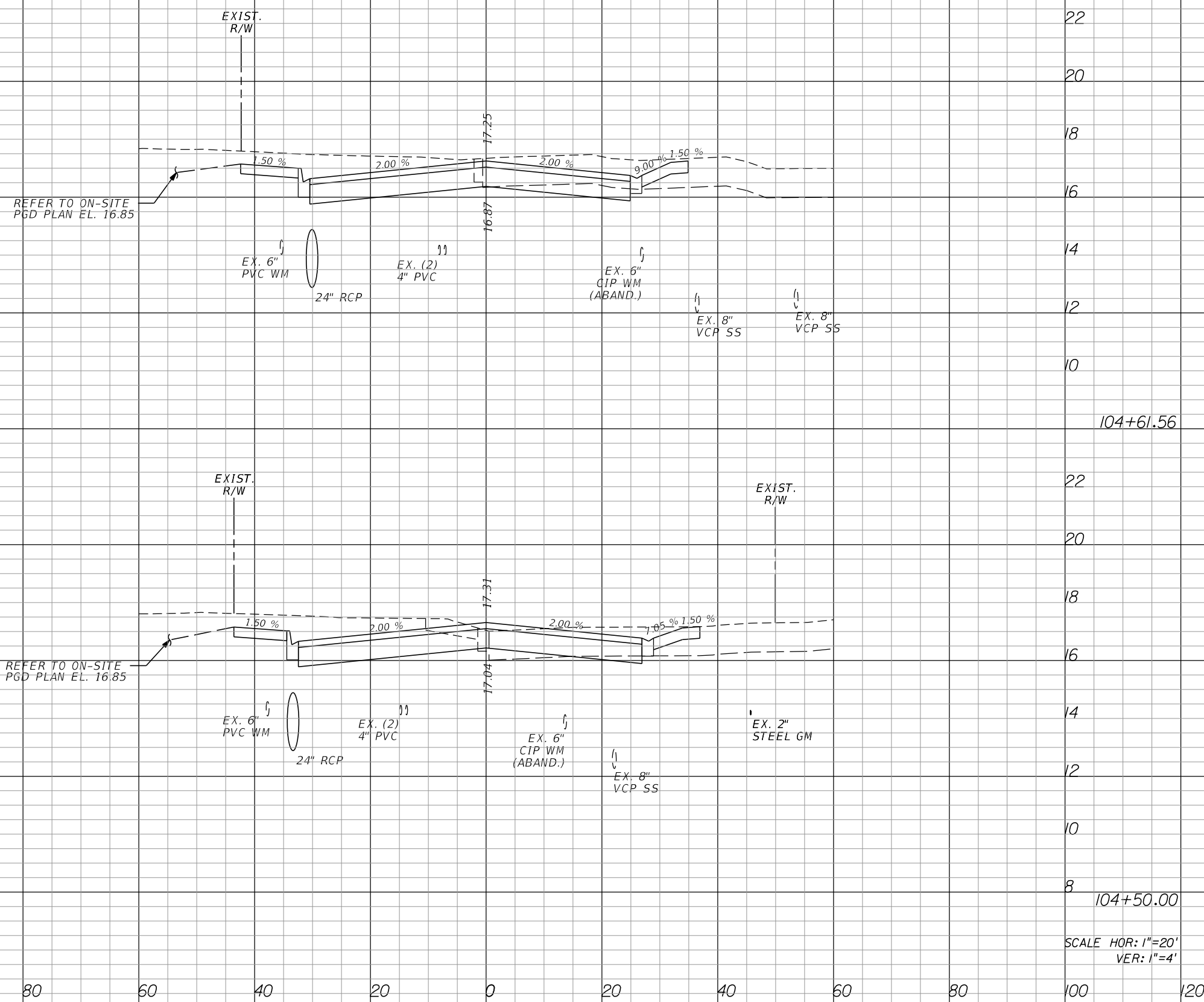
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 445 24TH STREET, SUITE 200
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CITY OF FORT PIERCE
 OHIO AVENUE
 ROADWAY IMPROVEMENTS

OHIO AVENUE
 CROSS SECTIONS

SHEET NO.
 15

Regular		Exc.		Embankment	
A	V	A	V	A	V



95	36	0	0
----	----	---	---

74	121	0	10
----	-----	---	----

SCALE HOR: 1"=20'
VER: 1"=4'

120 100 80 60 40 20 0 20 40 60 80 100 120

REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

Kimley»Horn
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CITY OF FORT PIERCE
 OHIO AVENUE
 ROADWAY IMPROVEMENTS

OHIO AVENUE
 CROSS SECTIONS

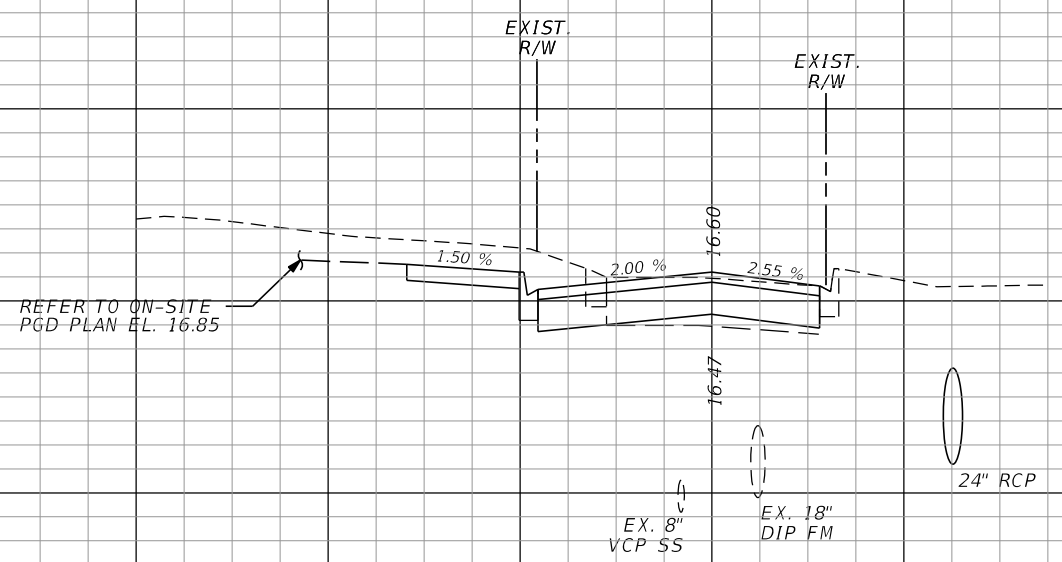
SHEET NO.
 16

Regular Exc.		Embankment	
A	V	A	V

EARTHWORK SUMMARY

REGULAR EXCAVATION = 955 CY
 EMBANKMENT = 39 CY

END PROJECT
 END EARTHWORK
 STA. 105+30.98



REFER TO ON-SITE
 PGD PLAN EL. 16.85

22
 20
 18
 16
 14
 12
 10
 105+00.00
 SCALE HOR: 1"=20'
 VER: 1"=4'

42	48	0	0
42	98	0	0

120 100 80 60 40 20 0 20 40 60 80 100 120

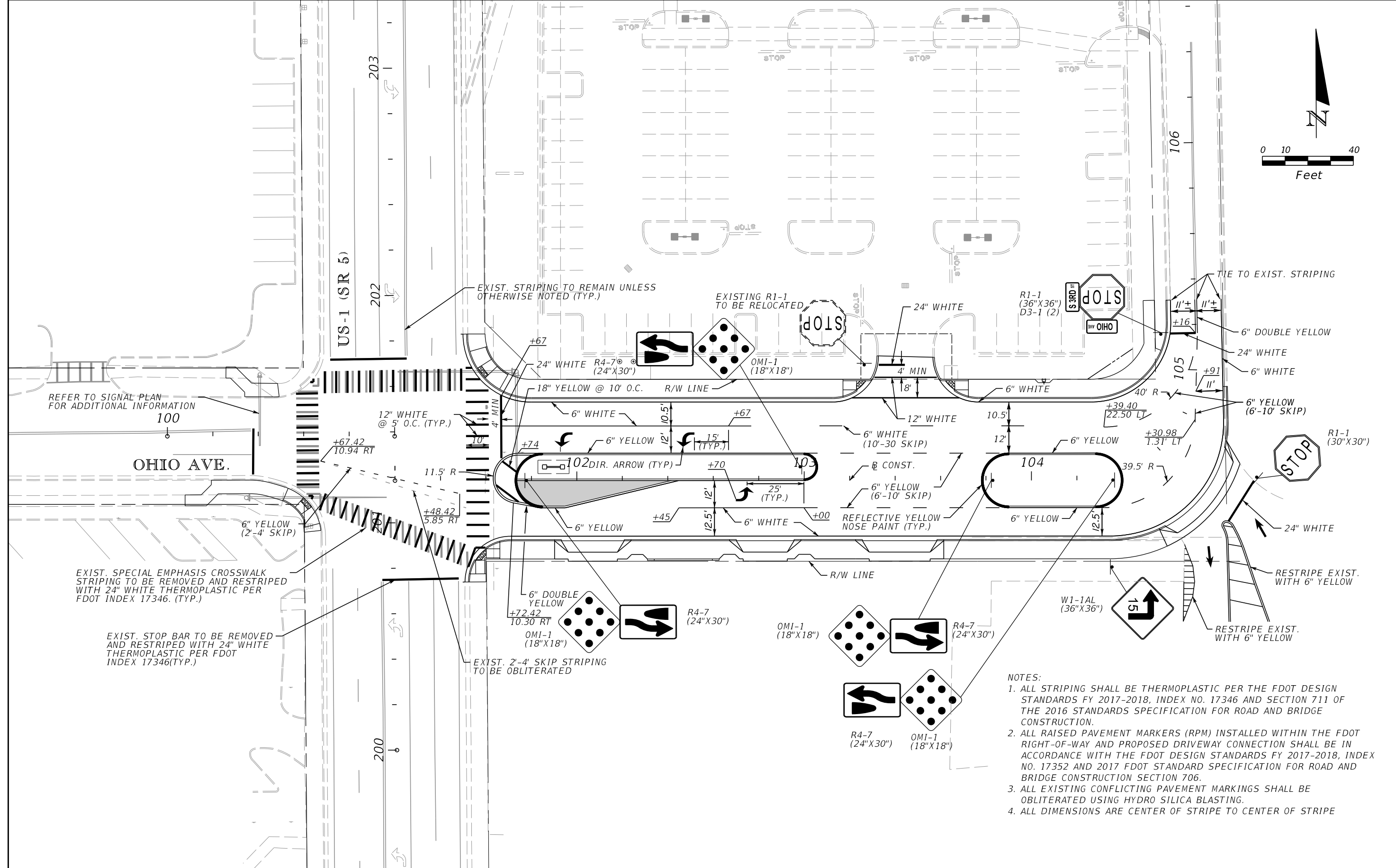
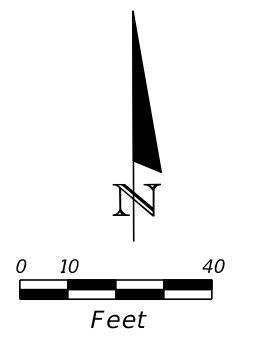
REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

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CITY OF FORT PIERCE
OHIO AVENUE
ROADWAY IMPROVEMENTS

OHIO AVENUE
CROSS SECTIONS

SHEET NO.
 17



REFER TO SIGNAL PLAN
FOR ADDITIONAL INFORMATION
100

OHIO AVE.

EXIST. SPECIAL EMPHASIS CROSSWALK
STRIPING TO BE REMOVED AND RESTRIPE
WITH 24\"/>

EXIST. STOP BAR TO BE REMOVED
AND RESTRIPE WITH 24\"/>

EXIST. STRIPING TO REMAIN UNLESS
OTHERWISE NOTED (TYP.)

EXISTING R1-1
TO BE RELOCATED

EXIST. 2'-4\"/>

NOTES:

1. ALL STRIPING SHALL BE THERMOPLASTIC PER THE FDOT DESIGN STANDARDS FY 2017-2018, INDEX NO. 17346 AND SECTION 711 OF THE 2016 STANDARDS SPECIFICATION FOR ROAD AND BRIDGE CONSTRUCTION.
2. ALL RAISED PAVEMENT MARKERS (RPM) INSTALLED WITHIN THE FDOT RIGHT-OF-WAY AND PROPOSED DRIVEWAY CONNECTION SHALL BE IN ACCORDANCE WITH THE FDOT DESIGN STANDARDS FY 2017-2018, INDEX NO. 17352 AND 2017 FDOT STANDARD SPECIFICATION FOR ROAD AND BRIDGE CONSTRUCTION SECTION 706.
3. ALL EXISTING CONFLICTING PAVEMENT MARKINGS SHALL BE OBLITERATED USING HYDRO SILICA BLASTING.
4. ALL DIMENSIONS ARE CENTER OF STRIPE TO CENTER OF STRIPE

REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

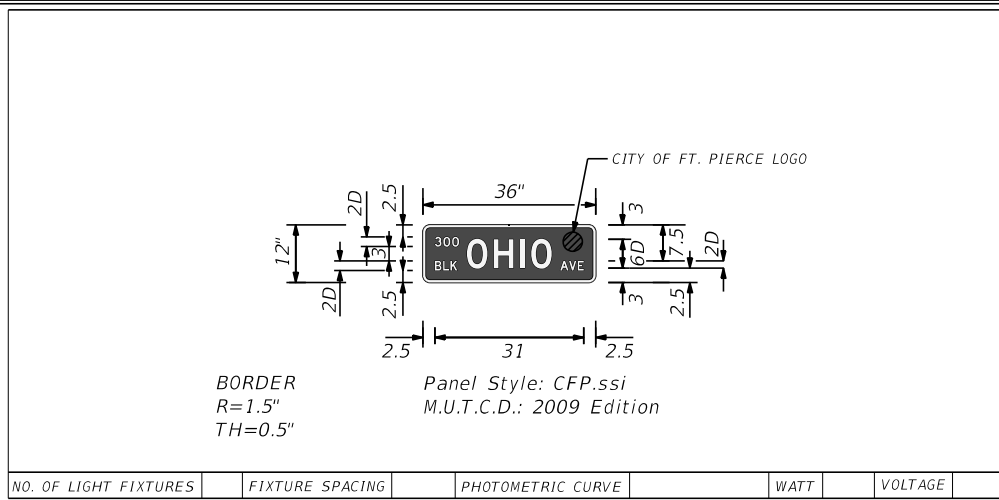
Kimley»Horn
 BRIAN A. GOOD, P.E.
 P.E. LICENSE NUMBER 56939
 445 24th STREET, SUITE 200
 VERO BEACH, FL 32960
 (772) 794-4100
 CERTIFICATE OF AUTHORIZATION: 00000696

CITY OF FORT PIERCE
 OHIO AVENUE
 ROADWAY IMPROVEMENTS

SIGNING & MARKING

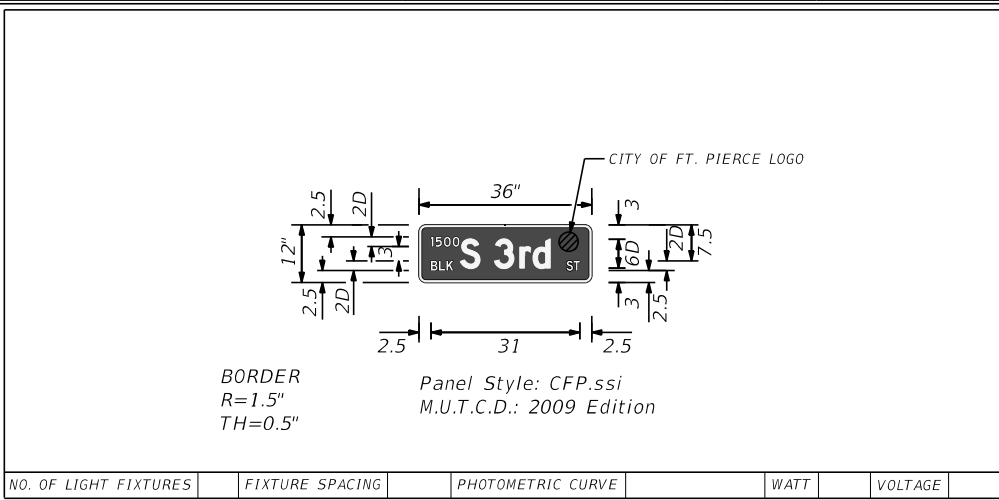
SHEET NO.
 18

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HEIGHT	12"	RADII	1.5"				
LEGEND	White	COLOR	White				
COLOR	Green						
SYMBOL(S)	ANGLE	X	Y	WID	HT		
SIGN NO.	NO. OF POSTS	EDGE OF LANE CLEARANCE	COLUMN SIZE	AVERAGE LENGTH			



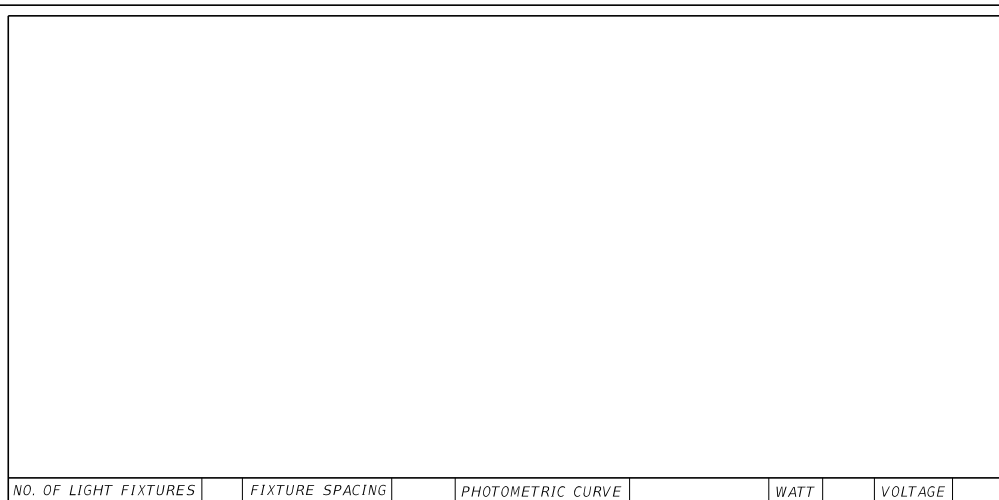
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SIGN NAME	S3RD	QTY	1	SIGN NO.		STATION(S)	
PANEL	BORDER					none	
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SIGN NO.	NO. OF POSTS	EDGE OF LANE CLEARANCE	COLUMN SIZE	AVERAGE LENGTH			



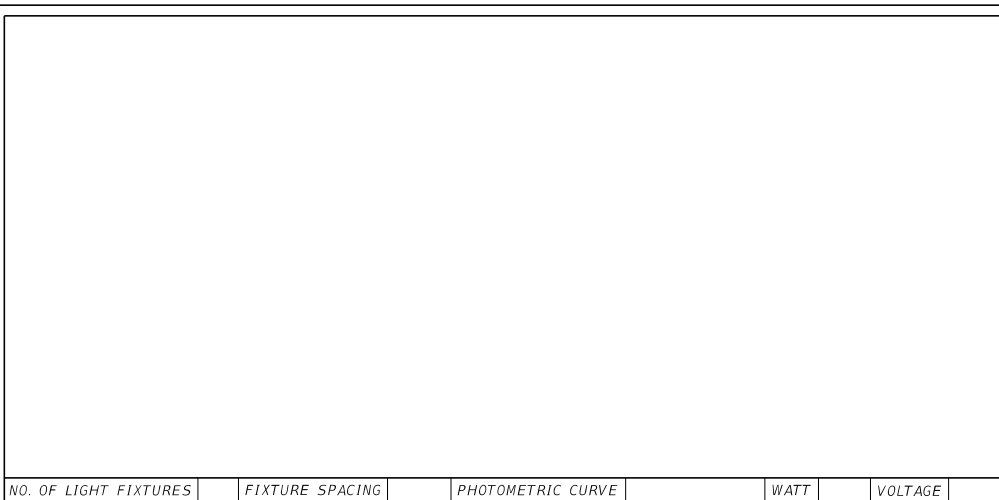
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SIGN NAME		QTY		SIGN NO.		STATION(S)	
PANEL	BORDER						
WIDTH	WIDTH						
HEIGHT	RADII						
LEGEND	COLOR						
COLOR							
SYMBOL(S)	ANGLE	X	Y	WID	HT		
SIGN NO.	NO. OF POSTS	EDGE OF LANE CLEARANCE	COLUMN SIZE	AVERAGE LENGTH			



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SYMBOL(S)	ANGLE	X	Y	WID	HT		
SIGN NO.	NO. OF POSTS	EDGE OF LANE CLEARANCE	COLUMN SIZE	AVERAGE LENGTH			



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REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

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CITY OF FORT PIERCE
 OHIO AVENUE
 ROADWAY IMPROVEMENTS

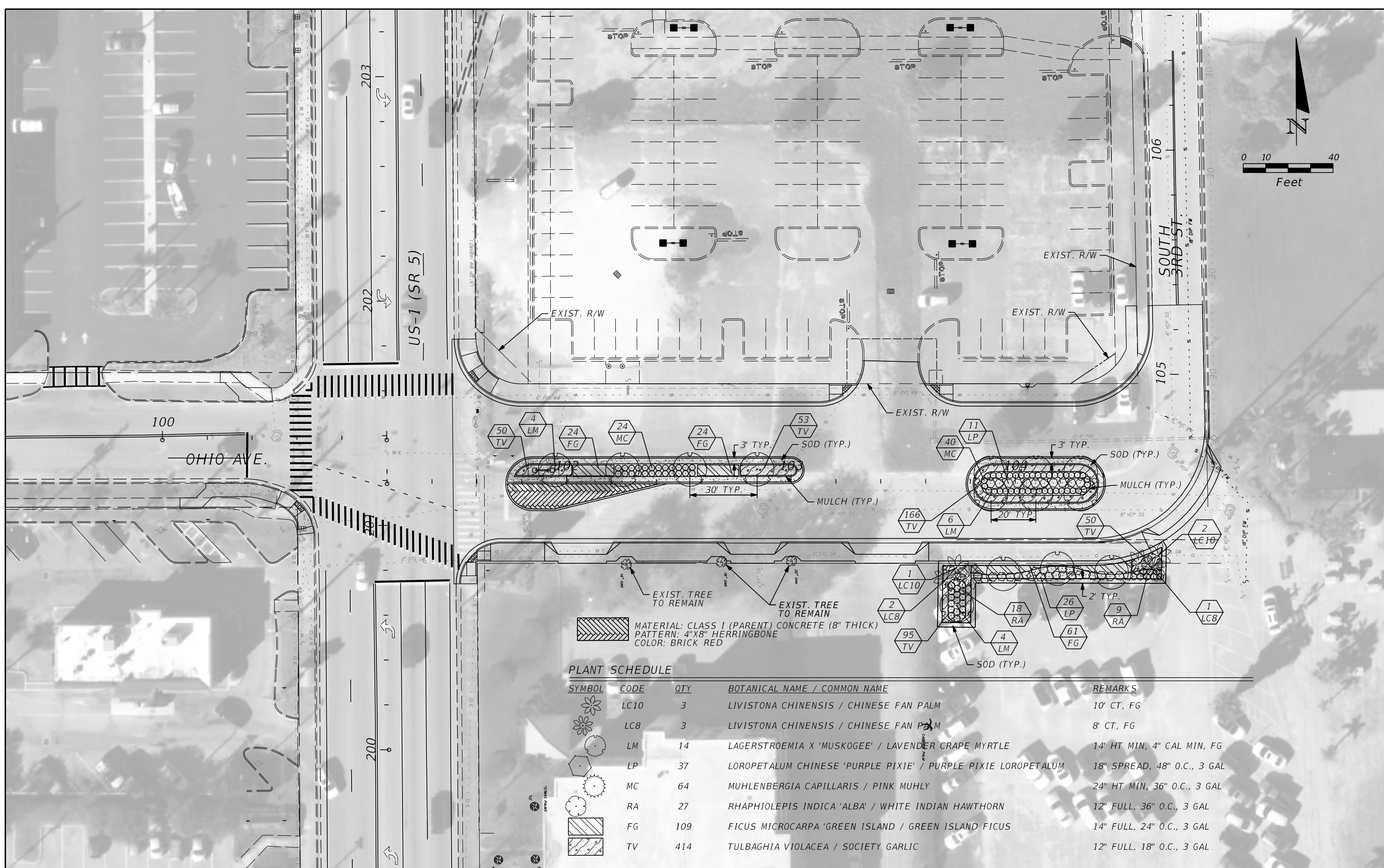
GUIDE SIGN
 DETAIL SHEET

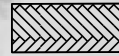
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LANDSCAPE NOTES








