NORTH 2ND STREET ROADWAY IMPROVEMENTS

CITY OF FORT PIERCE

ST. LUCIE COUNTY, FLORIDA

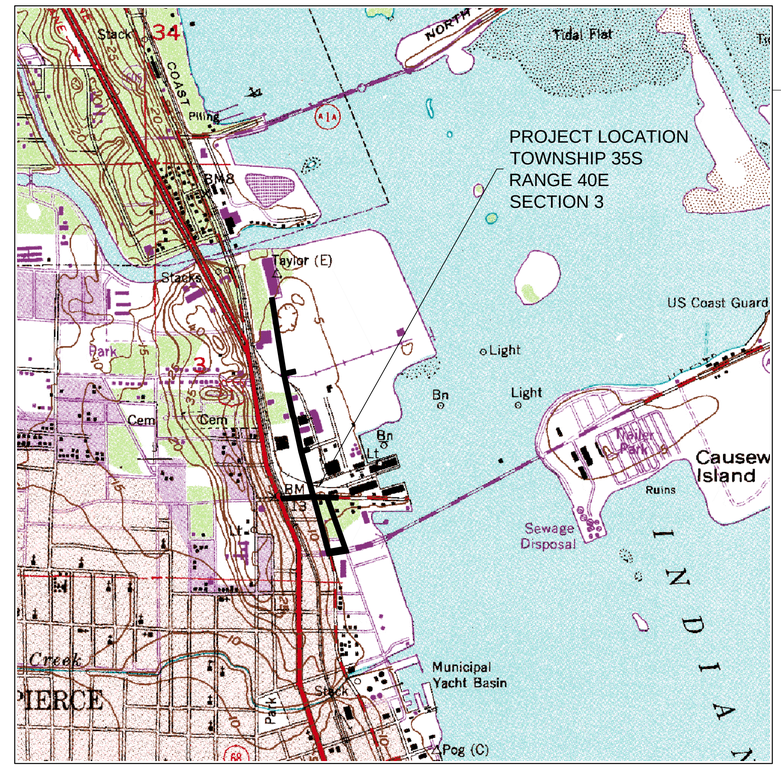
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LOCATION MAP

N.T.S.



VICINITY MAP

1"= 1,000' (22x34)
1"= 2,000' (11x17)

REFERENCE:
USGS 7.5' QUADRANGLE MAP,
FT. PIERCE NE, FLORIDA 1983

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10151 DEERWOOD PARK BLVD.
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JACKSONVILLE, FLORIDA 32256
(904)-731-7040
1675 PALM BEACH LAKES, SUITE 210
WEST PALM BEACH, FLORIDA 33401
(561)-640-7310
CERTIFICATE OF AUTHORIZATION # 4815