1. ALL LANDSCAPED AREAS ARE TO RECEIVE A MINIMUM OF 12" OF TOPSOIL.
2. ALL PLANT MATERIAL SHALL BE HEALTHY, VIGOROUS, AND FREE OF PESTS AND DISEASE
3. ALL PLANT MATERIAL SHALL BE CONTAINER GROWN OR BALLED AND BUR LAPPED AS INDICATED IN THE PLANT LIST.
4. ALL TREES SHALL HAVE A STRAIGHT TRUNK AND FULL HEAD AND MEET ALL REQUIREMENTS SPECIFIED.
5. ALL MATERIALS ARE SUBJECT TO THE APPROVAL OF THE LANDSCAPE ARCHITECT BEFORE, DURING, AND AFTER INSTALLATION.
6. ALL TREES MUST BE GUYED OR STAKED AS SHOWN IN THE DETAILS.
7. ALL PLANTING AREAS SHALL BE COMPLETELY MULCHED AS SPECIFIED.
8. PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL BE RESPONSIBLE FOR LOCATING ALL UNDERGROUND UTILITIES AND SHALL AVOID DAMAGE TO ALL UTILITIES DURING THE COURSE OF THE WORK. LOCATIONS OF EXISTING BURIED UTILITY LINES SHOWN ON THE PLANS ARE BASED UPON BEST AVAILABLE INFORMATION AND ARE TO BE CONSIDERED APPROXIMATE. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR 1) TO VERIFY THE LOCATIONS OF UTILITY LINES AND ADJACENT TO THE WORK AREA 2) TO PROTECT ALL OF ALL OF THE UTILITY LINES DURING THE CONSTRUCTION PERIOD 3) TO REPAIR ANY AND ALL DAMAGE TO UTILITIES, STRUCTURES, SITE APPURTENANCES, ETC. WHICH OCCURS AS A RESULT OF THE CONSTRUCTION.
9. THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING ALL QUANTITIES SHOWN ON THESE PLANS BEFORE PRICING THE WORK.
10. CONTRACTOR SHALL BE RESPONSIBLE FOR DELIVERY SCHEDULE AND PROTECTION BETWEEN DELIVERY TO MAINTAIN HEALTHY PLANT CONDITIONS.
11. THE CONTRACTOR SHALL BE RESPONSIBLE FOR FULLY MAINTAINING (INCLUDING BUT NOT LIMITED TO: WATERING, SPRAYING, MULCHING, FERTILIZING, ETC.) ALL OF THE PLANT MATERIALS UNTIL FINAL ACCEPTANCE
12. ANY PLANT MATERIAL WHICH IS DISEASED, DISTRESSED, DEAD, OR REJECTED (PRIOR TO SUBSTANTIAL COMPLETION) SHALL BE PROMPTLY REMOVED FROM THE SITE AND REPLACED WITH MATERIAL OF THE SAME SPECIES, QUANTITY, AND SIZE AND MEETING ALL PLANT LIST SPECIFICATIONS.
13. THE CONTRACTOR SHALL COMPLETELY GUARANTEE ALL PLANT MATERIAL FOR WARRANTY PERIOD. THE CONTRACTOR SHALL PROMPTLY MAKE ALL REPLACEMENTS DURING NORMAL PLANTING SEASON.
14. AFTER BEING DUG AT THE NURSERY SOURCE, ALL TREES IN LEAF SHALL BE ACCLIMATED FOR TWO (2) WEEKS UNDER A MIST SYSTEM PRIOR TO INSTALLATION.
15. STANDARDS SET FORTH IN "AMERICAN STANDARD FOR NURSERY STOCK" REPRESENT GUIDELINE SPECIFICATIONS ONLY AND SHALL CONSTITUTE MINIMUM QUALITY REQUIREMENTS FOR PLANT MATERIAL.
16. WHERE SHOWN ON THE PLANS AND DETAILS, PLANTING BEDS ARE TO BE COMPLETELY COVERED WITH HARDWOOD MULCH FROM A LOCAL SOURCE HARVESTED IN A SUSTAINABLE MANNER TO A MINIMUM DEPTH OF THREE (3) INCHES.
17. ALL PLANT MATERIAL QUANTITIES SHOWN ARE APPROXIMATE. CONTRACTOR SHALL BE RESPONSIBLE FOR COMPLETE COVERAGE OF ALL PLANTING BEDS AT SPACING SHOWN.
18. ALL LANDSCAPING SHALL BE INSTALLED ACCORDING TO SOUND NURSERY PRACTICES, AND SHALL BE FLORIDA NO.1 OR BETTER AS GIVEN IN "GRADES AND STANDARDS FOR NURSERY PLANTS, PARTS I AND II," STATE OF FLORIDA, DEPARTMENT OF AGRICULTURE.
19. ALL INVASIVE/EXOTIC SPECIES AND PROHIBITED TREE SPECIES AND PROHIBITED TREE SPECIES SHALL BE REMOVED FROM SITE, INCLUDING ROOT BALLS TO THE EXTENT POSSIBLE WITH NO DAMAGE TO ADJACENT EXISTING TREES.
20. THE CONTRACTOR IS RESPONSIBLE FOR OBTAINING A COPY OF THE PROJECT SPECIFICATIONS PRIOR TO BIDDING.

REVISIONS						 <small>BRIAN A. GOOD, P.E. P.E. LICENSE NUMBER 56939 445 24th STREET, SUITE 200 VERO BEACH, FL 32960 (772) 794-4100 CERTIFICATE OF AUTHORIZATION: 00000696</small>	CITY OF FORT PIERCE OHIO AVENUE ROADWAY IMPROVEMENTS	LANDSCAPE GENERAL NOTES	SHEET NO.
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION				19



 MATERIAL: CLASS 1 (PARENT) CONCRETE (8" THICK)
 PATTERN: 4"X8" HERRINGBONE
 COLOR: BRICK RED

PLANT SCHEDULE

SYMBOL	CODE	QTY	BOTANICAL NAME / COMMON NAME	REMARKS
	LC10	3	LIVISTONA CHINENSIS / CHINESE FAN PALM	10' CT, FG
	LC8	3	LIVISTONA CHINENSIS / CHINESE FAN PALM	8' CT, FG
	LM	14	LAGERSTROEMIA X 'MUSKOGEE' / LAVENDER CRAPE MYRTLE	14' HT MIN, 4" CAL MIN, FG
	LP	37	LOROPETALUM CHINESE 'PURPLE PIXIE' / PURPLE PIXIE LOROPETALUM	18" SPREAD, 48" O.C., 3 GAL
	MC	64	MUHLENBERGIA CAPILLARIS / PINK MUHLY	24" HT MIN, 36" O.C., 3 GAL
	RA	27	RHAPHIOLEPIS INDICA 'ALBA' / WHITE INDIAN HAWTHORN	12" FULL, 36" O.C., 3 GAL
	FG	109	FICUS MICROCARPA 'GREEN ISLAND' / GREEN ISLAND FICUS	14" FULL, 24" O.C., 3 GAL
	TV	414	TULBAGHIA VIOLACEA / SOCIETY GARLIC	12" FULL, 18" O.C., 3 GAL

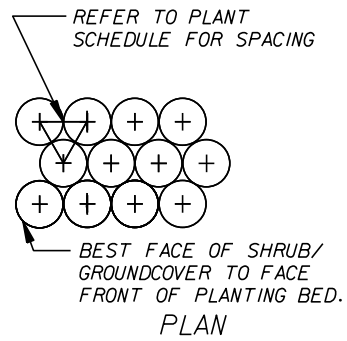
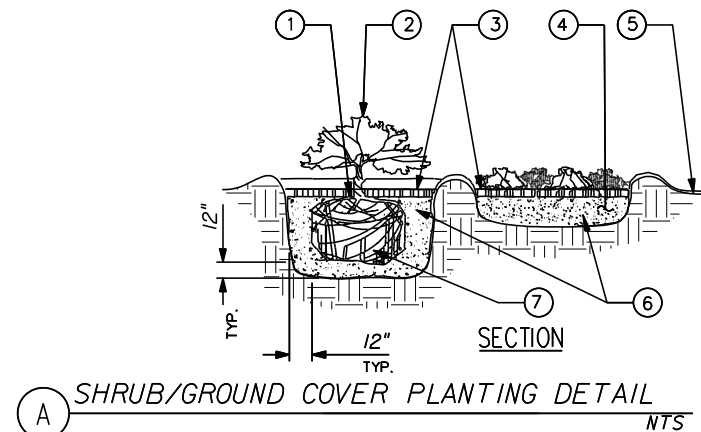
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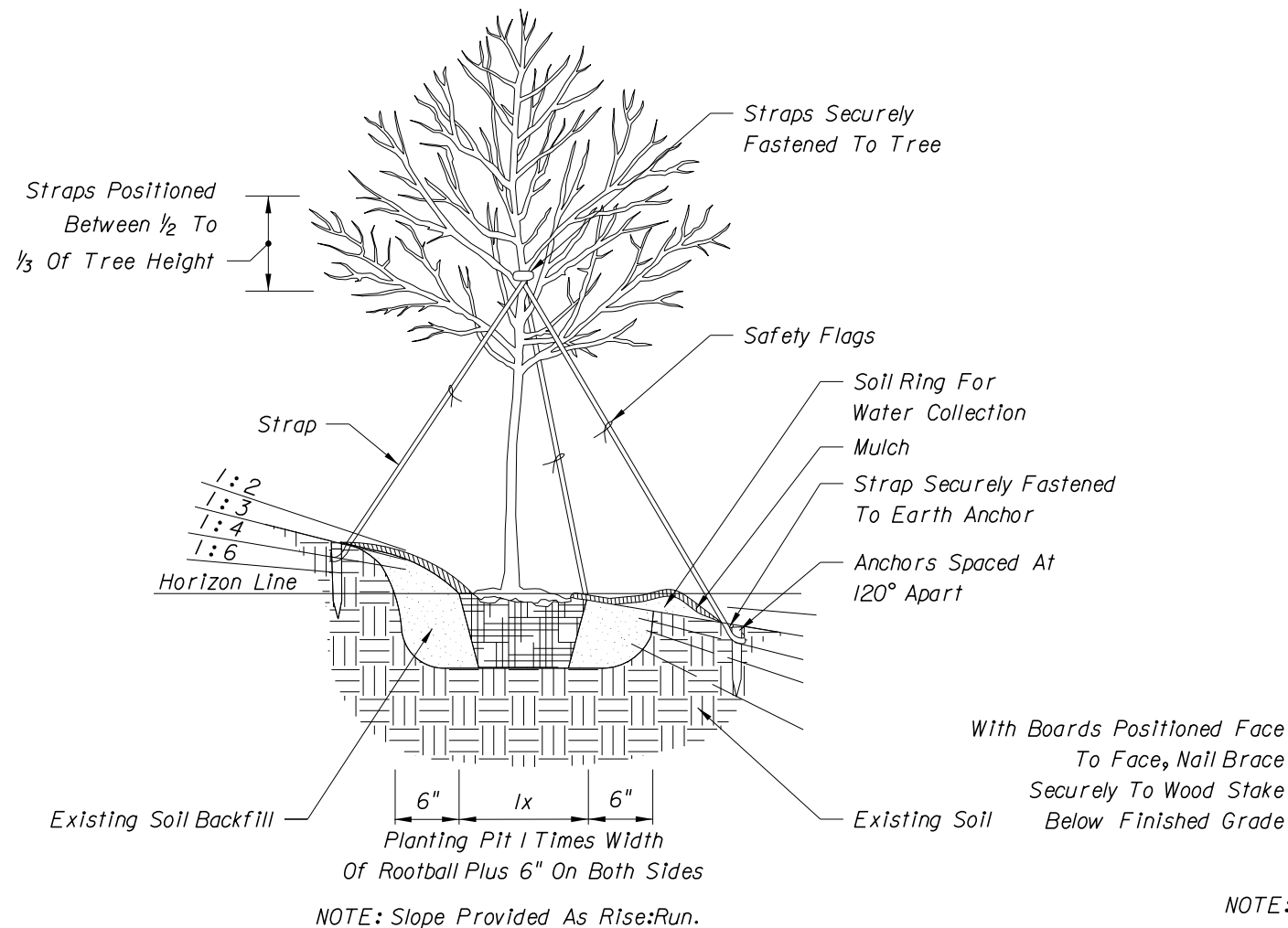
CITY OF FORT PIERCE
 OHIO AVENUE
 ROADWAY IMPROVEMENTS

LANDSCAPE & HARDSCAPE

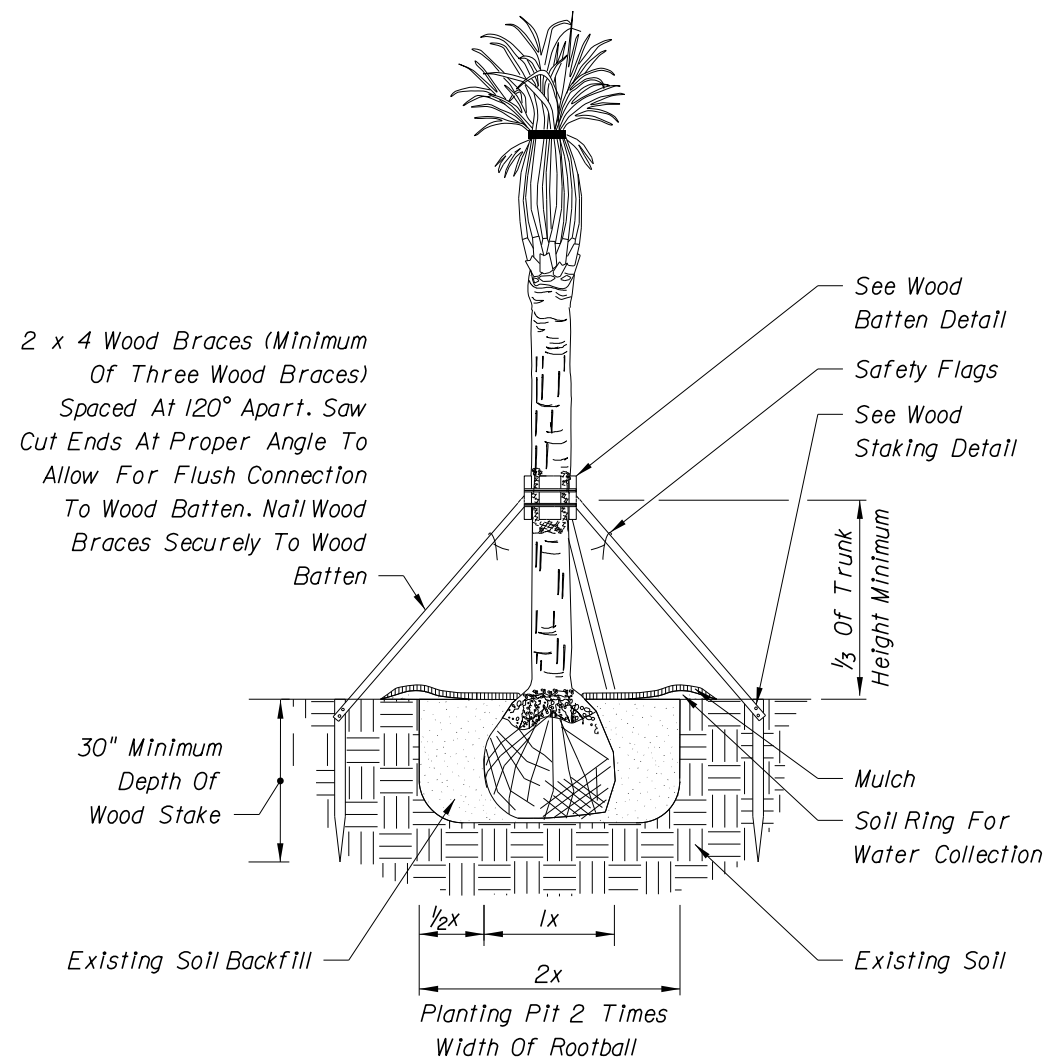
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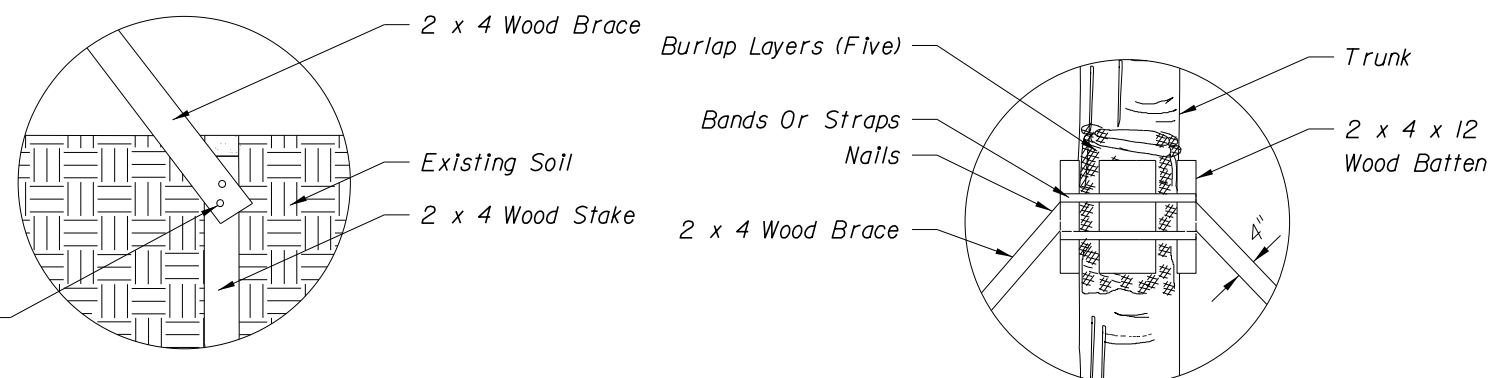
1. TOP OF SHRUB ROOTBALLS TO BE PLANTED 1" - 2" HIGH WITH SOIL MOUNDING UP TO THE TOP OF ROOTBALL.
2. WHEN USED IN MASSES- PRUNE ALL SHRUBS TO ACHIEVE A UNIFORM MASS/HEIGHT
3. 4" MINIMUM OF MULCH COMPACTED OR AS SPECIFIED.
4. EXCAVATE ENTIRE BED SPECIFIED FOR GROUND COVER BED.
5. 4" MINIMUM OF TOPSOIL TO BRING TO FINISHED GRADE (SEE GRADING PLAN).
6. PREPARED PLANTING SOIL AS SPECIFIED. NOTE: WHEN GROUND- COVERS AND SHRUBS USED IN MASSES ENTIRE BED TO BE AMENDED WITH PLANTING SOIL MIX AS SPECIFIED.
7. SCARIFY ROOTBALL SIDES AND BOTTOM.
8. ROOTBALLS GREATER THAN 4" DIAMETER SHALL BE PLACED ON MOUND OF UNDISTURBED SOIL TO PREVENT SETTLING ROOTBALLS SMALLER THAN 24" IN DIA. MAY SIT ON COMPACTED EARTH.



4" AND LARGER CALIPER TREE PLANTING ON SLOPE



NOTE: For All Other Palms, Use Detail Provided By Landscape Architect In Contract Plans.
CABBAGE PALM PLANTING FOR UP TO 24' CLEAR TRUNK



NOTE: Stake Into Firm, Existing Soil.
WOOD STAKING DETAIL

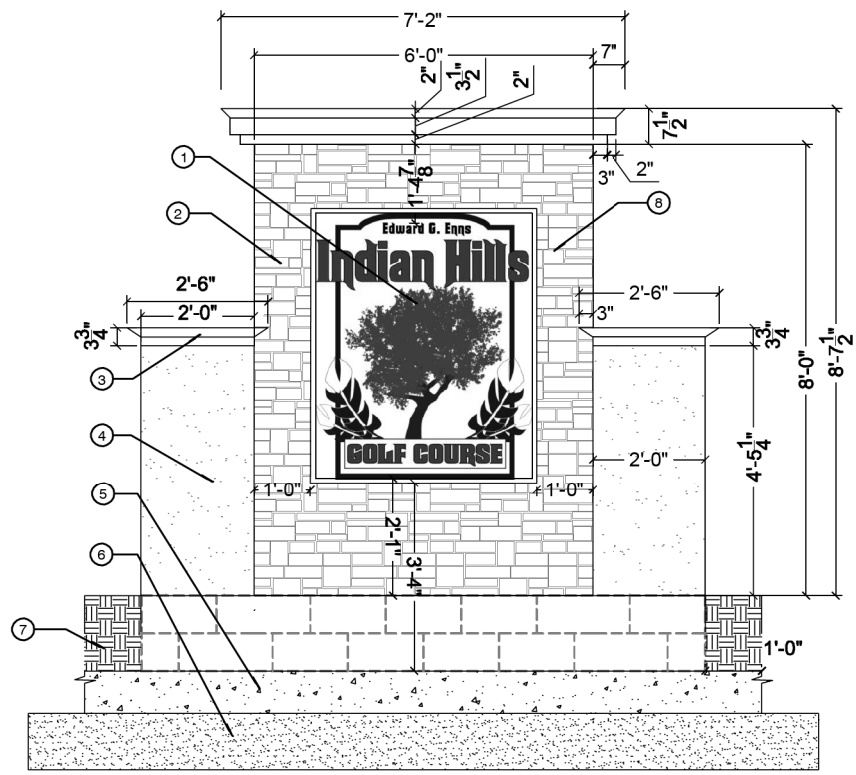
WOOD BATTEN DETAIL

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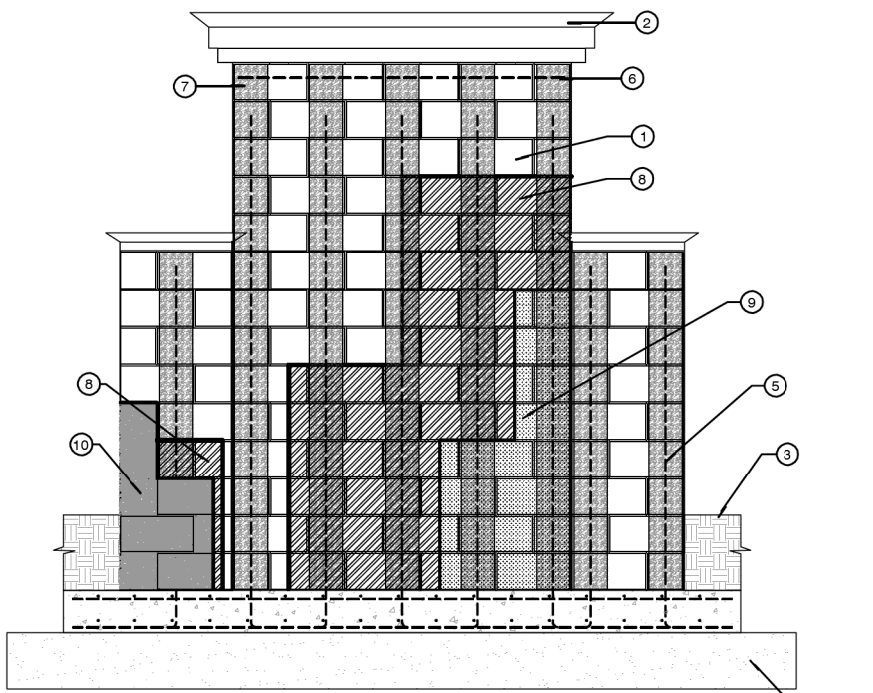
CITY OF FORT PIERCE
OHIO AVENUE
ROADWAY IMPROVEMENTS

LANDSCAPE
DETAILS



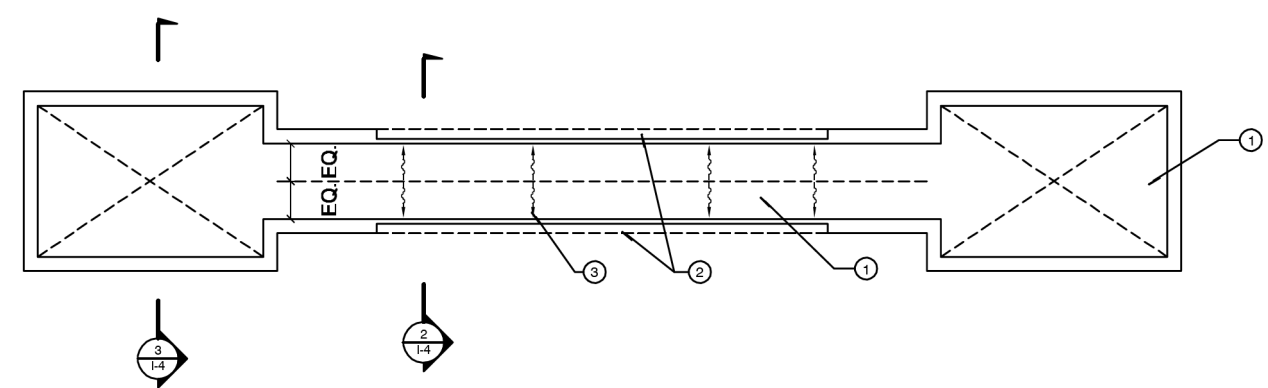
- ① SIGNAGE TO BE ACRYLIC AND RATED FOR OUTDOOR USE
- ② WALL FINISH TO BE 1-1/2" CORAL VENEER, SAND COLOR BY J&N STONE (863.422.7369) WWW.JNSTONE.COM
- ③ COLUMN TO BE CAST IN PLACE (SEE DETAIL X)
- ④ COLUMN TO BE ROUGH STUCCO FINISH, COLOR SW-7004 "SNOWBOUND"
- ⑤ CAST IN PLACE CONCRETE FOOTER
- ⑥ 98% AASHTO T99 COMPACTED SUBGRADE
- ⑦ FINISHED GRADE
- ⑧ 1" RECESSED AREA FOR SIGNAGE

1 MONUMENT SIGN FINISHES
NTS



- ① 16" x 8" x 8" CMU WITH 5/8" MORTAR JOINTS
- ② 4" THICK, CAST-IN-PLACE PORTLAND CEMENT CONCRETE CAP
- ③ FINISHED GRADE
- ④ CAST IN PLACE CONCRETE FOOTER
- ⑤ #4 REBAR
- ⑥ #5 REBAR
- ⑦ BOND BEAM
- ⑧ CEMENT PLASTER BASE COAT (3/8" - 5/8")
- ⑨ WALL FINISH TO BE 1-1/2" CORAL VENEER, SAND COLOR BY J&N STONE (863.422.7369) WWW.JNSTONE.COM
- ⑩ COLUMN TO BE ROUGH STUCCO FINISH, COLOR SW-7004 "SNOWBOUND"

2 MONUMENT SIGN STRUCTURAL
NTS



- ① 4" THICK, CAST IN PLACE CONCRETE CAP, SMOOTH FINISH, COLOR TO BE SW 7016 "MINDFUL GRAY"
- ② SIGNAGE TO BE ACRYLIC AND RATED FOR OUTDOOR USE
- ③ SLOPE FOR DRAINAGE

3 MONUMENT SIGN WALL CAP
NTS

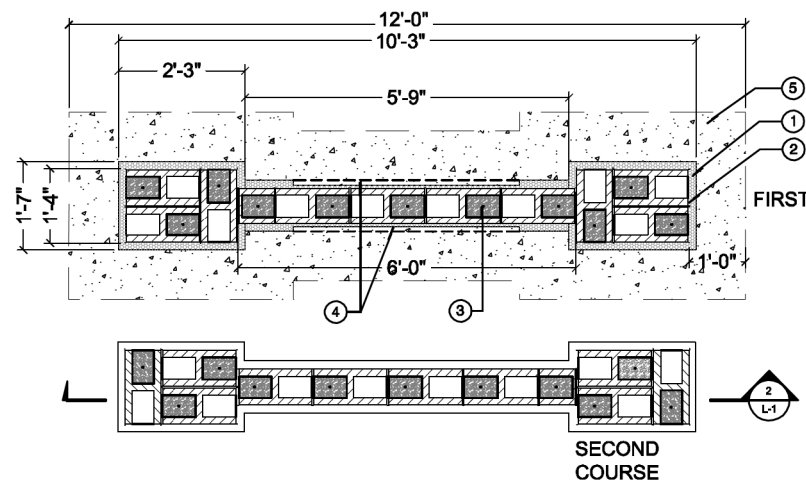
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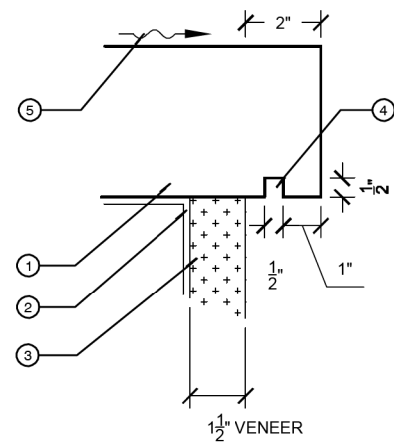
CITY OF FORT PIERCE
OHIO AVENUE
ROADWAY IMPROVEMENTS

MONUMENT DETAILS

SHEET NO.
21A

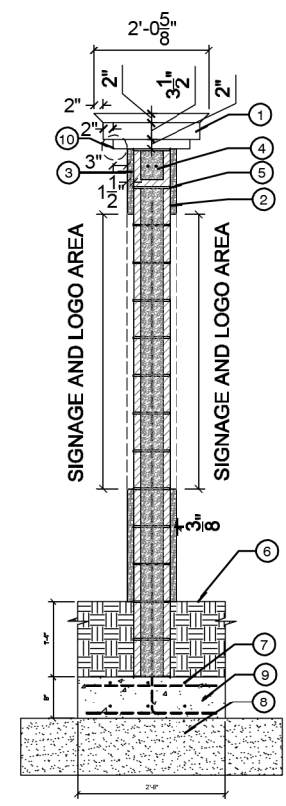
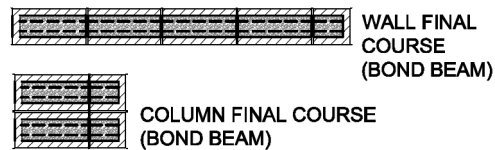


1 MONUMENT SIGN STRUCTURAL OVERHEAD
NTS



4 DRIP EDGE DETAIL
NTS

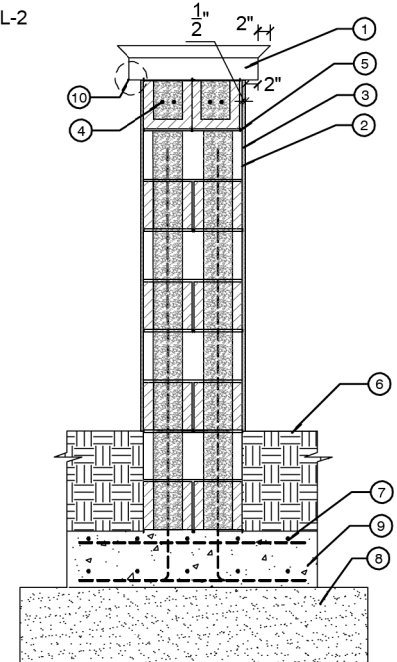
- ① WALL FINISH TO BE 1-1/2" CORAL VENEER, SAND COLOR BY J&N STONE (863.422.7369) WWW.JNSTONE.COM
- ② 5/8" CEMENT PLASTER BASE COAT
- ③ #4 REBAR, GROUT ALTERNATING CELLS, ALTERNATE BENDS IN FOOTER
- ④ SINGAGE TO BE ACRYLIC, INTENDED FOR OUTDOOR USE
- ⑤ CONCRETE FOOTER



2 WALL CROSS SECTION
NTS

- ① CAST IN PLACE CONCRETE WALL CAP
- ② CEMENT PLASTER BASE COAT (3/8" TO 5/8")
- ③ WALL FINISH TO BE 1-1/2" CORAL VENEER, SAND COLOR BY J&N STONE (868.422.7369) WWW.JNSTONEVENEER.COM
- ④ BOND BEAM WITH HORIZONTAL #5 REBAR
- ⑤ HORIZONTAL JOINT REINFORCEMENT WITH EYE AND PINTLE WALL TIES AT 16" O.C. (TYP.)
- ⑥ FINISHED GRADE
- ⑦ #4 REBAR
- ⑧ 98% AASHTO T99 COMPACTED SUBGRADE
- ⑨ POURED IN PLACE CONCRETE FOOTER
- ⑩ (3) L-2

- ① CAST IN PLACE CONCRETE WALL CAP
- ② CEMENT PLASTER BASE COAT (3/8" TO 5/8")
- ③ COLUMN TO BE ROUGH STUCCO FINISH, COLOR SW-7004 "SNOWBOUND"
- ④ BOND BEAM WITH HORIZONTAL #5 REBAR
- ⑤ HORIZONTAL JOINT REINFORCEMENT WITH EYE AND PINTLE WALL TIES AT 16" O.C. (TYP.)
- ⑥ FINISHED GRADE
- ⑦ #4 REBAR
- ⑧ 98% AASHTO T99 COMPACTED SUBGRADE
- ⑨ POURED IN PLACE CONCRETE FOOTER
- ⑩ (3) L-2



3 COLUMN CROSS SECTION
NTS

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CITY OF FORT PIERCE
OHIO AVENUE
ROADWAY IMPROVEMENTS

MONUMENT DETAILS
 SHEET NO. 21B

IRRIGATION SYSTEM NOTES:

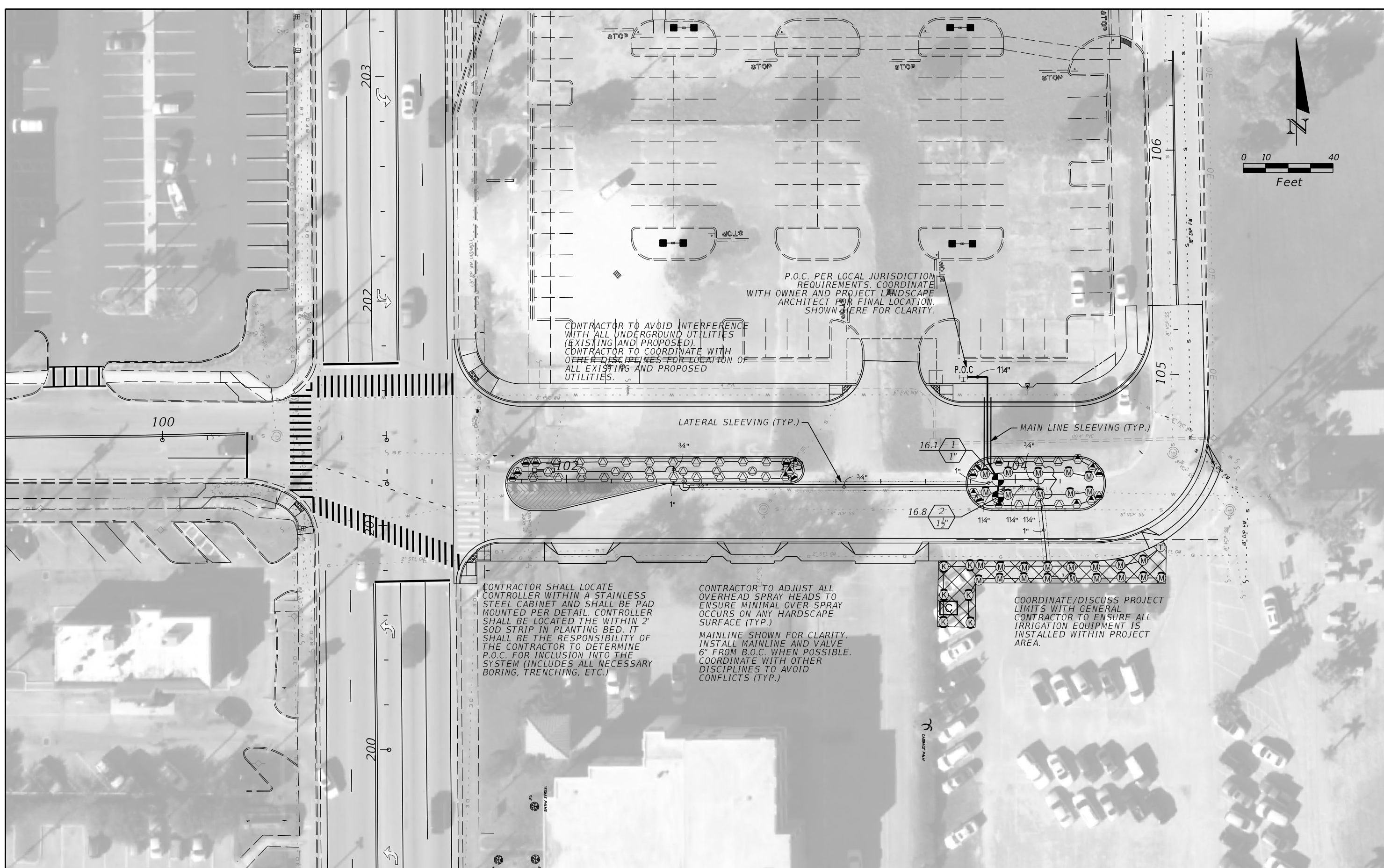
1. THE IRRIGATION MAINLINE LAYOUT IS DIAGRAMMATIC. ANY CHANGES MADE IN THE IRRIGATION MAINLINE DUE TO FIELD CONDITIONS OR CONTRACTOR'S SUBMITTED DESIGN SHALL BE IN ACCORDANCE WITH THESE STANDARDS.
2. SET SPRAY HEADS 6" AND ROTORS 12" IN FROM BACK OF CURB OR 24" IF PAVEMENT HAS NO CURB.
3. IRRIGATION CONTRACTOR IS RESPONSIBLE FOR PERFORMING ALL NECESSARY MODIFICATIONS REQUIRED TO MEET THE SCHEMATIC INTENT OF THESE PLANS PRIOR TO SUBMITTING PROPOSAL. THESE PLANS OUTLINE THE OVERALL LAYOUT THE SYSTEM AND IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO ZONE THE SYSTEM ACCORDINGLY BASED ON FLOW AND PRESSURE AVAILABLE. CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING THE FOLLOWING BUT NOT LIMITED TO AVAILABLE FLOW, AVAILABLE PRESSURE, CONNECTION ASSEMBLY, CAPACITY OF THE SYSTEM.
4. IRRIGATION SHALL NOT BE COMBINED ON A SINGLE ZONE AND SHALL BE ZONED ACCORDING TO IRRIGATION TYPE, PRECIPITATION RATE, AND THE SYSTEM'S AVAILABLE WATER / PRESSURE. CONTRACTOR TO SUBMIT SHOP DRAWINGS TO OWNER FOR REVIEW PRIOR TO INSTALLATION.
5. VERIFY LOCATIONS OF ALL UNDERGROUND UTILITIES PRIOR TO INSTALLATION OF IRRIGATION SYSTEM. ALL UTILITIES AND STRUCTURES MAY NOT BE SHOWN ON THESE PLANS-CONTRACTOR SHALL FIELD VERIFY.
6. CONTRACTOR TO FIELD VERIFY ALL POINT OF CONNECTION SOURCE INFORMATION INCLUDING PSI AND GPM PRIOR TO CONSTRUCTION.
7. INSTALLATION OF WORK SHALL BE COORDINATED WITH OTHER CONTRACTORS IN SUCH A MANNER AS TO ALLOW FOR A SPEEDY AND ORDERLY COMPLETION OF ALL WORK ON-SITE.
8. CONTRACTOR SHALL COORDINATE WITH THE PLANTING PLAN FOR PLANTER BED AND TREE LOCATIONS TO ENSURE ALL PLANT MATERIAL IS COVERED BY 100% HEAD-TO-HEAD IRRIGATION.
9. CONTRACTOR SHALL PROVIDE "AS-BUILT" DRAWINGS OF THE FINAL INSTALLATION TO OWNER AT SUBSTANTIAL COMPLETION BEFORE RECEIVING FINAL PAYMENT.
10. PRODUCTS SHALL BE AS SPECIFIED OR APPROVED EQUAL.

PRE-APPROVED MANUFACTURERS:

1. TORO
 2. HUNTER
 3. RAINBIRD
13. IRRIGATION CONTRACTOR SHALL SECURE ANY AND ALL NECESSARY PERMITS FOR THE WORK PRIOR TO COMMENCEMENT OF HIS OPERATIONS ON-SITE. COPIES OF THE PERMITS SHALL BE SENT TO THE OWNER/GENERAL CONTRACTOR. WORK IN THE R.O.W. SHALL CONFORM TO THE STANDARDS AND SPECIFICATIONS OF LOCAL AND/OR STATE JURISDICTION.
 14. LOCATE ALL IRRIGATION LINES WITHIN LANDSCAPED AREAS WHENEVER POSSIBLE. ALL LINES UNDER PAVEMENT MUST BE SLEEVED WITHIN SCH. 40 PVC 2X SIZE OF PIPE AND FREE OF STONES/DEBRIS. ALL VALVES SHALL BE LOCATED WITHIN LANDSCAPED AREAS.
 15. MAINLINE SHALL NOT BE LOCATED WITHOUT PRIOR APPROVAL OF THE OWNER'S REPRESENTATIVE.
 16. THE IRRIGATION CONTRACTOR SHALL BE DIRECTLY RESPONSIBLE FOR SLEEVE AND DIRECTIONAL BORES.
 17. ALL SLEEVES UTILIZED BY THE IRRIGATION CONTRACTOR WHETHER INSTALLED BY HIM OR NOT, SHALL BE LOCATED ON THE "AS-BUILT" DRAWINGS. THE DEPTH BELOW FINISH GRADE, TO THE NEAREST FOOT OF EACH END OF THE SLEEVE SHALL BE NOTED AT EACH SLEEVE LOCATION ON THE "AS-BUILT" DRAWINGS. ALL SLEEVES ON PLAN FOR WALL PENETRATIONS AND UNDER SIDEWALKS SHALL BE SIZED TWO PIPE SIZES GREATER THAN THE PIPE IT CARRIES.
 18. ALL PRESSURIZED MAINLINES AND LATERALS UNDER PAVEMENT SHALL BE WITHIN SCH. 40 PVC SLEEVES. WHERE ELECTRIC OR HYDRAULIC VALVE CONTROL LINES PASS THROUGH A SLEEVE WITH OTHER MAIN OR LATERAL LINES THEY SHALL BE CONTAINED WITHIN A SEPARATE, SMALLER CONDUIT.
 19. NUMBER THE TOP OF ALL VALVE BOX LIDS WITH MINIMUM 1" HEIGHT BLACK LETTERS TO CORRESPOND TO AUTOMATIC AND GATE VALVE DESIGNATIONS. ALL HOSE BIBB VALVE BOXES SHALL BE LABELED IN A SIMILAR MANNER WITH THE DESIGNATION "HB". LETTER OUTSIDE OF TIME CLOCK CABINETS TO CORRESPOND WITH IRRIGATION CLOCK PROGRAM DESIGNATION.
 20. THE IRRIGATION CONTRACTOR SHALL INSTALL A COLOR CODED METAL DETECTABLE MARKING TAPE WHICH CLEARLY NOTES: "CAUTION: IRRIGATION LINE BURIED BELOW." THE TAPE SHALL BE INSTALLED THE FULL LENGTH OF THE IRRIGATION MAINLINE.
 21. ELECTRIC SERVICE TO THE CONTROLLER SHALL BE PROVIDED BY THE GENERAL CONTRACTOR.
 22. ALL 24 VAC WIRING FROM DECODER TO VALVE SHALL BE OF DIRECT BURIAL COPPER WIRE. MAXIMUM LENGTH OF WIRE FROM DECODER TO VALVE SHALL NOT EXCEED 400 FEET. AS FOLLOWS:
CONTROL WIRES - #14
COMMON WIRES - #14