PROJECT TITLE

NORTH 2ND STREET
ROADWAY IMPROVEMENTS
CITY OF FORT PIERCE
ST. LUCIE COUNTY, FLORIDA

PROJECT NO	C2013-064
DATE	JULY 2014

SEAL

MICHAEL P. WHELAN P.E.# 55496

C-1

SHEET 1 OF 49

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GENERAL NOTES

1. ALL ELEVATIONS ARE REFERRED TO NATIONAL GEODETIC VERTICAL DATUM OF 1929.
2. LOCATIONS, ELEVATIONS, AND DIMENSIONS OF EXISTING UTILITIES, STRUCTURES, AND OTHER FEATURES ARE SHOWN ACCORDING TO THE BEST INFORMATION AVAILABLE AT THE TIME OF PREPARATION OF THESE PLANS, BUT DO NOT PURPORT TO BE ABSOLUTELY CORRECT. PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL VERIFY AND AGREE TO BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MIGHT BE OCCASIONED BY HIS FAILURE TO EXACTLY LOCATE AND PRESERVE ANY AND ALL EXISTING UTILITIES, STRUCTURES, AND OTHER FEATURES AFFECTING HIS WORK. CONTRACTOR SHALL POT-HOLE EXISTING UTILITIES A MINIMUM OF 10 DAYS PRIOR TO WORK IN POTENTIAL CONFLICT AREAS AND PROVIDE EXISTING HORIZONTAL AND VERTICAL SURVEY INFORMATION TO THE ENGINEER.
3. CONTRACTOR SHALL VERIFY ALL UTILITIES AND NOTIFY THE CITY OF FORT PIERCE UTILITIES AUTHORITY (FPUA), 72 HOURS PRIOR TO DIGGING IN ANY PORTION OF THE SITE.
4. THE CONTRACTOR SHALL REPLACE ALL DRAINAGE CULVERTS, FENCES, ETC. WITH THE SAME TYPE OF MATERIAL THAT WAS REMOVED DURING CONSTRUCTION, EXCEPT AS NOTED BY PLAN.
5. TOPOGRAPHIC SURVEY WAS PERFORMED BY: MORGAN & EKLUND, INC.
6. THE CONTRACTOR SHALL CONTACT THE ENGINEER'S OFFICE IMMEDIATELY UPON FINDING ANY CONFLICTS DURING CONSTRUCTION ON ANY IMPROVEMENTS SHOWN ON THE DRAWING, IN WRITING. CONTRACTOR SHOULD ANTICIPATE 2 WEEKS FOR REVIEW. ANY PLAN ERRORS OR MISTAKES NEED TO BE IDENTIFIED AT THE PRE-CONSTRUCTION MEETING, OTHERWISE, REQUESTS FOR INFORMATION MUST BE PROVIDED AND A REVIEW TIME OF 7 DAYS ALLOWED WITH NO TIME IMPACTS TO THE PROJECT SCHEDULE.
7. EROSION CONTROL AND SEDIMENTATION CONTROL DEVICES SHALL BE IN PLACE PRIOR TO BEGINNING ANY DEMOLITION OR CONSTRUCTION. THEY SHALL BE INSTALLED AND SHALL REMAIN IN PLACE FOR THE DURATION OF THE PROJECT, IN ACCORDANCE WITH ALL REGULATORY AGENCY REQUIREMENTS.
8. EXISTING DRAINAGE STRUCTURES WITHIN CONSTRUCTION LIMITS SHALL BE REMOVED UNLESS OTHERWISE NOTED ON THE PLANS.
9. ALL STATIONING AND OFFSET REFERS TO SURVEY BASELINE UNLESS OTHERWISE NOTED ON PLANS.
10. EXISTING UTILITIES AND FACILITIES SHOWN ON THE DRAWINGS WERE LOCATED FROM THE UTILITY OWNER'S RECORDS OF UNDERGROUND FACILITIES. GUARANTEE IS NOT MADE THAT ALL EXISTING FACILITIES ARE SHOWN NOR THAT THOSE FACILITIES SHOWN ARE ENTIRELY ACCURATE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE COORDINATION WITH EXISTING UTILITIES.
11. CONTRACTOR TO PROVIDE PHOTOGRAPHS AND/OR SITE VIDEO BEFORE COMMENCEMENT OF WORK AND SUBMITTED TO THE OWNER PRIOR TO WORK. THE CONTRACTOR SHALL, BY REPAIR OR REPLACEMENT, RETURN TO EQUAL OR BETTER CONDITION ALL PAVEMENT, SIDEWALK, LAWNS, UTILITIES AND OTHER ITEMS DAMAGED BY THIS CONSTRUCTION ACTIVITY AS PER PRECONSTRUCTION PHOTOGRAPHS AND/OR SITE VIDEO.
12. DURING CONSTRUCTION OF THE UNDERGROUND UTILITIES AND ROADWAY, THE CONTRACTOR IS RESPONSIBLE FOR REMOVAL, PROTECTION, AND REPLACEMENT OF ITEMS ON PRIVATE PROPERTY AND PUBLIC RIGHTS OF WAY SUCH AS SPRINKLERS, FENCES, SOD, SHRUBS, TREES, SURVEYING MARKERS, ETC. CONTRACTOR NEEDS TO PROVIDE LETTER OF AGREEMENT FROM PROPERTY OWNER FOR USE OF PRIVATE PROPERTY AND PROVIDE PRE-USE VIDEO AND PHOTOS.
13. PROPOSED NEW WATER MAIN SHALL HAVE A MINIMUM COVER PER FPUA SPECIFICATIONS.
14. WATER MAINS CROSSING OVER STORM OR SANITARY SEWERS SHALL BE LAID TO PROVIDE A MINIMUM VERTICAL DISTANCE OF 18 INCHES BETWEEN THE INVERT AND OF THE UPPER PIPE AND THE CROWN OF THE LOWER PIPE WHERE THIS MINIMUM SEPARATION CANNOT BE MAINTAINED, THE CROSSING SHALL BE ARRANGED SO THAT THE SEWER PIPE JOINTS AND WATER MAIN JOINTS ARE EQUIDISTANT FROM THE POINT OF CROSSING WITH NO LESS THAN 10 FEET BETWEEN ANY TWO JOINTS AND BOTH PIPES SHALL BE D.I.P. WHERE THERE IS NO ALTERNATIVE TO WATER MAIN CROSSING UNDER A SEWER MAIN. THE CRITERIA FOR MINIMUM SEPARATION BETWEEN LINES AND JOINTS IN THE ABOVE, SHALL BE REQUIRED AND BOTH PIPES SHALL BE D.I.P. IRRESPECTIVE OF SEPARATION. D.I.P. IS NOT REQUIRED FOR STORM SEWERS.