23. ALL VALVES, SPLICES WITHIN CONTROL LINES, AND QUICK COUPLERS SHALL BE LOCATED WITHIN NDS VALVE BOXES AS FOLLOWS:
-RECTANGULAR 12"x17" HEAVY DUTY BOX. (PURPLE COVER FOR REUSE TO BE PROVIDED WHERE APPROPRIATE).
24. ALL IRRIGATION HEADS/DRIP TUBING SHALL BE LOCATED ONE (1) FOOT FROM BACK OF CURB WHEN NEXT TO A ROADWAY. (THIS SHALL NOT INCLUDE PARKING AREAS OR DRIVE AISLES).
25. HEADS, LATERALS, EMITTERS, AND VALVES ARE NOT SHOWN, BUT ARE NECESSARY FOR A FULLY FUNCTIONING IRRIGATION SYSTEM.
26. LOCATE ALL VALVES IN PLANTING BEDS WITH A MINIMUM OF 3'-0" FROM BACK OF CURB OR EDGE OF PAVEMENT, UNLESS OTHERWISE NOTED. PIPE SIZES ON EITHER SIDE OF SECTION VALVES CONNECTING MAINLINE TO SECTION LATERAL SHALL BE ONE (1) PIPE SIZE LARGER THAN VALVE SIZE. WHERE MAINLINES RUN PARALLEL TO PAVEMENT OR CURBING, THE MAINLINE SHALL BE OFFSET 2'-0" FROM THE EDGE OF PAVEMENT OR CURB.
27. IRRIGATION ZONES SHALL BE SEPARATED FOR HIGH AND LOW WATER USE REQUIREMENTS AND OPERATED ON DIFFERENT WATERING CYCLES. BUBBLERS, DRIPLINE, AND SPRAY HEADS SHALL BE SEPARATED ON DIFFERENT VALVES. AT NO TIME SHALL MULTIPLE IRRIGATION HEAD TYPES BE LOCATED ON THE SAME VALVE.
28. ALL WIRING FOR CONNECTION OF THE VALVES TO THE CONTROLLER SHALL FOLLOW MANUFACTURERS SPECIFICATIONS. IF REQUIRED, ALL WIRING FOR A TWO WIRE PATH SHALL BE WITH RED/BLUE TWISTED PAIR 14 AWG. ELECTRIC CONTROL LINES FROM THE DECODER TO THE SOLENOID VALVES SHALL BE TWISTED PAIR 18 AWG. ALL DECODERS SHALL BE GROUNDED EVERY 1,000 L.F. OR EVERY 10 DEVICES. ALL WIRE SHALL BE FURNISHED IN MINIMUM 2,500' REELS AND SPLICING SHALL BE MINIMIZED. BURY SPLICE KIT. ALL 24 VOLT WIRING SHALL BE DONE IN ACCORDANCE WITH EXISTING CODES. SPLICING SHALL BE IN VALVE BOXES OR CONTROLLERS ONLY. IRRIGATION SYSTEM CONTROL SHALL BE TWO WIRE PATH. CONTRACTOR SHALL FOLLOW ALL MANUFACTURER'S REQUIREMENTS FOR THIS INSTALLATION. TWO WIRE SYSTEM SHALL HAVE 2-WAY COMMUNICATIONS FIELD PROGRAMMABILITY, STATION SPECIFICATIONS AND INTEGRATED SURGE PROTECTION.
29. ALL CONTROL WIRE SHALL BE INSTALLED IN A 1 1/4" ELECTRICAL CONDUIT.
30. SMALLEST DIAMETER LATERAL PIPE SHALL BE 3/4".
31. IRRIGATION SYSTEM SHALL BE CAPABLE OF SUPPLYING AN AVERAGE OF 1.05" OF WATER PER WEEK WITHIN WATERING RESTRICTIONS AS APPLICABLE.
32. IRRIGATION SYSTEM SHALL NOT BE INSTALLED THROUGH EXISTING, OR PRESERVED PLANT COMMUNITIES. DO NOT TRENCH THROUGH EXISTING ROOT SYSTEMS OF ANY VEGETATION INTENDED TO BE PRESERVED.
33. CONTRACTOR TO MINIMIZE IRRIGATION OVERTHROW TO IMPERVIOUS AND NATURAL AREAS THROUGH FIELD ADJUSTMENTS TO INDIVIDUAL HEADS.
34. ALL AREAS DISTURBED DURING CONSTRUCTION SHALL BE RESTORED BY THE CONTRACTOR TO THE CONDITION DENOTED ON THE LANDSCAPE PLAN.
35. IRRIGATION PIPING INSTALLED UNDER ROADS AND SIDEWALKS SHALL BE IN SCHEDULE 40 PVC SLEEVE AT 2X THE PIPE SIZE. ALL SLEEVE SHALL BE FREE OF STONES AND DEBRIS.
36. IRRIGATION SOURCE TO BE POTABLE WATER. IRRIGATION CONTRACTOR TO VERIFY SOURCE PRIOR TO DESIGN.
37. POINT OF CONNECTION TO BE FIELD LOCATED. IRRIGATION SYSTEM CONNECTIONS TO THE LOCAL JURISDICTION SERVICE SHALL COMPLY WITH ALL APPLICABLE CODES.
38. IRRIGATION CONNECTION MAY REQUIRE BACKFLOW PREVENTION, VERIFY WITH LOCAL JURISDICTION.
39. IRRIGATION SYSTEM SHALL COMPLY WITH THE LOCAL JURISDICTION LAND DEVELOPMENT CODE

REVISIONS						 BRIAN A. GOOD, P.E. P.E. LICENSE NUMBER 56939 445 24th STREET, SUITE 200 VERO BEACH, FL 32960 (772) 794-4100 CERTIFICATE OF AUTHORIZATION: 00000696	CITY OF FORT PIERCE		IRRIGATION GENERAL NOTES	SHEET NO.
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION		OHIO AVENUE ROADWAY IMPROVEMENTS			22



CONTRACTOR TO AVOID INTERFERENCE WITH ALL UNDERGROUND UTILITIES (EXISTING AND PROPOSED). CONTRACTOR TO COORDINATE WITH OTHER DISCIPLINES FOR LOCATION OF ALL EXISTING AND PROPOSED UTILITIES.

P.O.C. PER LOCAL JURISDICTION REQUIREMENTS. COORDINATE WITH OWNER AND PROJECT LANDSCAPE ARCHITECT FOR FINAL LOCATION. SHOWN HERE FOR CLARITY.

CONTRACTOR SHALL LOCATE CONTROLLER WITHIN A STAINLESS STEEL CABINET AND SHALL BE PAD MOUNTED PER DETAIL. CONTROLLER SHALL BE LOCATED THE WITHIN 2" SOD STRIP IN PLANTING BED. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO DETERMINE P.O.C. FOR INCLUSION INTO THE SYSTEM (INCLUDES ALL NECESSARY BORING, TRENCHING, ETC.)

CONTRACTOR TO ADJUST ALL OVERHEAD SPRAY HEADS TO ENSURE MINIMAL OVER-SPRAY OCCURS ON ANY HARDSCAPE SURFACE (TYP.)
MAINLINE SHOWN FOR CLARITY. INSTALL MAINLINE AND VALVE 6" FROM B.O.C. WHEN POSSIBLE. COORDINATE WITH OTHER DISCIPLINES TO AVOID CONFLICTS (TYP.)

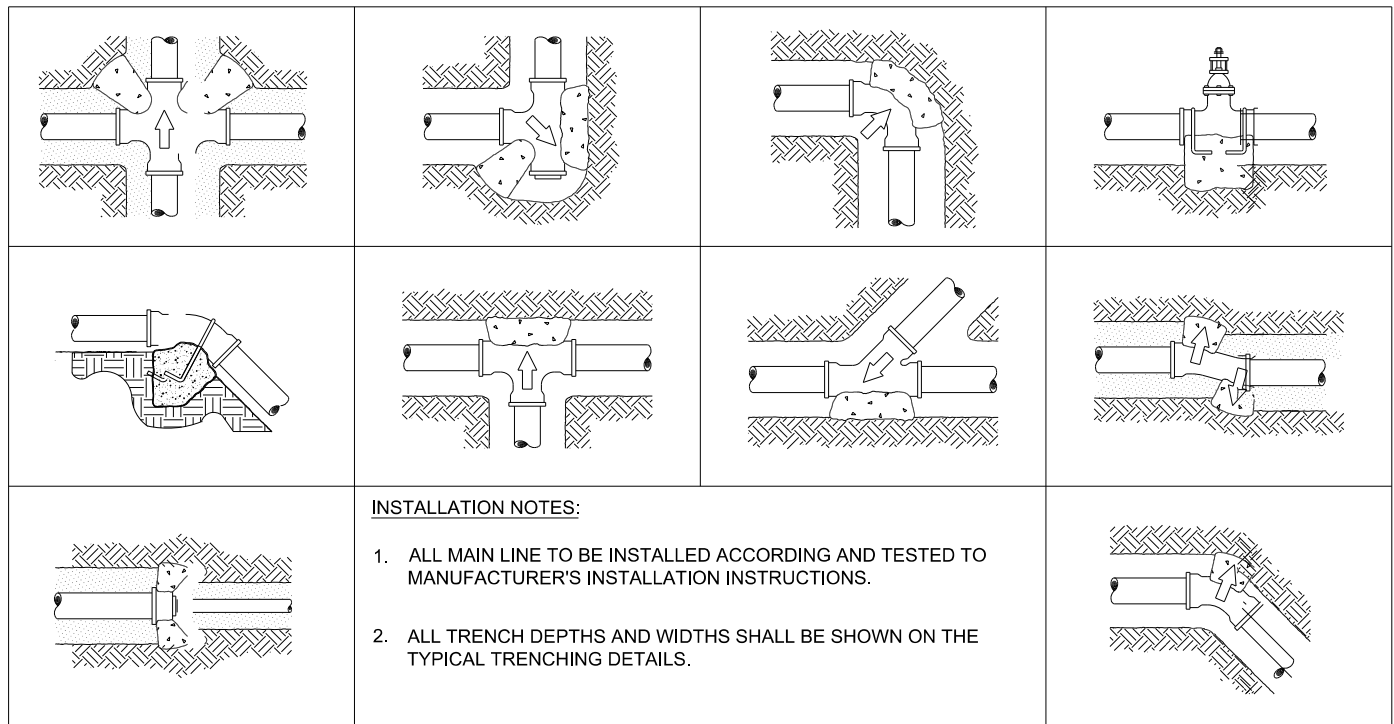
COORDINATE/DISCUSS PROJECT LIMITS WITH GENERAL CONTRACTOR TO ENSURE ALL IRRIGATION EQUIPMENT IS INSTALLED WITHIN PROJECT AREA.

REVISIONS					
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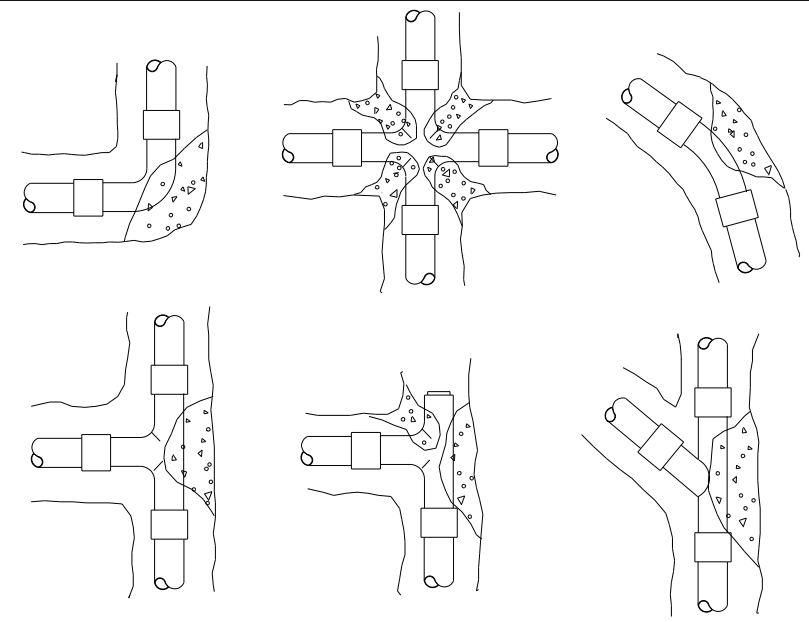
Kimley»Horn
 BRIAN A. GOOD, P.E.
 P.E. LICENSE NUMBER 56939
 445 24th STREET, SUITE 200
 VERO BEACH, FL 32960
 (772) 794-4100
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CITY OF FORT PIERCE
 OHIO AVENUE
 ROADWAY IMPROVEMENTS

IRRIGATION PLAN
 SHEET NO. 23



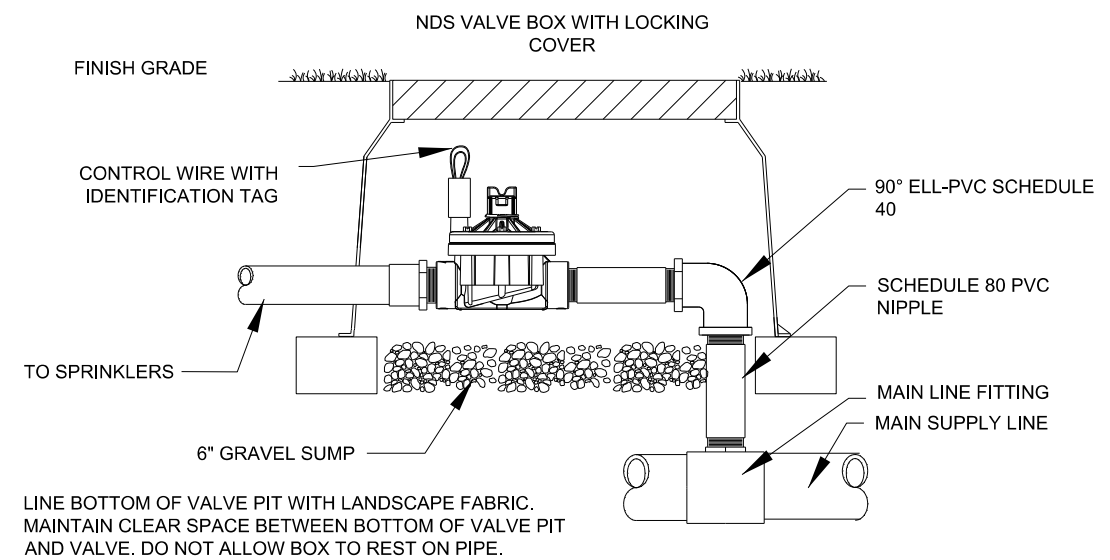
- INSTALLATION NOTES:**
1. ALL MAIN LINE TO BE INSTALLED ACCORDING AND TESTED TO MANUFACTURER'S INSTALLATION INSTRUCTIONS.
 2. ALL TRENCH DEPTHS AND WIDTHS SHALL BE SHOWN ON THE TYPICAL TRENCHING DETAILS.



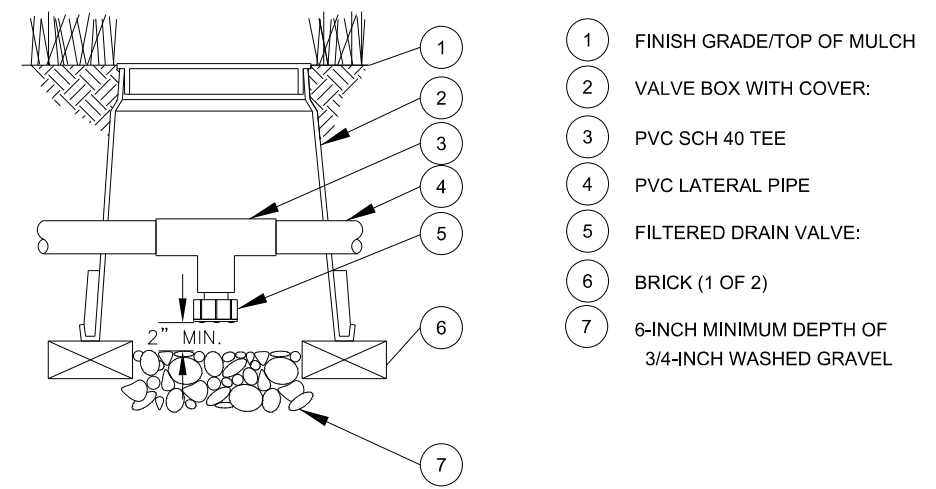
- INSTALLATION NOTES**
1. 3000 PSI CONCRETE OR BETTER IS TO BE USED FOR THRUST BLOCKS.
 2. FOR 45°/90° FITTINGS, MINIMUM OF 2 CUBIC FEET OF CONCRETE TO BE USED.
 3. FOR 22-1/2° FITTINGS, MINIMUM OF 0.5 CUBIC FEET OF CONCRETE TO BE USED.
 4. FOR TEES, MINIMUM OF 2 CUBIC FEET OF CONCRETE TO BE USED. THRUST
- BLOCKS REQUIRED FOR IRRIGATION MAINLINE 2 1/2" AND LARGER.

TYPICAL THRUST BLOCK SECTION NTS

THRUST BLOCK REINFORCEMENT SECTION NTS



TYPICAL CONTROL VALVE SECTION NTS



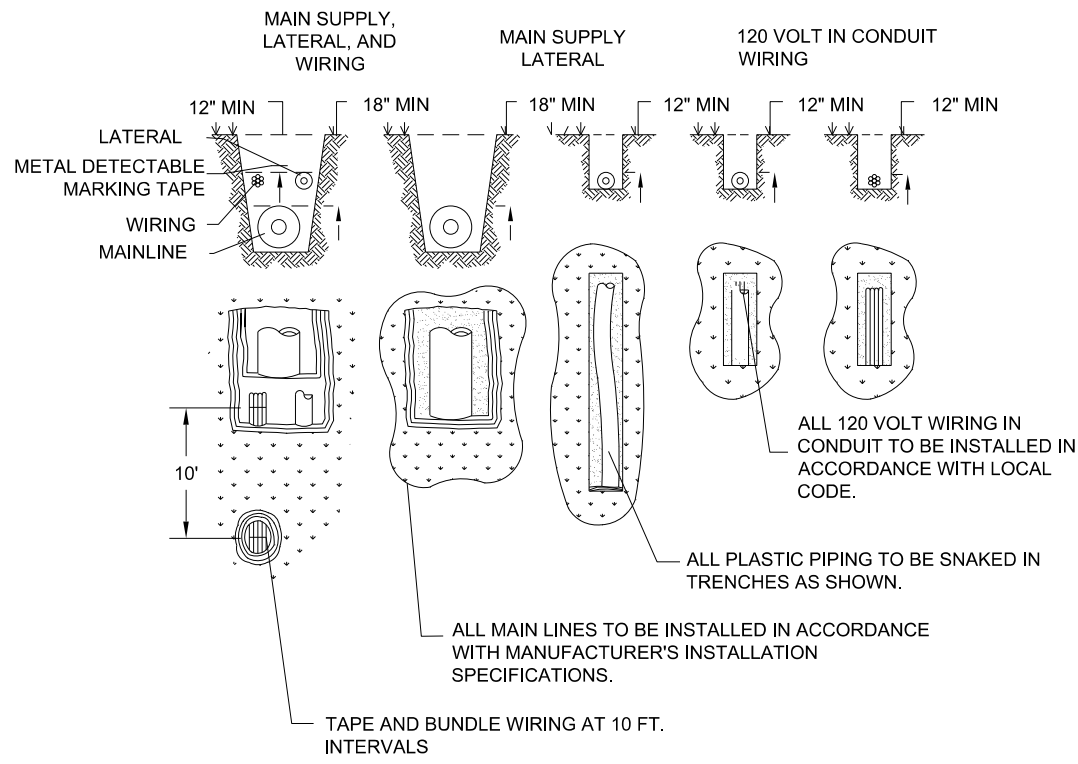
DRAIN VALVE SECTION NTS

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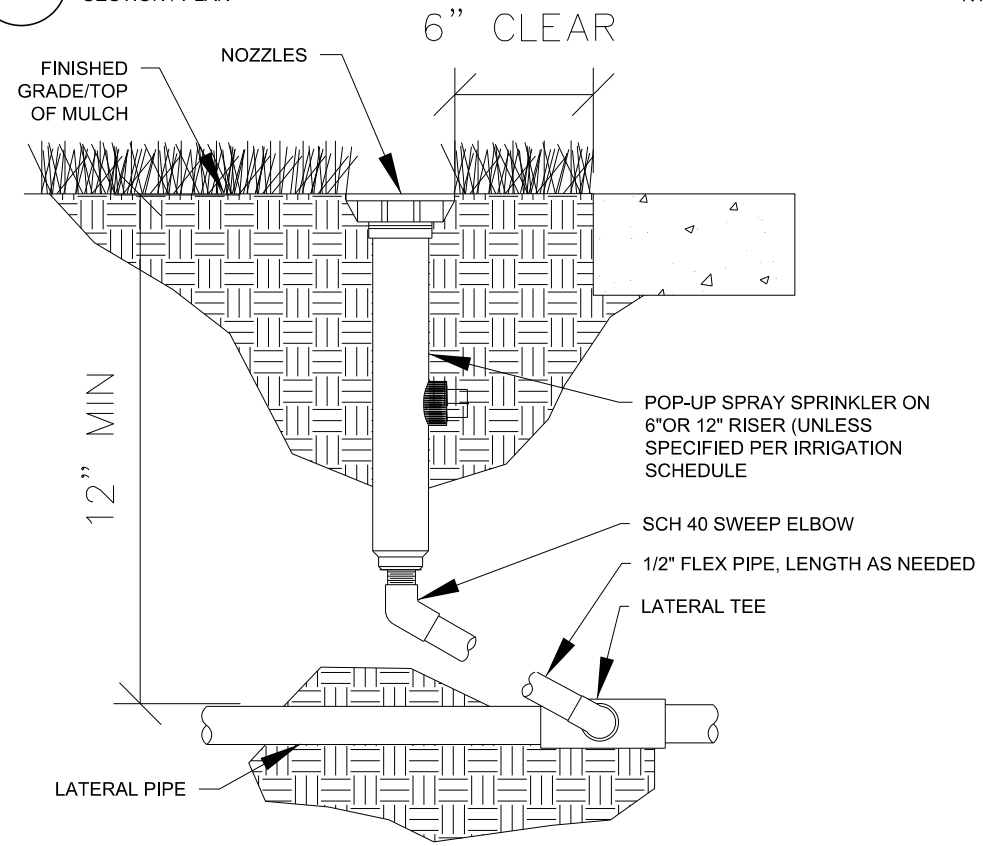
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 BRIAN A. GOOD, P.E.
 P.E. LICENSE NUMBER 56939
 445 24th STREET, SUITE 200
 VERO BEACH, FL 32960
 (772) 794-4100
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CITY OF FORT PIERCE
OHIO AVENUE
ROADWAY IMPROVEMENTS

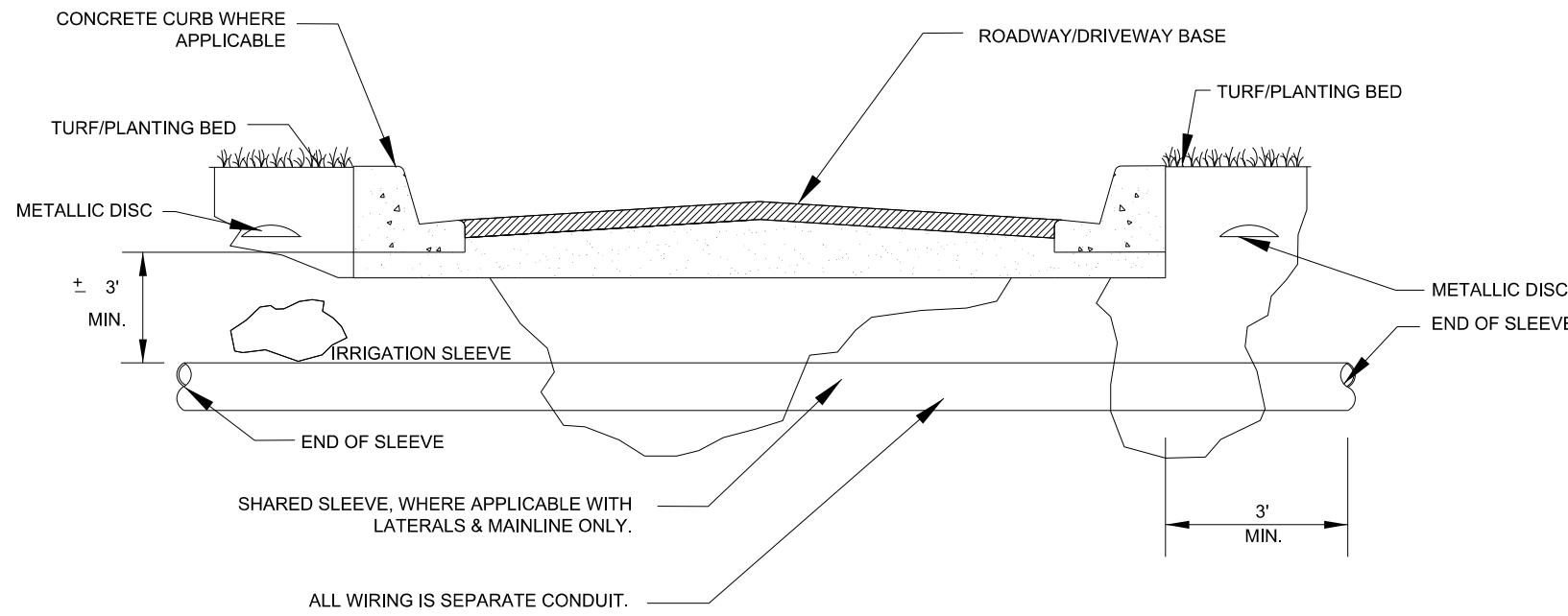
IRRIGATION DETAILS
 SHEET NO. 24



TYPICAL TRENCHING
SECTION / PLAN NTS

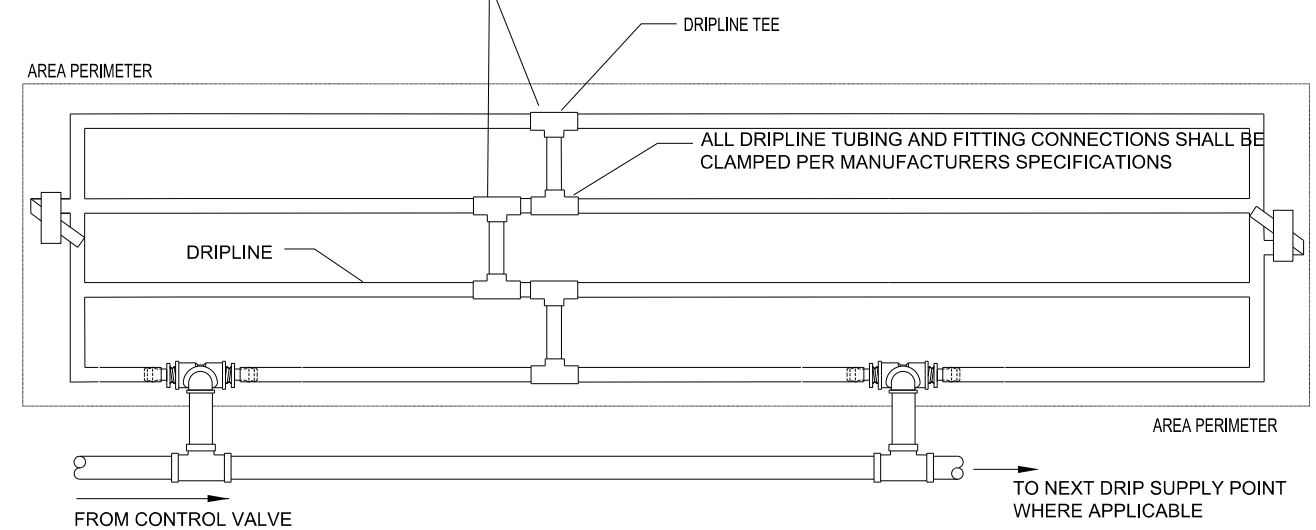


TYPICAL SPRAY / ROTAR HEAD
SECTION 1" = 1" NTS



TYPICAL SLEEVING
SECTION NTS

WHEN DRIPLINE REQUIRES MULTIPLE SUPPLY POINTS EACH POINT SHALL BE CONNECTED UTILIZING RAINBIRD FITTINGS.



TYPICAL DRIP LINE
PLAN NTS

NOTE:

1. DRIPLINE TUBING TO BE ROUTED IN THE PLANT MATERIAL BED WITH AT MAXIMUM LATERAL SPACING OF 16 INCHES.
2. DRIPLINE TUBING TO BE INSTALLED IN A GRID PATTERN. DRIPLINE TUBING SHALL NOT BE INSTALLED IN A LONG CONTINUOUS RUN.
3. CONTRACTOR TO REFER TO IRRIGATION PLAN FOR LOCATION OF CONTROL VALVES THAT UTILIZE MULTIPLE DRIPLINE SUPPLY CONNECTIONS (IF SHOWN).

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BRIAN A. GOOD, P.E.
P.E. LICENSE NUMBER 56939
445 24th STREET, SUITE 200
VERO BEACH, FL 32960
(772) 794-4100
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CITY OF FORT PIERCE
OHIO AVENUE
ROADWAY IMPROVEMENTS

IRRIGATION DETAILS

SHEET NO.
25

VALVE SCHEDULE

SYSTEM DEMAND

SYMBOL	MANUFACTURER/MODEL/DESCRIPTION	QTY	PSI
	HUNTER MP STRIP PROS-06-PRS40-CV-R TURF ROTATOR, 6" (15.24 CM) POPUP WITH FACTORY INSTALLED CHECK VALVE, RECLAIMED BODY CAP, PRESSURE REGULATED TO 40 PSI (2.76 BAR), MP ROTATOR NOZZLE ON PRS40 BODY. LST=IVORY LEFT STRIP, SST=BROWN SIDE STRIP, RST=COPPER RIGHT STRIP.	46	40
	HUNTER MP1000 PROS-12-PRS40-CV SHRUB ROTATOR, 12" (30.48 CM) POP-UP WITH CHECK VALVE, PRESSURE REGULATED TO 40 PSI (2.76 BAR), MP ROTATOR NOZZLE. M=MAROON ADJ ARC 90 TO 210, L=LIGHT BLUE 210 TO 270 ARC, O=OLIVE 360 ARC ON PRS40 BODY.	27	40
	HUNTER MP2000 PROS-12-PRS40-CV SHRUB ROTATOR, 12" (30.48 CM) POP-UP WITH CHECK VALVE, PRESSURE REGULATED TO 40 PSI (2.76 BAR), MP ROTATOR NOZZLE. K=BLACK ADJ ARC 90-210, G=GREEN ADJ ARC 210-270, R=RED 360 ARC ON PRS40 BODY.	6	40
	HUNTER MP CORNER PROS-12-PRS40-CV SHRUB ROTATOR, 12" (30.48 CM) POP-UP WITH FACTORY INSTALLED CHECK VALVE, PRESSURE REGULATED TO 40 PSI (2.76 BAR), MP ROTATOR NOZZLE. T=TURQUOISE ADJ ARC 45-105 ON PRS40 BODY.	1	40
	HUNTER MP STRIP PROS-12-PRS40-CV SHRUB ROTATOR, 12" (30.48 CM) POP-UP WITH FACTORY INSTALLED CHECK VALVE, PRESSURE REGULATED TO 40 PSI (2.76 BAR), MP ROTATOR NOZZLE. LST=IVORY LEFT STRIP, SST=BROWN SIDE STRIP, RST=COPPER RIGHT STRIP, ON PRS40 BODY.	9	40

NUMBER	MODEL	SIZE	TYPE	GPM	FRICION LOSS	VALVE LOSS	PSI	PSI @ POC	PRECIP
1	RAIN BIRD PEB-PRS-D	1"	TURF ROTARY	16.06	5.86	2.47	48.33	49.35	1.00 in/h
2	RAIN BIRD PEB-PRS-D	1-1/2"	SHRUB ROTARY	16.81	2.70	3.90	46.60	47.86	0.57 in/h

CRITICAL ANALYSIS

Generated: 2017-09-28 08:56
 P.O.C. NUMBER: 01
 Water Source Information: TIE INTO EXISTING MAIN

FLOW AVAILABLE
 Point of Connection Size: 1-1/2"
 Flow Available: 47.66 gpm

PRESSURE AVAILABLE
 Static Pressure at POC: 55.00 psi
 Pressure Available: 55.00 psi

DESIGN ANALYSIS
 Maximum Station Flow: 16.81 gpm
 Flow Available at POC: 47.66 gpm
 Residual Flow Available: 30.85 gpm

Critical Station: 1
 Design Pressure: 40.00 psi
 Friction Loss: 5.33 psi
 Fittings Loss: 0.53 psi
 Elevation Loss: 0.00 psi
 Loss through Valve: 2.47 psi
 Pressure Req. at Critical Station: 48.33 psi
 Loss for Fittings: 0.09 psi
 Loss for Main Line: 0.93 psi
 Loss for POC to Valve Elevation: 0.00 psi
 Loss for Backflow: 0.00 psi
 Critical Station Pressure at POC: 49.35 psi
 Pressure Available: 55.00 psi
 Residual Pressure Available: 5.65 psi

THIS IRRIGATION PLAN IS DESIGN TO THE FOLLOWING STATS:
 55 PSI AND 47.66 GPM. CONTRACTOR TO VERIFY WATER AVAILABILITY/PRESSURE AND CONTACT THE LANDSCAPE ARCHITECT PRIOR TO INSTALLATION IF A SYSTEM HAS +/- 5 PSI THAN DESIGN PRESSURE.

FLOW TOTALS
 Shrub Rotary: 16.8
 Turf Rotary: 16.1
 Total: 32.9 GPM

IRRIGATION SYSTEM USAGE:
 +/- 4,064.4 SF
 4,064 SF x .0875 = 355.6 CF (ASSUMING 1.05" OF IRRIGATION PRECIPITATION)
 356 CF x 7.854 (GALLONS TO COVER 1.05") = 2,796 GALLONS (COVER SITE WITH 1.05" OF IRRIGATION PRECIPITATION)

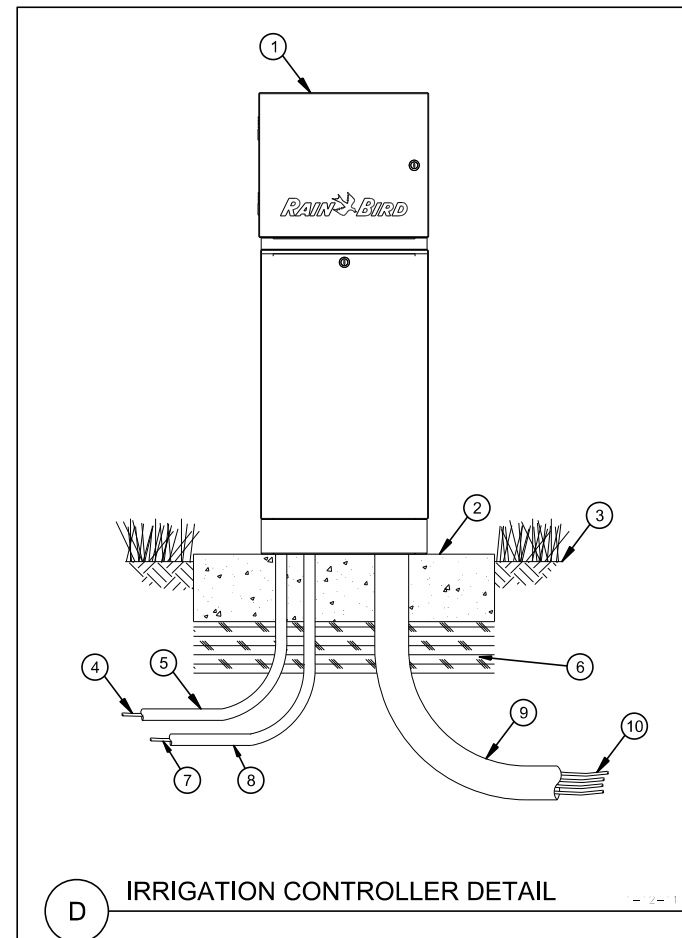
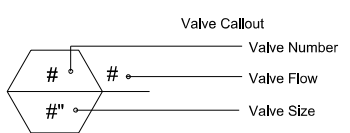
2,796 GALLONS / 7 DAYS = 399 GALLONS PER DAY (+/-)
 399 GALLONS PER DAY x 30.4 = 12,129.6 GALLONS PER MONTH (+/-)
 12,130 GALLONS PER MONTH x 12 = 145,560 GALLONS PER YEAR (+/-)

IRRIGATION SYSTEM USAGE:
 +/- 4,064.4 SF
 4,064 SF x .0875 = 355.6 CF (ASSUMING 1.05" OF IRRIGATION PRECIPITATION)
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 399 GALLONS PER DAY x 30.4 = 12,129.6 GALLONS PER MONTH (+/-)
 12,130 GALLONS PER MONTH x 12 = 145,560 GALLONS PER YEAR (+/-)

NOTE:
 - FIRST YEAR WATERING SCHEDULE TO BE 1" OF WATER PER WEEK.
 - CONTRACTOR TO PROVIDE A LAMINATED IRRIGATION SCHEDULE THAT SHALL BE ATTACHED TO THE IRRIGATION CONTROLLER.

SYMBOL	MANUFACTURER/MODEL/DESCRIPTION	QTY
	RAIN BIRD PEB-PRS-D 1", 1-1/2", 2" PLASTIC INDUSTRIAL VALVES. LOW FLOW OPERATING CAPABILITY, GLOBE CONFIGURATION. WITH PRESSURE REGULATOR MODULE.	2
	RAIN BIRD ESP8-LMXE W/ STAINLESS STEEL ENCLOSURE AND PEDESTAL	1
	POINT OF CONNECTION 1-1/2" TIE INTO EXISTING MAIN	1
	IRRIGATION LATERAL LINE: PVC CLASS 200 SDR 21	1,262 L.F.
	IRRIGATION MAINLINE: PVC SCHEDULE 40	65.5 L.F.
	PIPE SLEEVE: PVC SCHEDULE 40 MAINLINE SLEEVE	31.0 L.F.
	PIPE SLEEVE: PVC SCHEDULE 40 LATERAL SLEEVE	100.5 L.F.



- ① IRRIGATION CONTROLLER: RAIN BIRD IQ ESP-LXME SATELLITE CONTROLLER WITH IQ NCC RS232 CARTRIDGE IN LXMM METAL CABINET AND LXMPED METAL PEDESTAL. INSTALL CONTROLLER, CABINET AND PEDESTAL PER MANUFACTURER'S RECOMMENDATIONS.
- ② CONCRETE PAD: 6-INCH MINIMUM THICKNESS (3 KSI MIN.)
- ③ FINISH GRADE
- ④ POWER SUPPLY WIRE
- ⑤ 1-INCH SCH 40 PVC CONDUIT AND FITTINGS AND SWEEP ELL TO POWER SUPPLY
- ⑥ COMPACTED SUBGRADE
- ⑦ RS232 SERIAL CABLE TO IQ CENTRAL CONTROL COMPUTER (MAXIMUM LENGTH 50 FEET)
- ⑧ 1-INCH SCH 40 PVC CONDUIT, FITTINGS AND SWEEP ELL FOR RS232 SERIAL CABLE TO IQ CENTRAL CONTROL COMPUTER
- ⑨ 3-INCH SCH 40 PVC CONDUIT, FITTINGS AND SWEEP ELL FOR STATION WIRES
- ⑩ WIRES TO REMOTE CONTROL VALVES

- NOTES:
- IQ ESP-LXME CONTROLLER IS AVAILABLE IN 8- OR 12-STATION BASE MODELS. ADDITIONAL MODULES IN 4-, 8- AND 12-STATION VERSIONS MAY BE ADDED TO BRING THE CONTROLLER UP TO 48 STATIONS MAXIMUM.
 - FOR EASE OF INSTALLATION INTO A CONTROLLER WITH MORE THAN 24 STATIONS, INSTALL A JUNCTION BOX AT THE BASE OF CONTROLLER AND TRANSITION LARGER VALVE AND COMMON WIRES FROM FIELD TO 18 AWG MULTI CONDUCTOR WIRE TO BE USED IN CONTROLLER.
 - PROVIDE PROPER GROUNDING COMPONENTS TO ACHIEVE GROUND RESISTANCE OF 10 OHMS OR LESS.
 - USE PE-CABLE WITH SHORT HAUL MODEMS FOR INSTANCES WHERE CONTROLLER IS MORE THAN 50 FEET FROM IQ CENTRAL CONTROL COMPUTER.

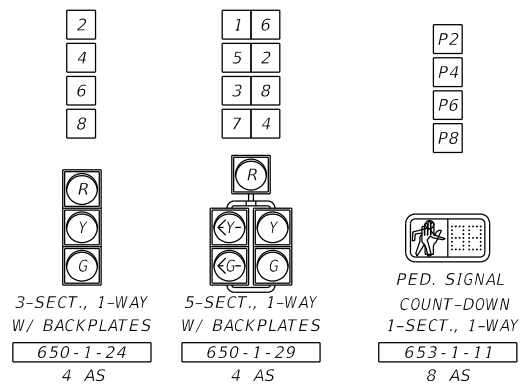
REVISIONS						Kimley Horn BRIAN A. GOOD, P.E. P.E. LICENSE NUMBER 56939 445 24th STREET, SUITE 200 VERO BEACH, FL 32960 (772) 794-4100 CERTIFICATE OF AUTHORIZATION: 00000696	CITY OF FORT PIERCE OHIO AVENUE ROADWAY IMPROVEMENTS	IRRIGATION DETAILS	SHEET NO.
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION				26