15. MAINTAIN 10 FEET HORIZONTAL DISTANCE BETWEEN WATER MAIN AND STORM OR SANITARY SEWER MAIN WHENEVER POSSIBLE.
16. WATER MAIN CROSSING FORCE MAIN SHALL BE LAID TO PROVIDE A MINIMUM VERTICAL DISTANCE OF 18 INCHES BETWEEN THE OUTSIDE OF THE FORCE MAIN AND THE OUTSIDE OF THE WATER MAIN WITH WATER MAIN CROSSING OVER THE FORCE MAIN WHENEVER POSSIBLE.
17. ALL NEW WATER MAINS MUST BE TESTED, DISINFECTED AND APPROVED PRIOR TO CONNECTION TO ANY EXISTING WATER MAIN, DISINFECTION SHALL BE IN ACCORDANCE WITH SPECIFICATIONS OF THE FPUA AND ST. LUCIE COUNTY HEALTH DEPARTMENT.
18. SERVICE LINES SHALL HAVE A MINIMUM COVER OF 18 INCHES IN ALL YARDS FROM THE METER TO THE HOUSE CONNECTION.
19. NEW SERVICE LINES SHALL BE THOROUGHLY FLUSHED BEFORE NEW METERS ARE INSTALLED.
20. WATER METER 2 INCHES OR LARGER ON THE NEW WATER MAIN SHALL BE RECORDED BY THE CONTRACTOR ON THE FIELD COPY OF THE RECORD DRAWINGS. METER HOUSING SHALL PROVIDE TEST PORT TO WHICH A BACTERIOLOGICAL SAMPLING POINT CAN BE CONNECTED (FOR ST. LUCIE COUNTY HEALTH DEPARTMENT).
21. CONTRACTOR SHALL NOTIFY THE FPUA PERSONNEL A MINIMUM OF 24 HOURS PRIOR TO SWITCHING FROM THE EXISTING WATER MAIN TO THE NEW WATER MAIN IN ORDER THAT FPUA PERSONNEL CAN OBTAIN THE APPROPRIATE METER READINGS.
22. IF NEW METERS ARE INSTALLED, THE CONTRACTOR SHALL REMOVE THE OLD METER BOXES AND SHALL RE-GRADE AND SOD THE SURROUNDING AREA.
23. THIS SET OF PLANS IS A SCHEMATIC REPRESENTATION OF WATER MAINS INSTALLATION. ALL TIE-IN LOCATIONS TO EXISTING WATER MAIN, VALVE LOCATIONS, AND FIRE HYDRANT LOCATIONS ARE TO BE FIELD LOCATED BY THE CONTRACTOR PRIOR TO ANY WATER MAIN LAYOUT INSTALLATION BEING PERFORMED. ANY LOCATIONS DETERMINED BY SCALING THESE DRAWINGS SHALL BE AT THE RISK OF THE CONTRACTOR OR HIS REPRESENTATIVES.
24. CONTRACTOR TO NOTIFY RESIDENTS IN WRITING AT LEAST ONE WEEK IN ADVANCE PRIOR TO COMMENCING WORK IN THEIR GENERAL AREA, IN WRITING.
25. CONTRACTOR SHALL NOTIFY FPUA A MINIMUM OF 48 HOURS PRIOR TO CONNECTING NEW WATER MAINS TO EXISTING WATER MAINS, IN WRITING.
26. SHOULD CONTRACTOR BREAK OR DAMAGE EXISTING WATER MAINS, CONTRACTOR IS RESPONSIBLE FOR COSTS AND LABOR ASSOCIATED WITH WRITTEN BOIL WATER NOTICES TO THE AFFECTED RESIDENCES. A VARIETY OF DRESSER COUPLINGS MUST BE ON SITE AT ALL TIMES IN ORDER TO REPAIR ANY BREAKS.
27. ACCORDING TO THE FPUA SOME OF THE WATER MAINS SHOWN ON THESE DRAWINGS ARE MADE OF ASBESTOS CEMENT AND CAN BE BRITTLE. THE CONTRACTOR SHALL LOCATE THE EXISTING WATER MAIN AND SERVICE LINES AND EXCAVATE THE TRENCH FOR THE NEW MAIN IN SUCH A MANNER SO AS NOT TO DISTURB THE INTEGRITY OR EXPOSE THE WATER MAIN. THE CONTRACTOR IS INFORMED THAT THE INSPECTOR FROM THE FPUA WILL ADVISE THE CONTRACTOR TO HALT WORK ANY TIME THE ASBESTOS CEMENT WATER MAIN BECOMES EXPOSED. ASBESTOS CEMENT PIPE WHICH FAILS DURING CONSTRUCTION WILL BE ASSUMED TO BE DAMAGED BECAUSE OF THE CONSTRUCTION. CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROPER REPAIR OF ALL DAMAGE CAUSED BY THE CONSTRUCTION OPERATIONS. THE EXISTING WATER MAINS SHALL REMAIN OPERATIONAL AT ALL TIMES UNLESS CUT IN VALVES OR TEES ARE SHOWN TO BE INSTALLED.
28. OPERATION OF ALL IN-LINE WATER MAIN VALVES SHALL ONLY BE PERFORMED WHEN A FPUA INSPECTOR IS PRESENT.
29. ALL REPAIRS SHALL BE MADE TO DAMAGED EXISTING WATER MAINS UNDER THE SUPERVISION OF FPUA.
30. RESTORE OR REPLACE ALL TREES IN KIND AFFECTED BY CONSTRUCTION. THE CONTRACTOR TO PERFORM TREE SURVEY AND SUBMITTED THE SURVEY FOR ACCEPTANCE PRIOR TO CONSTRUCTION.
31. PRESSURE TESTS SHALL BE MADE IN SECTIONS BETWEEN VALVES, POTABLE WATER FROM AN EXISTING WATER DISTRIBUTION SYSTEM SHALL BE USED.
32. ALL EXISTING STRIPING AND SIGNAGE SHALL REMAIN IN ITS PRESENT LOCATION UNLESS OTHERWISE NOTED. STRIPING & SIGNAGE REMOVED DURING CONSTRUCTION SHALL BE REPLACED IN ITS ORIGINAL LOCATION UNLESS OTHERWISE NOTED.
33. ALL DEWATATERING COSTS ASSOCIATED WITH SECURING A SFWMD GENERAL WATER USE PERMIT, INSTALLATION AND CONSTRUCTION OF THE UNDERGROUND UTILITIES; STORMWATER PIPES AND MANHOLES; SANITARY SEWER MAINS AND MANHOLES; PONDS, OUTFALL PIPES AND STRUCTURES; SHALL BE INCLUDED AS PART OF THE CONSTRUCTION BID COSTS, AND BE COMPLETED BY CONTRACTOR. CONTRACTOR IS RESPONSIBLE TO OBTAIN ALL DEWATERING PERMITS.