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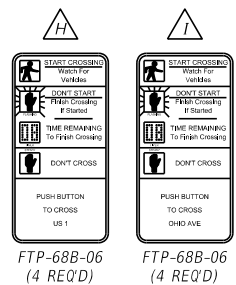
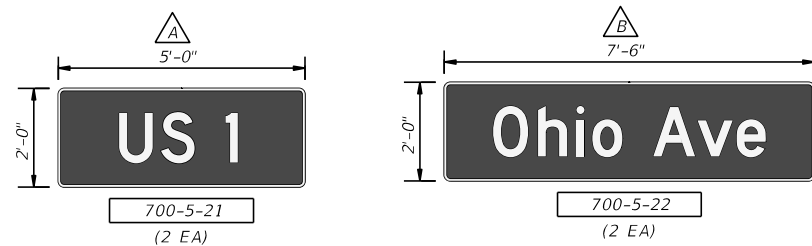
1. CONTRACTOR SHALL CONTACT CITY OF FORT PIERCE PROJECT MANAGER ED SEISSIGER AT (772-460-2200) 24 HOURS PRIOR TO BEGINNING ANY WORK AT THE INTERSECTION.
2. ALL EQUIPMENT/ MATERIALS TO BE APPROVED BY THE CITY OF FORT PIERCE TRAFFIC OPERATIONS DIVISION.
 - A. CITY OF FORT PIERCE IS STANDARDIZED ON ECONOLITE CABINETS, CONTROLLERS, AND VIDEO DETECTION. ALL SIGNAL EQUIPMENT IS TO BE COMPATIBLE WITH EXISTING CITY OF FORT PIERCE CLOSED LOOP SYSTEM. MUST HAVE KNOWLEDGE OF THE ECONOLITE AIRES SYSTEM.
 - B. ALL CABINETS TO BE TYPE V-TS2-T1 16 PHASE (8 SIGNAL PHASES, 4 PED AND 4 O/L) AND SHALL HAVE ILLUMINATED SIGN PANEL WITH PHOTOCCELL, GENERATOR PANEL WITH TRANSFER SWITCH, DOOR MOUNTED FLEXIBLE LIGHT (GOOSE NECK). HONDA GENERATOR (EU-3000-1S) FOR EMERGENCY POWER. US ROBOTICS 56K FAX MODEM WITH A MIN 500W UPS IN ALL MASTER CABINETS.
 - C. ELECTRICAL SERVICE TO BE 2-120 VOLTS, ONE WITH A 50 AMP BREAKER AND ONE WITH A 20 AMP BREAKER.
 - D. SERVICE RISER-USE 1 1/2" IMC ON SERVICE POLE. CONTRACTOR SHALL INSTALL RIGID CONDUIT STRAPS (ONE AT 18 INCHES ABOVE GRADE AND ONE AT 12 INCHES ABOVE AND/OR BELOW SERVICE CAN. (5 FOOT MAXIMUM SPACING) (DOES NOT APPLY TO MAST ARMS).
 - E. WIRING TO BE AS PER CITY RECOMMENDATIONS SHEET. CONTRACTOR SHALL VERIFY CITY OF FORT PIERCE COLOR CODES PRIOR TO ORDERING WIRE.
 - F. CONTROLLER BASE AND SERVICE PAD TO BE MONOLITHIC POUR WITH A FINISHED GRADE 18" ABOVE BACK OF CURB.
 - G. MAST ARM AND POLES SHALL BE GALVANIZED (AND NOT PAINTED). WITH ELONGATED HANDHOLE COVERS AND 25 POSITIONS STAINLESS STEEL TERMINAL BLOCK SHALL BE MOUNTED MIN.
3. 20 CONDUCTOR SIGNAL CABLE TO EACH MAST ARM MIN. C OR J HOOKS AT ARM WITH HAND HOLE.
4. CITY OF FORT PIERCE WILL REQUIRE AN INSPECTION OF SERVICE PRIOR TO CONTACTING POWER COMPANY FOR HOOK-UP.
5. CONTRACTOR WILL INSURE A MINIMUM OF ONE (1) IMSA CERTIFIED LEVEL II SIGNAL TECHNICIAN IS PRESENT DURING ALL PHASES OF CONSTRUCTION OR IS AVAILABLE WITHIN (2) HOURS NOTICE - 24 HOURS PER DAY / 7 DAYS PER WEEK FROM THE LETTING OF CONTRACT TO FINAL ACCEPTANCE OF COMPLETED PROJECT.
6. THE CONTRACTOR SHALL PROVIDE FOUR COPIES OF MARKED-UP (AS-BUILT) CONSTRUCTION PLANS, AND CAD FILE OF SUCH, AT THE TIME OF SIGNAL ACCEPTANCE INSPECTION BY CITY OF FORT PIERCE. (AS-BUILT SHALL BE ENLARGED A MIN. OF 200%).
7. THE CONTRACTOR SHALL NOTIFY CITY OF FORT PIERCE TRAFFIC OPERATIONS AT LEAST 24-HRS IN ADVANCE OF INSTALLING GROUND RODS OR UNDERGROUND CONDUIT SO THAT THESE OPERATIONS MAY BE OBSERVED. 25 OHM MAX RESISTANCE ON ALL GROUND WIRES.
8. THE CONTRACTOR SHALL MAKE ALL VIDEO DETECTORS INSTALLED AS PART OF THE PROJECT FULLY OPERATIONAL IN ACCORDANCE WITH THEIR ASSOCIATED INTERSECTION SIGNAL TIMING CHART WITHIN 24 HOURS OF THEIR INSTALLATION.
9. ALL FIELD WIRING SHALL BE NEATLY BUNDLED AND CLEARLY IDENTIFIED WITH PERMANENT LEGIBLE, WEATHERPROOF TAGS THAT ARE SECURELY ATTACHED TO EACH CABLE. THE TAGGING SYSTEM PROPOSED SHALL BE SUBMITTED FOR APPROVAL WITH ALL OF THE OTHER EQUIPMENT SUBMITTALS REQUIRED FOR THIS PROJECT.
10. THREE SPARE WIRES ARE REQUIRED PER SIGNAL CABLE. SPARES SHALL BE BOUND AND GROUNDED IN CABINET.
11. CITY OF FORT PIERCE REQUIRES LED COUNTDOWN PEDESTRIAN SIGNAL HEADS WITH (T) BASES AND ALUMINUM-4 1/2" DIA. POLE.
12. ONE EXTRA CONDUIT WITH PULL WIRE AND ONE SPARE CONDUIT ON ALL DIRECTIONAL BORES SHALL BE PROVIDED.
13. ALL ILLUMINATED SIGNS SHALL BE RIGID MOUNT AND LED EDGE-LIT.
14. CONTRACTOR IS RESPONSIBLE FOR ALL LOCATES FROM THE LETTING OF CONTRACT TO FINAL ACCEPTANCE.
15. WHENEVER SIGNAL WORK IS BEING PERFORMED IN AN INTERSECTION (INSTALLING CONDUIT IN THE STREET, REMOVING EXISTING SIGNAL EQUIPMENT, INSTALLING NEW SIGNAL EQUIPMENT, INSTALLING CAMERAS ETC.) AN ENFORCEMENT OFFICER SHALL DIRECT TRAFFIC. THE COST OF THE TRAFFIC CONTROL OFFICER SHALL BE INCLUDED UNDER PAY ITEM 102-1.
16. ALL TRAFFIC SIGNAL HEADS SHALL HAVE BACKPLATES AND SHALL BE LED.
17. THERE SHALL BE A 1-YEAR WARRANTY ON ALL PARTS FROM TIME OF FINAL ACCEPTANCE.
18. A 2 MAN BUCKET SHALL BE PROVIDED AT TIME OF INSPECTION.
19. THE CONTRACTOR SHALL PLACE PORTABLE CHANGEABLE (VARIABLE) MESSAGE SIGNS (PCMS) PRIOR TO CONSTRUCTION ACTIVITIES TO NOTIFY THE TRAVELING PUBLIC OF CONSTRUCTION ACTIVITIES.
20. EXCEPT AS OTHERWISE INDICATED THE FOLLOWING STANDARDS AND SPECIFICATION SHALL APPLY TO CONSTRUCTION AND MATERIALS FOR THIS PROJECT: THE CITY OF FORT PIERCE SPECIFICATIONS, THE FDOT DESIGN STANDARDS DATED FY 2017-2018, THE FDOT STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION DATED 2017, THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD) 2009 EDITION WITH REVISIONS.
21. THE CONTRACTOR SHALL USE CAUTION WHEN WORKING IN OR AROUND AN AREA OF OVERHEAD TRANSMISSION AND UNDERGROUND UTILITIES.
22. TUNNEL VISORS ARE REQUIRED FOR ALL SIGNAL HEADS AND ARE INCLUDED IN PAY ITEMS 650-1-24 AND 650-1-29.
23. THE APPROPRIATE UTILITY COMPANY SHALL BE NOTIFIED BY THE CONTRACTOR FORTY-EIGHT (48) HOURS IN ADVANCE OF ANY EXCAVATION INVOLVING ITS UTILITIES SO THAT A COMPANY REPRESENTATIVE CAN BE PRESENT.
24. LOCATIONS OF UTILITIES SHOWN ON THE PLANS ARE APPROXIMATE ONLY. THE EXACT LOCATION SHALL BE DETERMINED BY THE CONTRACTOR PRIOR TO EXCAVATION.
25. A DISCONNECT SWITCH SHALL BE MOUNTED ON A SEPARATE POLE CLOSE TO THE CONTROLLER.
26. THE CONTROLLER BASE SHALL HAVE TWO (2) CONDUITS FOR COMMUNICATION CABLE IN ADDITION TO TWO (2) SPARES THAT ARE REQUIRED. THEY SHALL BE TERMINATED INTO THE COMMUNICATION PULL BOX.
27. CONTRACTOR SHALL COORDINATE WITH FLORIDA POWER AND LIGHT TO CONNECT ELECTRICAL SERVICE FEED LOCATION.
28. THE CONTROLLER CABINET SHALL BE ORIENTED WITH THE CABINET DOOR OPENING AWAY FROM THE INTERSECTION, SO THAT A TECHNICIAN CAN VIEW THE ENTIRE INTERSECTION WHILE WORKING IN THE CABINET.
29. A CONCRETE TECHNICIAN PAD SHALL BE CONSTRUCTED ADJACENT TO THE CONTROLLER AT SIDEWALK ELEVATION WITH A 6" EYEBOLT PROTRUDING FROM THE CONCRETE AT THE HINGE SIDE OF THE CABINET TO SECURE A GENERATOR.
30. TOP OF MAST ARM FOUNDATIONS WITHIN THE SIDEWALKS SHALL MATCH FINISH CONTOUR AND ELEVATION OF SIDEWALKS WITHOUT JOINTS. CONTRACTOR IS RESPONSIBLE FOR THE PROPER BOLT PROJECTION ABOVE FINISHED SIDEWALK GRADE.
31. OPTICAL VEHICLE DETECTOR SHALL BE ECONOLITE TERRA, AND SHALL BE CAPABLE OF MULTI-ZONE DETECTION. DETECTORS SHALL BE MOUNTED ABOVE THE MAST ARM USING ASTRO BRACKET HARDWARE AT A HEIGHT CAPABLE OF THE REQUIRED DETECTION AND AS RECOMMENDED BY THE SYSTEM MANUFACTURER. SHOP DRAWINGS TO BE SUBMITTED TO THE ST. LUCIE COUNTY TRAFFIC OPERATIONS DIVISION FOR APPROVAL AND MUST COMPLY WITH THE COUNTY'S VIDEO SYSTEM. ALL VIDEO POWER CABLES, PROCESSORS AND EQUIPMENT SHALL BE PROVIDED FOR A COMPLETE AND OPERATIONAL VIDEO DETECTION SYSTEM. MANUFACTURER SHALL BE PRESENT AT TURN ON FOR PROGRAMMING AND SETUP. THE CONTRACTOR SHALL MAKE ALL VIDEO DETECTORS FULLY OPERATIONAL WITHIN 24 HOURS OF THEIR INSTALLATION.
32. ALL PEDESTRIAN PUSH BUTTONS SHALL COMPLY WITH THE AMERICANS WITH DISABILITIES ACT AND FDOT INDEX 17784.
33. ALL ILLUMINATED STREET NAME SIGNS SHALL BE SINGLE SIDED, WITH WHITE LETTERS ON GREEN BACKGROUND, BE RIGIDLY MOUNTED TO THE ARM AND BE WIRED TO A SINGLE PHOTO CELL LOCATED INSIDE THE CONTROLLER CABINET. COST OF PHOTO CELL SHALL BE INCLUDED IN THE COST OF ILLUMINATED SIGNS.
34. ALL NEW CONDUIT RUNS SHOWN ON THE PLANS ARE SCHEMATIC AND MAY REQUIRE FIELD ADJUSTMENT.
35. FINAL LOCATION AND ELEVATION OF ALL TRAFFIC SIGNAL POLE/MAST ARM ASSEMBLY EQUIPMENT SHALL BE FIELD VERIFIED BY THE CONTRACTOR PRIOR TO PROCUREMENT OF POLE/MAST ARM ASSEMBLIES TO VERIFY THAT THE ASSEMBLIES CAN BE INSTALLED IN THE LOCATIONS AS SPECIFIED IN THESE PLANS.
36. ALL SIGNS AND TRAFFIC SIGNAL EQUIPMENT THAT ARE REMOVED SHALL BE TURNED OVER TO CITY OF FORT PIERCE, WHICH IS THE MAINTAINING AGENCY AS DIRECTED BY THE ENGINEER. THE COST OF DELIVERY TO CITY OF FORT PIERCE SHALL BE INCLUDED IN THE REMOVAL OF RELATED SIGNAL PAY ITEM.
37. PULL BOXES ARE TO BE PLACED BEHIND CURB AND GUTTER, UNLESS CURB AND GUTTER ARE NOT PRESENT. IF CURB AND GUTTER ARE NOT PRESENT, PULL BOXES SHALL BE PLACED A MINIMUM OF 4 FEET FROM THE EDGE OF PAVEMENT OR AT THE BACK OF EXISTING RIGHT-OF-WAY, OR AS DIRECTED BY THE ENGINEER TO AVOID EXISTING UTILITIES.
38. THE CONTRACTOR SHALL HAND DIG HOLES FOR CONDUIT OR POLE FOUNDATIONS AT LOCATIONS WHERE THE DEPTH OF ANY UTILITY LINE MAY BE IN CONTACT WITH THE PROPOSED INSTALLATION.
39. REFER TO ROADWAY GENERAL NOTES FOR UTILITY CONTACT INFORMATION.
40. THE CONTROLLER SHALL OPERATE AS SIGNAL OPERATING PLAN 10 (SEE FDOT INDEX 17870) AS SHOWN IN PLANS.
41. SIGNAL TIMING DISPLAYED FOR LOCAL OPERATION ARE SUGGESTED TIMINGS - ACTUAL TIMINGS AND COORDINATION PLANS ARE TO BE DETERMINED BY CITY OF FORT PIERCE TRAFFIC OPERATIONS DIVISION REPRESENTATIVES.
42. NON APL/QPL SIGNALIZATION MATERIALS ARE TO BE SUBMITTED ON FDOT FORM NO. QF-72-01-1 "REQUEST FOR PRODUCT CONSIDERATION" TO FDOT DISTRICT 4 TRAFFIC OPERATIONS FOR APPROVAL.

REVISIONS						 <small>BRIAN A. GOOD, P.E. P.E. LICENSE NUMBER 56939 445 24th STREET, SUITE 200 VERO BEACH, FL 32960 (772) 794-4100 CERTIFICATE OF AUTHORIZATION: 00000696</small>	CITY OF FORT PIERCE OHIO AVENUE ROADWAY IMPROVEMENTS	SIGNALIZATION GENERAL NOTES	SHEET NO. 27
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION				

SIGNAL HEAD DETAILS



SIGN DETAILS



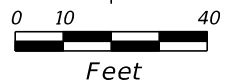
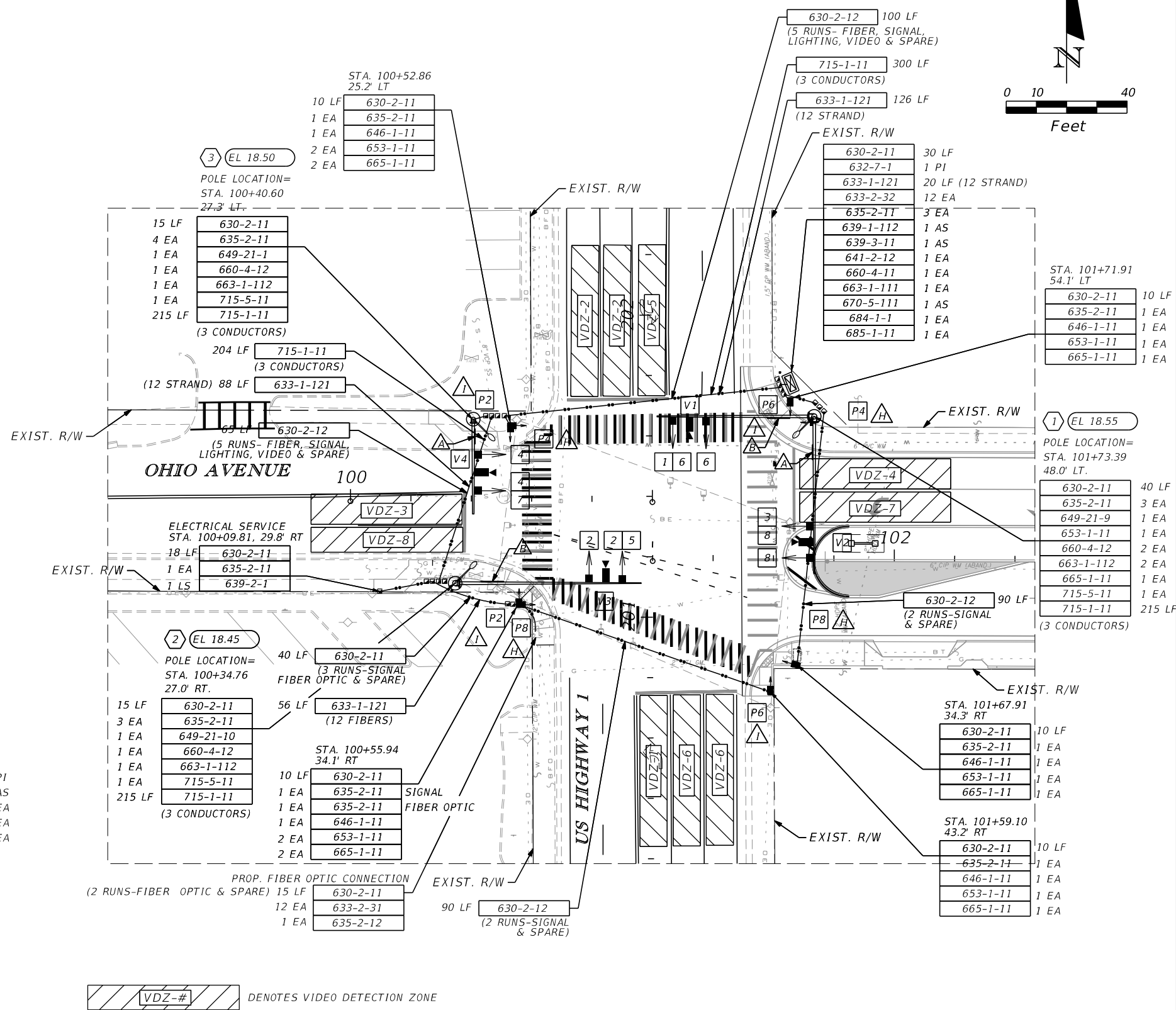
PEDESTRIAN PUSH BUTTON SIGNS FTP-68B-06 INCLUDED IN THE COST OF PAY ITEM 665-1-11.

POSTED SPEED LIMITS:
US HIGHWAY 1 - 45 MPH
OHIO AVENUE - 30 MPH

SEE SHEET 28A FOR NOTES, CONTROLLER TIMINGS, SIGNAL OPERATIONS PLAN, ETC.

REMOVAL ITEMS

632-7-6	1 PI
639-1-610	1 AS
641-2-80	4 EA
646-1-60	1 EA
670-5-600	1 EA



REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

Kimley Horn

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P.E. LICENSE NUMBER 56939
445 24th STREET, SUITE 200
VERO BEACH, FL 32960
(772) 794-4100
CERTIFICATE OF AUTHORIZATION: 00000696

CITY OF FORT PIERCE

OHIO AVENUE
ROADWAY IMPROVEMENTS

SIGNAL PLANS

SHEET NO. 28

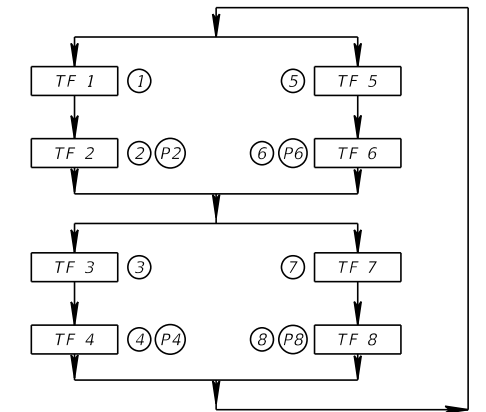
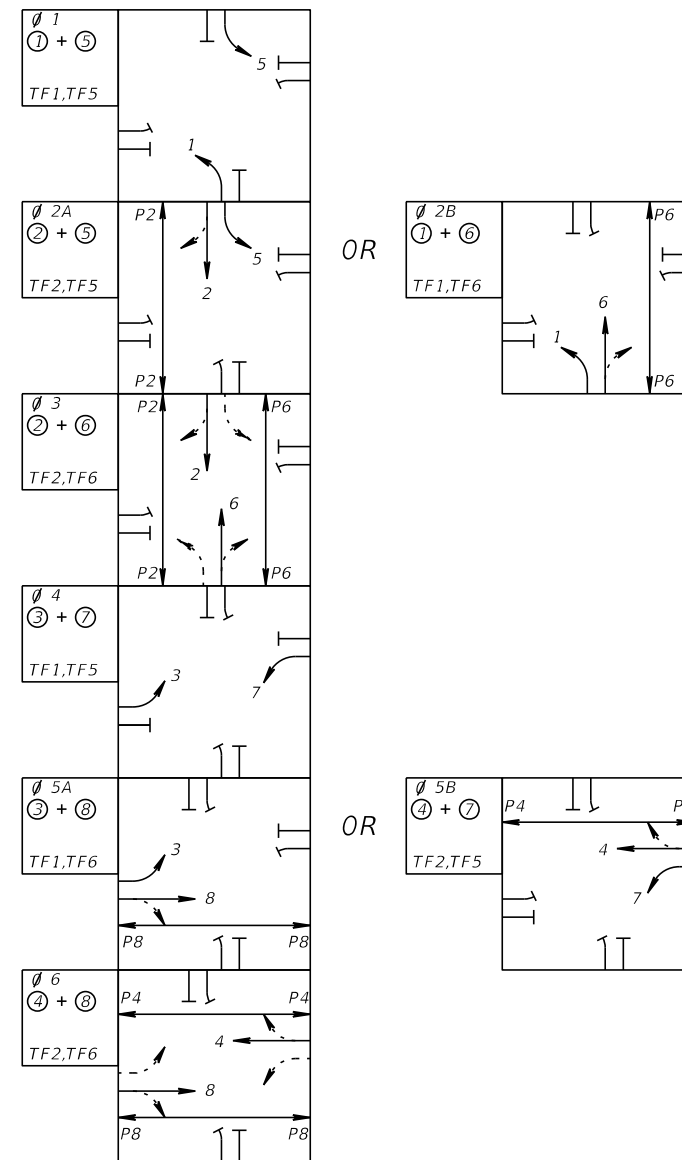
DETECTION CAMERA ASSIGMENTS				
CAMERA NO.	ZONE NO.	DETECTOR OPERATION	TIMING FUNCTION	DELAY TIME (SEC)
V1	1	NORMAL	1	-
	6	NORMAL	6	-
V2	3	NORMAL	3	-
	8	NORMAL	8	-
V3	2	NORMAL	2	-
	5	NORMAL	5	-
V4	4	NORMAL	4	-
	7	NORMAL	7	-

DETECTION CAMERA ASSIGMENTS AND DETECTION ZONE AREAS ARE PRELIMINARY AND MAY REQUIRE FIELD ADJUSTMENT BY THE CONTRACTOR DURING INSTALLATION. DELAY TIME IS INITIAL AND MAY REQUIRE FIELD ADJUSTING AS DIRECTED BY PROJECT ENGINEER.

CONTROLLER OPERATIONS

1. MAJOR STREET: US HIGHWAY 1 (MOVEMENTS 2 AND 6)
MINOR STREET: OHIO AVENUE (MOVEMENTS 4 AND 8)
2. FLASHING OPERATION: MOVEMENTS 2 AND 6 - YELLOW
MOVEMENTS 4 AND 8 - RED
3. ALL SIGNAL TIMING SHALL BE PROVIDED BY FDOT DISTRICT 4 TRAFFIC ENGINEERING
4. CABINET DOOR SHALL OPEN AWAY FROM THE INTERSECTION.

ASSOCIATED PHASE MOVEMENTS



REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

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 445 24th STREET, SUITE 200
 VERO BEACH, FL 32960
 (772) 794-4100
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CITY OF FORT PIERCE
OHIO AVENUE
ROADWAY IMPROVEMENTS

SIGNAL PLAN
 SHEET NO. 28A

STANDARD MAST ARM ASSEMBLIES DATA TABLE											Table Date 11-01-16
STRUCTURE ID NUMBERS	DESIGNATION	FIRST ARM		SECOND ARM		UF (deg)	LL (deg)	POLE			DRILLED SHAFT ID
		ARM ID	FAA (ft.)	ARM ID	SAA (ft.)			POLE ID	UAA (ft.)	UB (ft.)	
1	A50/D-A50/D-P3/D/L	A50/D	-	A50/D	-	90	45	P3/D/L	-	20	DS/14/4.5
2	A60/S-P4/S/L	A60/S	-	-	-	-	45	P4/S/L	-	20	DS/14/4.5
3	A30/S-P1/S/L	A30/S	-	-	-	-	45	P1/S/L	-	20	DS/12/4.5

NOTES [Notes Date 11-01-16]:

1. If an entry appears in column FAA, a shorter arm is required. This is obtained by removing length from the arm tip and the arm length shortened from FA to FAA. SAA Similar.
2. If an entry appears in column UAA, a shorter pole is required. This is obtained by removing length from the pole tip and the pole height shortened from UA to UAA.
3. Arm mounting height UB must be between 18-22 feet.
4. Pole types P2 and larger require a minimum 4.5 foot diameter drilled shaft. Pole types P5 and larger require a minimum 5.0 foot diameter drilled shaft.
5. Work this sheet with the Signal Designer's "Mast Arm Tabulation". See "Mast Arm Tabulation" for special instructions that include non-standard Handhole location, paint color, terminal compartment requirement, and pedestrian features.
6. Work with Index 17743 and 17745.
7. Soil criteria meet the minimum values set forth in IDS Index No. 17743. For geotechnical information refer to "Subsurface Soil Exploration and Geotechnical Engineering Evaluation" by Ardaman & Associates, Inc. (File No. 17-5460) dated September 26, 2017, signed/sealed by Daniel J. Zrallack, P.E. (P.E. No. 63911).

REVISIONS						 <small>BRIAN A. GOOD, P.E. P.E. LICENSE NUMBER 56939 445 24th STREET, SUITE 200 VERO BEACH, FL 32960 (772) 794-4100 CERTIFICATE OF AUTHORIZATION: 00000696</small>	CITY OF FORT PIERCE OHIO AVENUE ROADWAY IMPROVEMENTS	STANDARD MAST ARM ASSEMBLIES DATA TABLE	SHEET NO.
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION				30

GENERAL EROSION NOTES

MAINTENANCE

A. THE STORMWATER POLLUTION PREVENTION PLAN IS COMPRISED OF THIS DRAWING, THE STANDARD DETAILS, THE PLAN NARRATIVE, ATTACHMENTS INCLUDED IN SPECIFICATIONS, PLUS THE PERMIT AND ALL SUBSEQUENT REPORTS AND RELATED DOCUMENTS.

B. ALL CONTRACTORS AND SUBCONTRACTORS INVOLVED WITH STORM WATER POLLUTION PREVENTION SHALL OBTAIN A COPY OF THE STORM WATER POLLUTION PREVENTION PLAN AND THE STATE OF FLORIDA NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM GENERAL PERMIT (NPDES PERMIT) AND BECOME FAMILIAR WITH THEIR CONTENTS.

C. CONTRACTOR SHALL IMPLEMENT BEST MANAGEMENT PRACTICES AS REQUIRED BY THE SWPPP. ADDITIONAL BEST MANAGEMENT PRACTICES SHALL BE IMPLEMENTED AS DICTATED BY CONDITIONS.

D. BEST MANAGEMENT PRACTICES (BMP'S) AND CONTROLS SHALL CONFORM TO FEDERAL, STATE, OR LOCAL REQUIREMENTS OR MANUAL OF PRACTICE, AS APPLICABLE CONTRACTOR SHALL IMPLEMENT ADDITIONAL CONTROLS AS DIRECTED BY PERMITTING AGENCY OR THE CITY.

F. CONTRACTOR SHALL MINIMIZE CLEARING TO THE MAXIMUM EXTENT PRACTICAL OR AS REQUIRED BY THE GENERAL PERMIT.

G. GENERAL CONTRACTOR SHALL DENOTE ON PLAN THE TEMPORARY STORAGE AREA WHICH SHALL ALSO BE USED AS THE EQUIPMENT MAINTENANCE AND CLEANING AREA, EMPLOYEE PARKING AREA, AND AREA FOR LOCATING PORTABLE FACILITIES, OFFICE TRAILERS, AND TOILET FACILITIES.

H. ALL WASH WATER (CONCRETE TRUCKS, VEHICLE CLEANING, EQUIPMENT CLEANING, ETC.) SHALL BE DETAINED AND PROPERLY TREATED OR DISPOSED.

I. SUFFICIENT OIL AND GREASE ABSORBING MATERIALS AND FLOTATION BOOMS SHALL BE MAINTAINED ON SITE OR READILY AVAILABLE TO CONTAIN AND CLEAN-UP FUEL OR CHEMICAL SPILLS AND LEAKS.

J. DUST ON THE SITE SHALL BE CONTROLLED. THE USE OF MOTOR OILS AND OTHER PETROLEUM BASED OR TOXIC LIQUIDS FOR DUST SUPPRESSION OPERATIONS IS PROHIBITED.

K. RUBBISH, TRASH, GARBAGE, LITTER, OR OTHER SUCH MATERIALS SHALL BE DEPOSITED INTO SEALED CONTAINERS. MATERIALS SHALL BE PREVENTED FROM LEAVING THE PREMISES THROUGH THE ACTION OF WIND OR STORMWATER DISCHARGE INTO DRAINAGE DITCHES OR WATERS OF THE STATE.

L. ALL STORM WATER POLLUTION PREVENTION MEASURES PRESENTED ON THIS PLAN, AND IN THE STORM WATER POLLUTION PREVENTION PLAN, SHALL BE INITIATED AS SOON AS PRACTICABLE.

M. STABILIZATION PRACTICES SHOULD BE INITIATED AS SOON AS PRACTICAL, BUT IN NO CASE MORE THAN 7 DAYS WHERE CONSTRUCTION HAS TEMPORARILY CEASED.

N. DISTURBED PORTIONS OF THE SITE WHERE CONSTRUCTION ACTIVITY HAS PERMANENTLY STOPPED SHALL BE PERMANENTLY SODDED. THESE AREAS SHALL BE SODDED NO LATER THAN 7 DAYS AFTER THE LAST CONSTRUCTION ACTIVITY OCCURRING IN THESE AREAS. REFER TO THE GRADING PLAN AND/OR LANDSCAPE PLAN.

O. IF THE ACTION OF VEHICLES TRAVELING OVER THE GRAVEL CONSTRUCTION ENTRANCES IS NOT SUFFICIENT TO REMOVE THE MAJORITY OF DIRT OR MUD, THEN THE TIRES MUST BE WASHED BEFORE THE VEHICLES ENTER A PUBLIC ROAD. IF WASHING IS USED, PROVISIONS MUST BE MADE TO INTERCEPT THE WASH WATER AND TRAP THE SEDIMENT BEFORE IT IS CARRIED OFF THE SITE.

P. ALL MATERIALS SPILLED, DROPPED, WASHED, OR TRACKED FROM VEHICLES ONTO ROADWAYS OR INTO STORM DRAINS MUST BE REMOVED IMMEDIATELY.

Q. CONTRACTORS OR SUBCONTRACTORS WILL BE RESPONSIBLE FOR REMOVING SEDIMENT THAT MAY HAVE COLLECTED IN THE STORM SEWER DRAINAGE SYSTEMS IN CONJUNCTION WITH THE STABILIZATION OF THE SITE.

R. ON-SITE & OFFSITE SOIL STOCKPILE AND BORROW AREAS SHALL BE PROTECTED FROM EROSION AND SEDIMENTATION THROUGH IMPLEMENTATION OF BEST MANAGEMENT PRACTICES. STOCKPILE AND BORROW AREA LOCATIONS SHALL BE NOTED ON THE SITE MAP AND PERMITTED IN ACCORDANCE WITH GENERAL PERMIT REQUIREMENTS.

S. SLOPES SHALL BE LEFT IN A ROUGHENED CONDITION DURING THE GRADING PHASE TO REDUCE RUNOFF VELOCITIES AND EROSION.

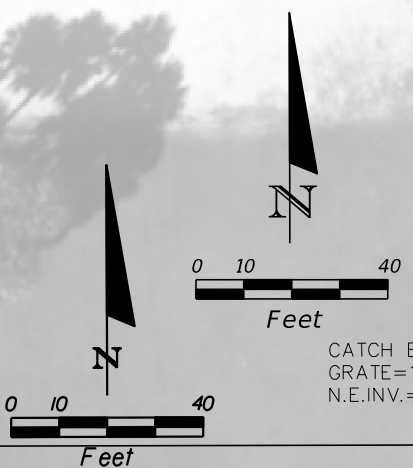
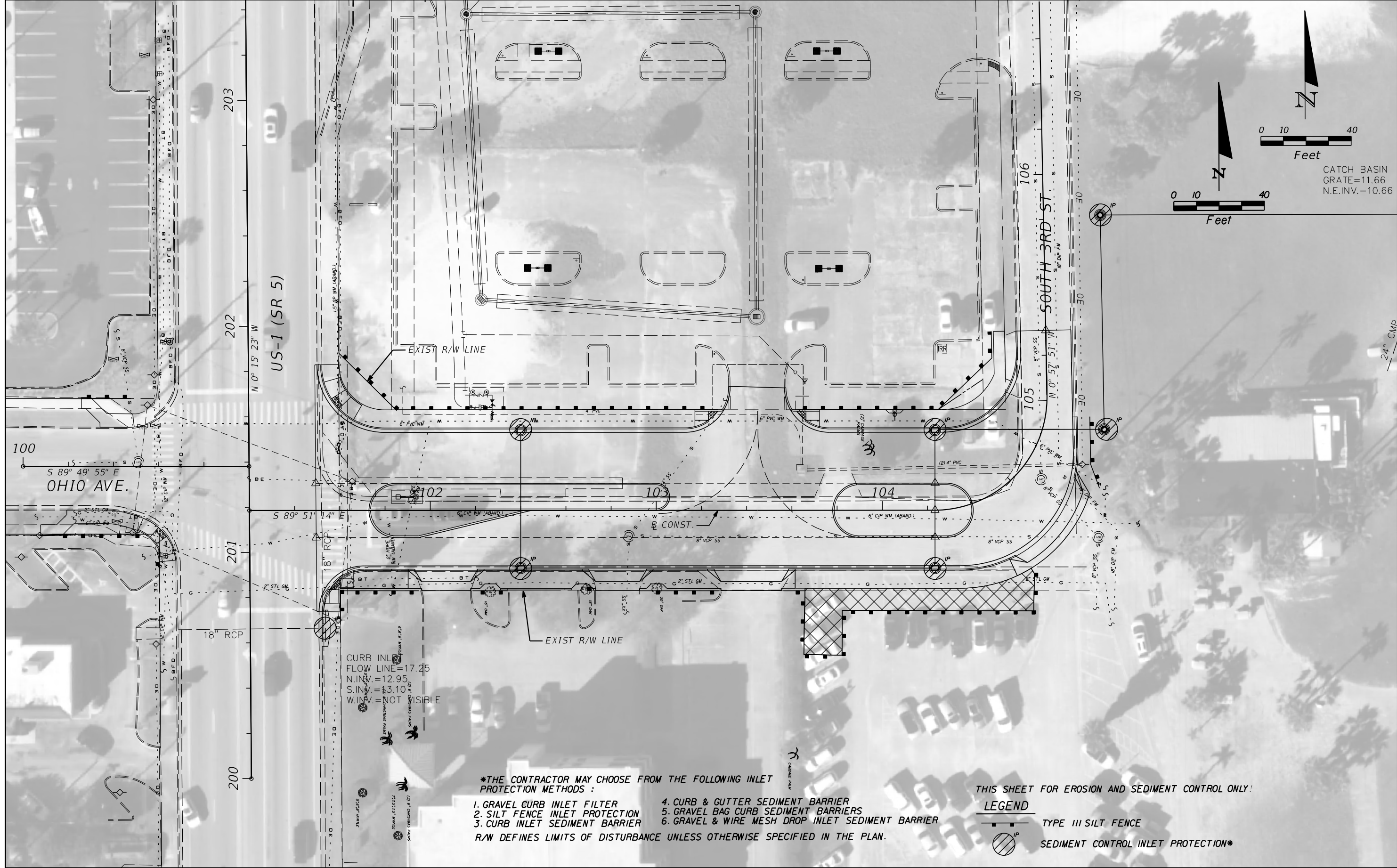
T. DUE TO THE GRADE CHANGES DURING THE DEVELOPMENT OF THE PROJECT, THE CONTRACTOR SHALL BE RESPONSIBLE FOR ADJUSTING THE EROSION CONTROL MEASURES (SILT FENCES, ETC.) TO PREVENT EROSION.

U. THE CONTRACTOR IS RESPONSIBLE FOR APPLYING FOR AND OBTAINING THE NPDES PERMIT PRIOR TO THE COMMENCEMENT OF CONSTRUCTION.

ALL MEASURES STATED ON THIS EROSION AND SEDIMENT CONTROL PLAN, AND IN THE STORM WATER POLLUTION PREVENTION PLAN, SHALL BE MAINTAINED IN FULLY FUNCTIONAL CONDITION UNTIL NO LONGER REQUIRED FOR A COMPLETED PHASE OF WORK OR FINAL STABILIZATION OF THE SITE. ALL EROSION AND SEDIMENTATION CONTROL MEASURES SHALL BE CHECKED BY A QUALIFIED PERSON AT LEAST ONCE EVERY SEVEN CALENDAR DAYS AND WITHIN 24 HOURS OF THE END OF A 0.5" RAINFALL EVENT, AND CLEANED AND REPAIRED IN ACCORDANCE WITH THE FOLLOWING:

1. INLET PROTECTION DEVICES AND BARRIERS SHALL BE REPAIRED OR REPLACED IF THEY SHOW SIGNS OF UNDERMINING, OR DETERIORATION.
2. ALL SODDED AREAS SHALL BE CHECKED REGULARLY TO SEE THAT A GOOD STAND IS MAINTAINED. AREAS SHOULD BE FERTILIZED, WATERED, AND RESODDED AS NEEDED.
3. SILT FENCES SHALL BE REPAIRED TO THEIR ORIGINAL CONDITIONS IF DAMAGED. SEDIMENT SHALL BE REMOVED FROM THE SILT FENCES WHEN IT REACHES ONE-HALF THE HEIGHT OF THE SILT FENCE.
4. THE CONSTRUCTION ENTRANCES SHALL BE MAINTAINED IN A CONDITION WHICH WILL PREVENT TRACKING OR FLOW OF MUD ONTO PUBLIC RIGHTS-OF-WAY. THIS MAY REQUIRE PERIODIC TOP DRESSING OF THE CONSTRUCTION ENTRANCES AS CONDITIONS DEMAND.
5. THE TEMPORARY STORAGE AREA SHALL BE KEPT IN GOOD CONDITION (SUITABLE FOR PARKING AND STORAGE).
6. ALL MAINTENANCE OPERATIONS SHALL BE DONE IN A TIMELY MANNER BUT IN NO CASE LATER THAN SEVEN CALENDAR DAYS FOLLOWING THE INSPECTION.

REVISIONS						 <small>BRIAN A. GOOD, P.E. P.E. LICENSE NUMBER 56939 445 24th STREET, SUITE 200 VERO BEACH, FL 32960 (772) 794-4100 CERTIFICATE OF AUTHORIZATION: 00000696</small>	CITY OF FORT PIERCE	EROSION CONTROL GENERAL NOTES	SHEET NO.
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION		OHIO AVENUE ROADWAY IMPROVEMENTS		32



CATCH BASIN
GRATE=11.66
N.E. INV.=10.66

CURB INLET
FLOW LINE = 17.25
N. INV. = 12.95
S. INV. = 3.10
W. INV. = NOT VISIBLE

- *THE CONTRACTOR MAY CHOOSE FROM THE FOLLOWING INLET PROTECTION METHODS :
- 1. GRAVEL CURB INLET FILTER
 - 2. SILT FENCE INLET PROTECTION
 - 3. CURB INLET SEDIMENT BARRIER
 - 4. CURB & GUTTER SEDIMENT BARRIER
 - 5. GRAVEL BAG CURB SEDIMENT BARRIERS
 - 6. GRAVEL & WIRE MESH DROP INLET SEDIMENT BARRIER
- R/W DEFINES LIMITS OF DISTURBANCE UNLESS OTHERWISE SPECIFIED IN THE PLAN.

THIS SHEET FOR EROSION AND SEDIMENT CONTROL ONLY!



REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

Kimley»Horn

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P.E. LICENSE NUMBER 56939
445 24th STREET, SUITE 200
VERO BEACH, FL 32960
(772) 794-4100
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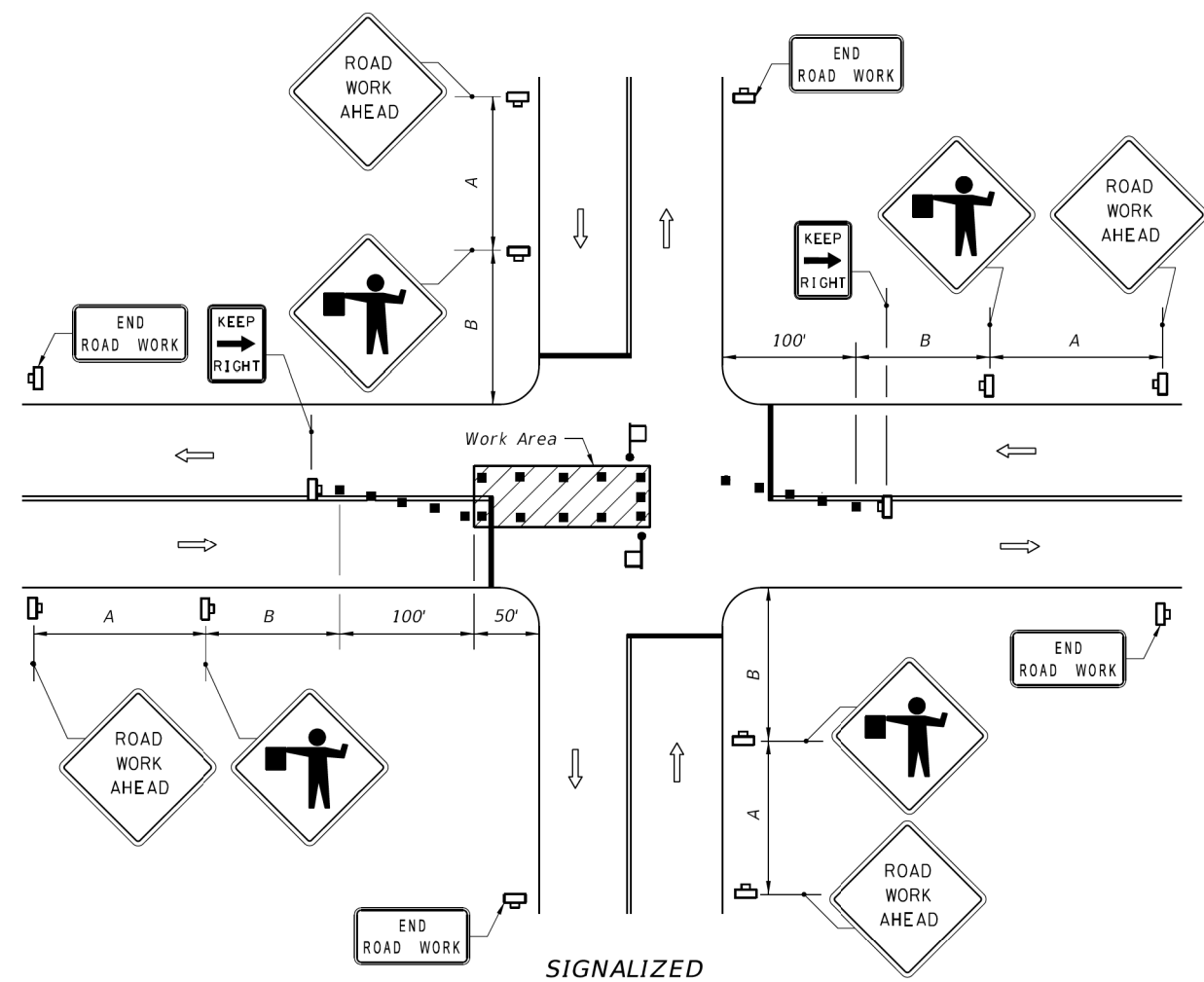
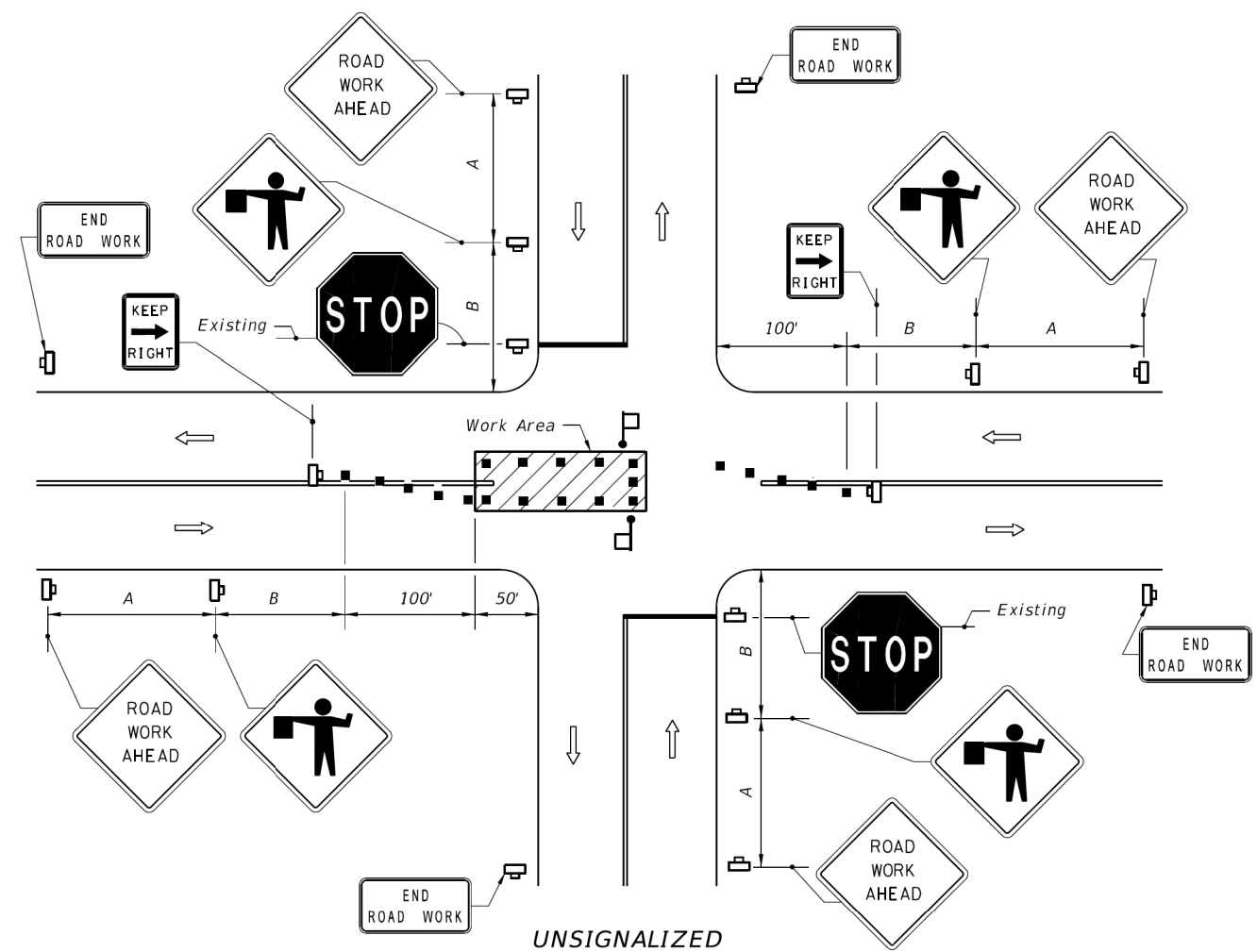
Mike Forman 3/22/2018 7:39:52 AM

CITY OF FORT PIERCE

OHIO AVENUE
ROADWAY IMPROVEMENTS

EROSION CONTROL

SHEET NO.
33



SYMBOLS

- Work Area
- Channelizing Device (See Index No. 600)
- Work Zone Sign
- Flagger
- Stop Bar
- Lane Identification + Direction of Traffic

GENERAL NOTES

1. The FLAGGER legend sign may be substituted for the symbol sign.
2. When vehicles in a parking zone block the line of sight to TCZ signs, the signs shall be post mounted and located in accordance with Index No. 17302.
3. If the work space extends across a crosswalk, the crosswalk should be closed using the information in Index No. 660.
4. Flaggers shall be located where they can control more than one direction of traffic.
Flaggers shall be in sight of each other or in direct communication at all times.
5. Maximum spacing between channelizing devices shall be not greater than 20'.
6. Temporary signal phasing modifications are to be approved by the District Traffic Operations Engineer prior to the beginning of work.
7. For general TCZ requirements and additional information, refer to Index No. 600.
8. For unsignalized intersections, use Temporary Raised Rumble Strips in accordance with Index 603. Placement of Rumble Strips and additional signs should begin at FLAGGER sign location.

DURATION NOTES

1. ROAD WORK AHEAD AND END ROAD WORK sign may be omitted if all of the following conditions are met:
 - a. Work operations are 60 minutes or less.
 - b. Speed is 45 mph or less.
 - c. No sight obstructions to vehicles approaching the work area for a distance equal to A plus B.
 - d. Vehicles in the work area have high-intensity, rotating, flashing, oscillating, or strobe lights operating.
 - e. Volume and complexity of the roadway has been considered.