GEOTECHNICAL RECOMMEDATIONS

1. CONTRACTOR SHALL REFER TO GEOTECHNICAL REPORT DATED SEPTEMBER 30, 2008 BY DUKELBERGER ENGINEERING & TESTING, INC.. PROJECT # : PSL - 08 - 2735.
2. CONTRACTOR SHALL INSTALL ALL UTILITIES AND PIPING IN ACCORDANCE TO FDOT SECTION 125 AND 430.
3. PARTIAL OVER-EXCAVATION AND REPLACEMENT: THIS PROCEDURE WOULD INVOLVE REMOVAL OF TWO FEET (VERTICAL MEASURE) OF MUCK SOILS FROM BENEATH THE PROPOSED PIPELINE AND STRUCTURE BOTTOM LEVELS, FOLLOWED BY REPLACEMENT WITH GRANULAR MATERIALS. CONTRACTOR TO NOTIFY ENGINEER OF ANY INSTANCE WHERE MUCK REMOVAL OCCURS.
4. WHEN ENCOUNTERING OR EXPOSING ANY ABNORMAL CONDITION INDICATING THE PRESENCE OF HAZARDOUS OR CONTAMINATED MATERIAL, THE CONTRACTOR SHALL CEASE OPERATIONS IMMEDIATELY IN VICINITY OF WORK AND NOTIFY THE ENGINEER. ANY AREA SUSPECTED OF BEING CONTAMINATED SHALL BE TREATED WITH EXTREME CAUTION UNTIL A VIABLE REMOVAL, DISPOSAL, AND REPLACEMENT PLAN HAS BEEN FORMULATED TO ADDRESS THIS OR THOSE AREAS. THE ENGINEER WILL CONTACT THE APPROPRIATE AUTHORITIES TO DETERMINE A COURSE OF ACTION NECESSARY TO SECURE THE AREA AND PROVIDE REMEDIAL ACTION TO RESOLVE THE CONTAMINATION ISSUE.