DISTANCE BETWEEN SIGNS

Speed	Spacing (ft.)	
	A	B
40 mph or less	200	200
45 mph	350	350

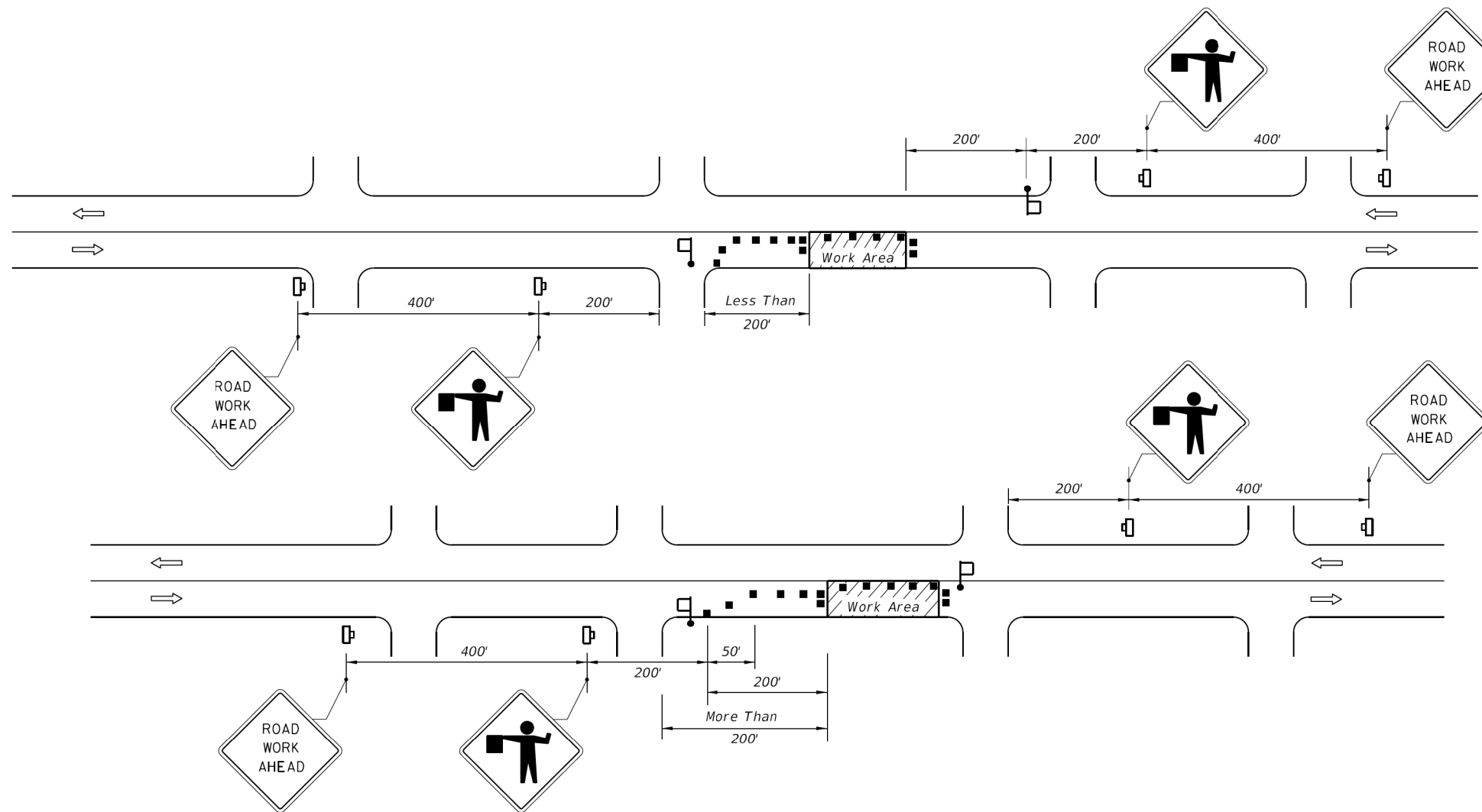
CONDITIONS

WHERE ANY VEHICLE, EQUIPMENT, WORKERS OR THEIR ACTIVITIES ENCROACH ON THE PAVEMENT REQUIRING THE CLOSURE OF A PORTION OF ONE OR MORE TRAFFIC LANES IN AN INTERSECTION.

10/12/2016 1:07:44 PM

LAST REVISION 07/01/15	REVISION	DESCRIPTION:	FY 2017-18 DESIGN STANDARDS	TWO-LANE, TWO-WAY, WORK IN INTERSECTION	INDEX NO. 604	SHEET NO. 1 of 1
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REVISIONS							CITY OF FORT PIERCE OHIO AVENUE ROADWAY IMPROVEMENTS	TEMPORARY TRAFFIC CONTROL DETAILS	SHEET NO.
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION				34



CONDITIONS

WHERE ANY VEHICLE, EQUIPMENT, WORKERS OR THEIR ACTIVITIES ENCR OACH ON THE PAVEMENT REQUIRING THE CLOSURE OF ONE TRAFFIC LANE, FOR WORK AREAS LESS THAN 200' DOWNSTREAM FROM AN INTERSECTION FOR A PERIOD OF MORE THAN 60 MINUTES.

CONDITIONS

WHERE ANY VEHICLE, EQUIPMENT, WORKERS OR THEIR ACTIVITIES ENCR OACH ON THE PAVEMENT REQUIRING THE CLOSURE OF ONE TRAFFIC LANE, FOR WORK AREAS 200' OR MORE DOWNSTREAM FROM AN INTERSECTION FOR A PERIOD OF MORE THAN 60 MINUTES.

- SYMBOLS**
- Work Area
 - Channelizing Device (See Index No. 600)
 - Work Zone Sign
 - Flagger
 - Lane Identification + Direction of Traffic

GENERAL NOTES

1. Work operations shall be confined to one travel lane, leaving the opposing travel lane open to traffic.
2. When vehicles in a parking zone block the line of sight to TCZ signs or when TCZ signs encroach on a normal pedestrian walkway, the signs shall be post mounted and located in accordance with Index No. 17302.
3. If work area is confined to an outside auxiliary lane, the work area shall be barricaded and the FLAGGER signs replaced by ROAD WORK AHEAD signs. Flaggers are not required.
4. Flaggers shall be in sight of each other or in direct communication at all times.
5. The FLAGGER legend sign may be substituted for the symbol sign.
6. The maximum spacing between devices shall be no greater than 25'.
7. For general TCZ requirements and additional information, refer to Index No. 600.
8. The two channelizing devices directly in front and directly at the end of the work area may be omitted provided vehicles in the work area have high-intensity rotating, flashing, oscillating, or strobe lights operating.
9. Use Temporary Raised Rumble Strips in accordance with Index 603. Placement of Rumble Strips and additional signs should begin at FLAGGER sign location.

DURATION NOTES

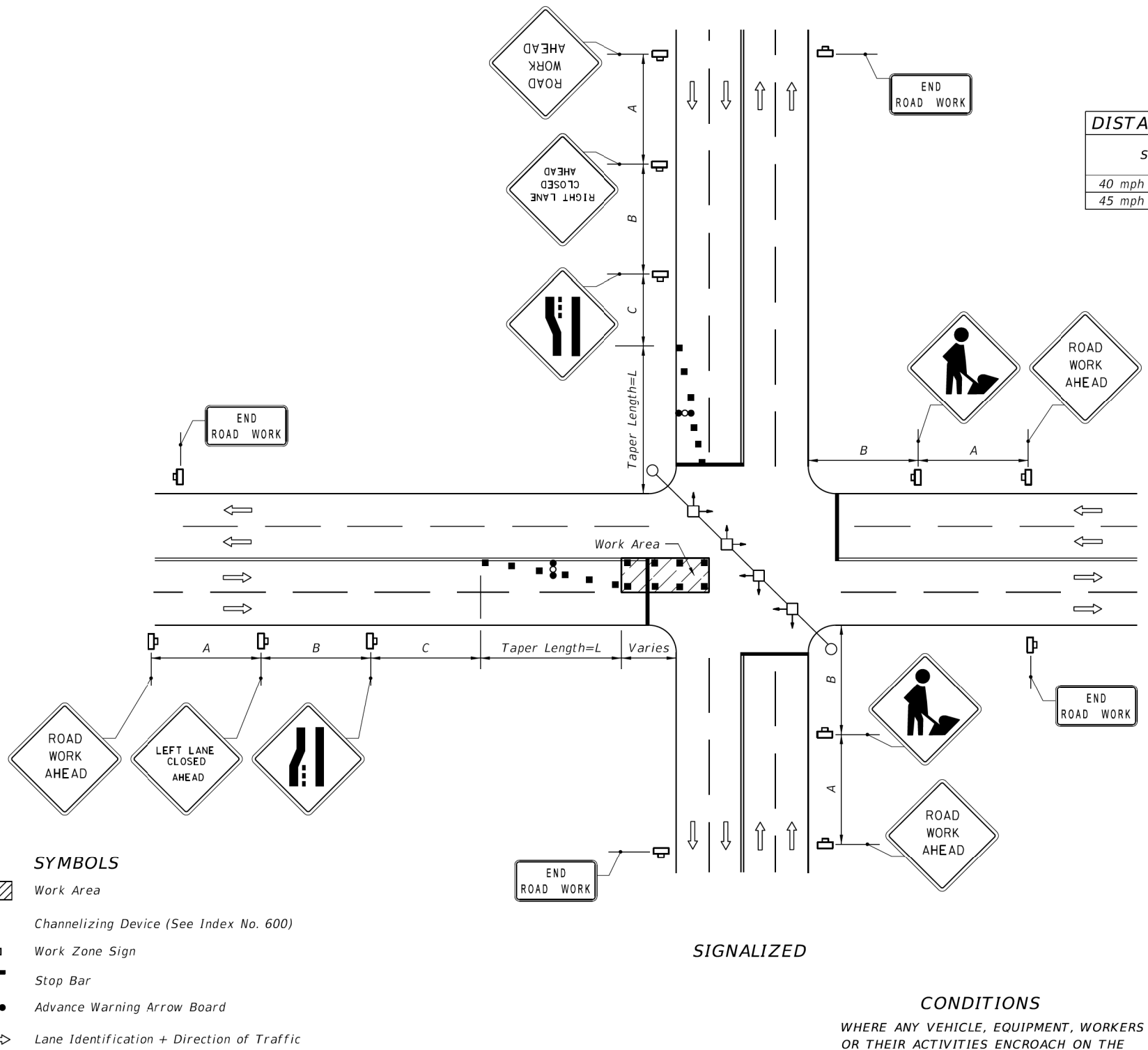
1. ROAD WORK AHEAD sign may be omitted if all of the following conditions are met:
 - a. Work operations are 60 minutes or less.
 - b. Speed is 45 mph or less.
 - c. No sight obstructions to vehicles approaching the work area for a distance of 600 feet.
 - d. Vehicles in the work area have high-intensity, rotating, flashing, oscillating, or strobe lights operating.
 - e. Volume and complexity of the roadway has been considered.

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LAST REVISION 07/01/15	REVISION	DESCRIPTION:	 FY 2017-18 DESIGN STANDARDS	TWO-LANE, TWO-WAY, WORK NEAR INTERSECTION	INDEX NO. 605	SHEET NO. 1 of 1
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REVISIONS							CITY OF FORT PIERCE OHIO AVENUE ROADWAY IMPROVEMENTS	TEMPORARY TRAFFIC CONTROL DETAILS	SHEET NO.
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DISTANCE BETWEEN SIGNS

Speed	Spacing (ft.)		
	A	B	C
40 mph or less	200	200	200
45 mph	350	350	350

**Table II
Taper Length - Merge
(12' Lateral Transition)**

Speed (mph)	L (ft.)	Notes (Merge)
25	125	$L = \frac{WS^2}{60}$
30	180	
35	245	
40	320	
45	540	$L=WS$

For lateral transitions other than 12', use formula for L shown in the notes column. Where:
 L = Length of taper in feet
 W = Width of lateral transition in feet
 S = Posted speed limit (mph)

GENERAL NOTES

1. The WORKERS legend sign may be substituted for the symbol sign.
2. When vehicles in a parking zone block the line of sight to TCZ signs, the signs shall be post mounted and located in accordance with Index No. 17302.
3. If the work space extends across a crosswalk, the crosswalk should be closed using the information in Index No. 660.
4. Dual signs are required for divided roadways.
5. Maximum spacing between barricades, vertical panels, cones, tubular markers and drums shall not be greater than 25'.
6. Temporary signal phasing modifications are to be approved by the District Traffic Operations Engineer prior to the beginning of work.
7. For general TCZ requirements and additional information, refer to Index No. 600.

DURATION NOTES

1. Signs and arrow board may be omitted if all of the following conditions are met:
 - a. Work operations are 60 minutes or less.
 - b. Speed is 45 mph or less.
 - c. No sight obstructions to vehicles approaching the work area for a distance equal to twice the taper length.
 - d. Vehicles in the work area have high-intensity, rotating, flashing, oscillating, or strobe lights operating.
 - e. Volume and complexity of the roadway has been considered.

- SYMBOLS**
- Work Area
 - Channelizing Device (See Index No. 600)
 - Work Zone Sign
 - Stop Bar
 - Advance Warning Arrow Board
 - Lane Identification + Direction of Traffic

SIGNALIZED

CONDITIONS

WHERE ANY VEHICLE, EQUIPMENT, WORKERS OR THEIR ACTIVITIES ENCROACH ON THE PAVEMENT REQUIRING THE CLOSURE OF AT LEAST ONE MEDIAN TRAFFIC LANE.

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GENERAL NOTES

1. Work operations shall be confined to either one lane, or lane combinations as follows:
 - a. Outside travel lane;
 - b. Outside auxiliary lane;
 - c. Outside travel lane and adjoining auxiliary lane;
 - d. Inside travel lane Δ ;
 - e. Inside auxiliary lane Δ ;
 - f. Inside travel lane and adjoining auxiliary lane Δ







Δ See Sheet 3

If the work area is confined to an auxiliary lane the work area shall be barricaded and the RIGHT (LEFT) LANE CLOSED AHEAD signs replaced by ROAD WORK AHEAD signs, and the merge symbol signs eliminated.
2. When vehicles in a parking zone block the line of sight to TCZ signs, the signs shall be post mounted and located in accordance with Index No. 17302.
3. If the work space extends across a crosswalk, the crosswalk should be closed using the information in Index No. 660.
4. Signs are required on the median side for divided highways.
5. The two channelizing devices directly in front and directly at the end of the work area may be omitted provided vehicles in the work area have high-intensity rotating, flashing, oscillating, or strobe lights operating.
6. For general TCZ requirements and additional information, refer to Index No. 600.


DURATION NOTES

1. For work operations up to approximately 15 minutes, signs, channelizing devices, and arrow board may be omitted if all of the following conditions are met:
 - a. Speed limit is 45 mph or less.
 - b. No sight obstructions to vehicles approaching the work area for a distance equal to twice the taper length.
 - c. Volume and complexity of the roadway has been considered.
 - d. The closed lane is occupied by a class 5 or larger, medium duty truck(s) with a minimum gross weight vehicle rating (GWVR) of 16,001 lb with high-intensity, rotating, flashing, oscillating, or strobe lights mounted above the cab height and operating.
2. For work operations up to 60 minutes, the arrow board may be omitted if conditions a, b, and c in DURATION NOTE 1 are met, and vehicles in the work area have high-intensity, rotating, flashing, oscillating, or strobe lights operating.

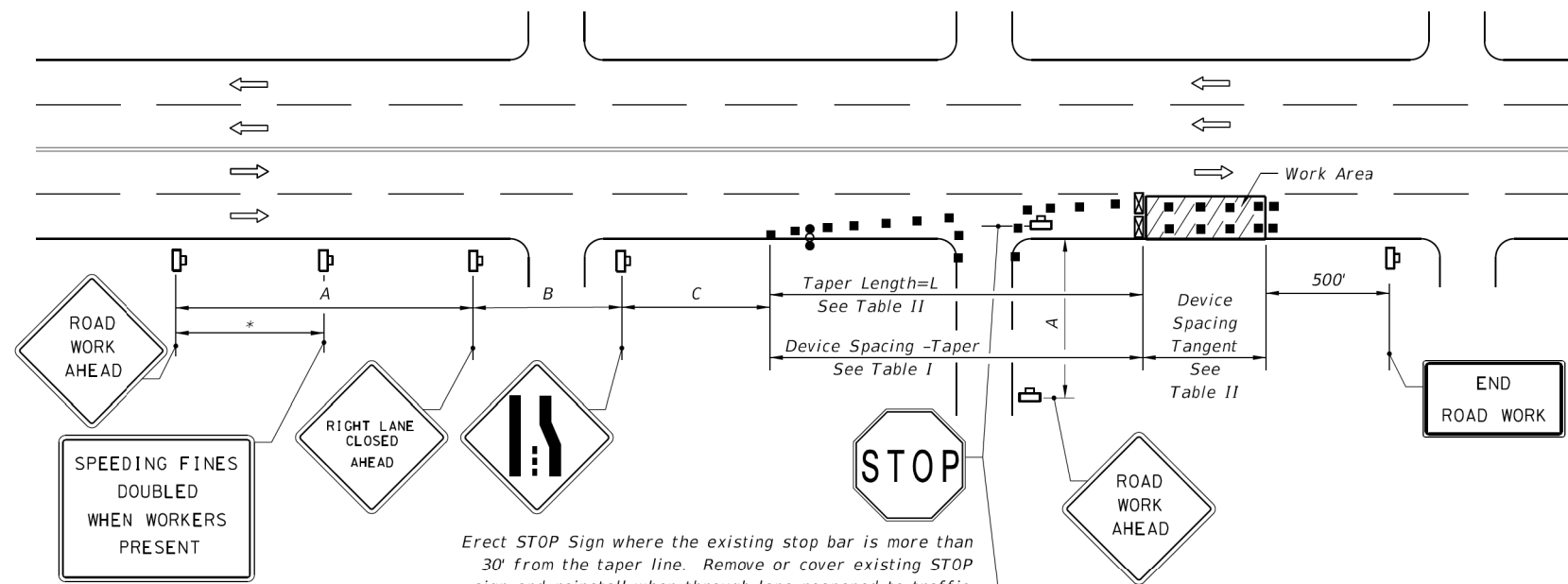
SYMBOLS

-  Work Area
-  Work Zone Sign
-  Advance Warning Arrow Board
-  Type III Barricade
-  Channelizing Device (See Index No. 600)
-  Lane Identification + Direction of Traffic

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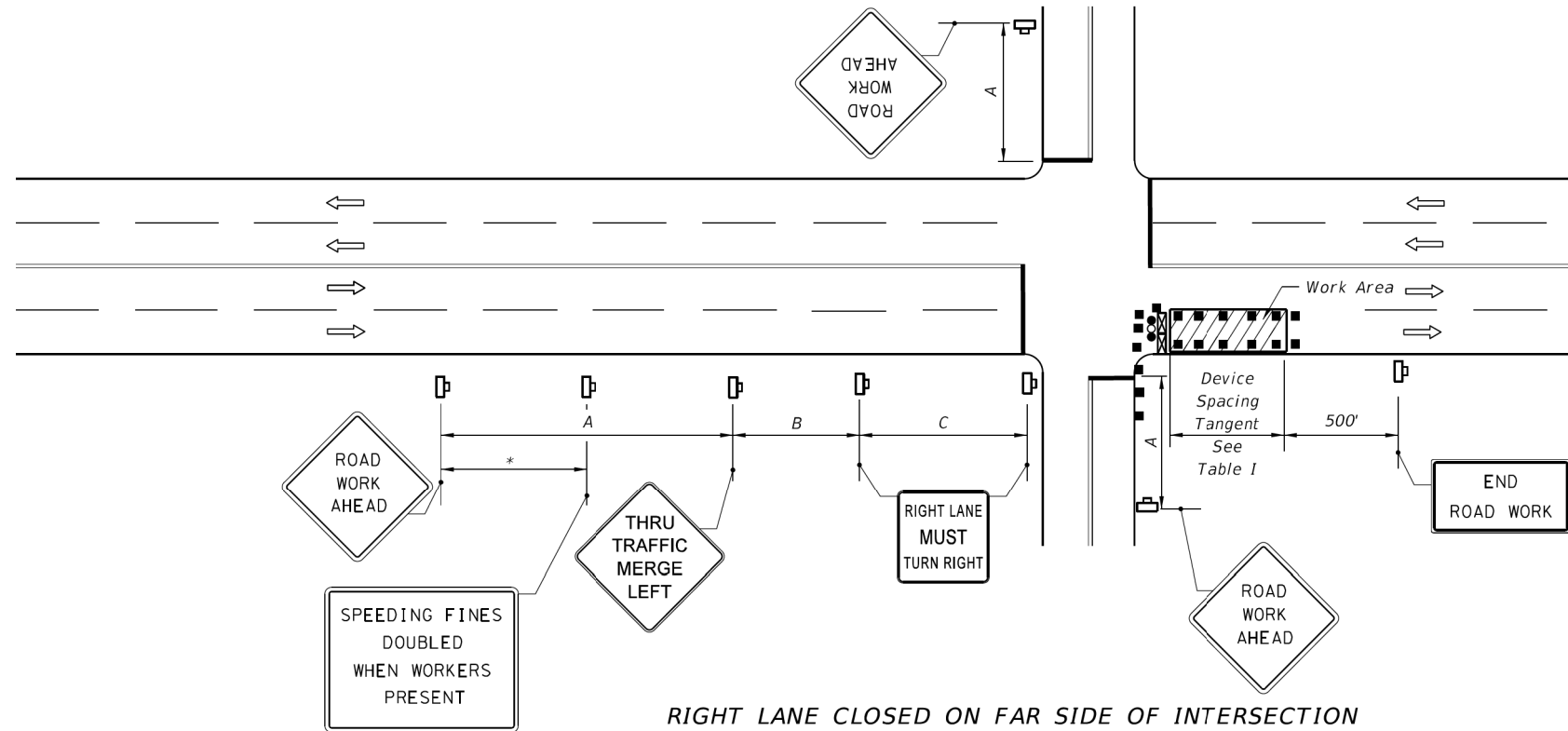
Erect STOP Sign where the existing stop bar is more than 30' from the taper line. Remove or cover existing STOP sign and reinstall when through lane reopened to traffic.

RIGHT LANE CLOSED ON FAR SIDE OF MINOR SIDESTREET

Speed	Spacing (ft.)		
	A	B	C
40 mph or less	200	200	200
45 mph	350	350	350

* 500' beyond the ROAD WORK AHEAD sign or midway between signs whichever is less.

Speed (mph)	Max. Distance Between Devices (ft.)			
	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



Speed (mph)	L (ft)	Notes (Merge)
25	125	$L = \frac{WS^2}{60}$
30	180	
35	245	
40	320	
45	540	$L=WS$

For lateral transitions other than 12', use formula for L shown in the notes column. Where:
 L = Length of taper in feet
 W = Width of lateral transition in feet
 S = Posted speed limit (mph)

1. The normal procedure is to close on the near side of the intersection any lane that is not carried through the intersection. However, when this results in the closure of a right lane having significant right turning movements, then the right lane may be restricted to right turns only as shown in this detail.

2. For intersection approaches reduced to a single lane, left turning movements may be prohibited to maintain capacity for through vehicular traffic.

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