MAINTENANCE OF TRAFFIC NOTES

1. THE CONTRACTOR SHALL ADHERE TO STANDARD FDOT INDEX 600 AND ANY OTHER APPLICABLE FDOT 600 SERIES INDEX AS NOTED IN THESE PLANS. CONTRACTOR TO PROVIDE VARIABLE MESSAGE BOARDS TO INFORM PUBLIC OF FUTURE TRAFFIC DIVERSIONS, ONE WEEK PRIOR TO REROUTING TRAFFIC.
2. TRAFFIC SHALL BE MAINTAINED ON PAVED SURFACES AT ALL TIMES.
3. THE CONTRACTOR SHALL RETURN THE GROUND TO ITS ORIGINAL CONDITION OR FINAL GRADE. AS APPROPRIATE WHEN REMOVING ANY TEMPORARY PAVEMENT.
4. PEAK HOURS ARE 6:30 AM - 8:30 AM AND 3:30 PM - 6:00 PM (MONDAY THROUGH FRIDAY) AND 6:30 AM - 1:30 PM (SUNDAY). SEE SECTION 01025 FOR SPECIAL CONDITIONS.
5. TRAFFIC CONDITIONS, ACCIDENTS AND OTHER EMERGENCY CONDITIONS MAY REQUIRE THE ENGINEER TO MODIFY ANY CHANNELIZATION SHOWN IN THESE PLANS. THE CONTRACTOR SHALL MAKE THE NECESSARY ADJUSTMENTS, AS DIRECTED BY THE ENGINEER AND LOCAL POLICE, AS REQUIRED.
6. THE CONTRACTOR SHALL PROVIDE TO ENGINEER A PROPOSED MAINTENANCE OF TRAFFIC PLAN FOR APPROVAL PRIOR TO CONSTRUCTION. MAINTENANCE OF TRAFFIC PLANS MUST BE SIGNED AND SEALED BY A FLORIDA PROFESSIONAL ENGINEER. CONTRACTOR SHALL ALLOW FOR 3-WEEK REVIEW PERIOD.
7. CONTRACTOR TO OBTAIN PERMITS FROM ALL AGENCIES PRIOR TO BEGINNING WORK.
8. CONTRACTOR TO PROVIDE MINIMUM OF TWO VARIABLE MESSAGE BOARDS TO INFORM PUBLIC OF FUTURE TRAFFIC DIVERSIONS ONE WEEK PRIOR TO REROUTING TRAFFIC.

UTILITY OWNERS & CONTACTS

1. THE CONTRACTOR SHALL NOTIFY THE APPROPRIATE UTILITY COMPANY FORTY-EIGHT (48) HOURS IN ADVANCE OF ANY EXCAVATION INVOLVING ITS UTILITIES SO THAT A COMPANY REPRESENTATIVE CAN BE PRESENT. THE LOCATION OF THE UTILITIES SHOWN IN THE PLANS ARE APPROXIMATE ONLY. THE EXACT LOCATION SHALL BE DETERMINED BY THE CONTRACTOR DURING CONSTRUCTION.
2. UTILITY OWNERS:

AT&T COMMUNICATIONS MARK GUTIERREZ	(770) 460-4443
FLORIDA POWER AND LIGHT TRACY STERN	(800) 868-9554
FPUA WATER & SEWER - JOSH MILLER GAS - JAVIER CISNEROS ELECTRIC & LIGHTING - PAUL LAGUERRE	 (772) 466-1600 (772) 466-1600 (772) 466-1600
COMCAST ANTHONY SPRINGSTEEL	(800) COMCAST

3. WATER, SEWER, GAS, AND ELECTRIC INFORMATION IN PROFILE VIEW IS PROVIDED BY FPUA

EROSION CONTROL

1. SEDIMENT BASINS AND TRAPS, PERIMETER DITCHES, SEDIMENT BARRIERS AND OTHER MEASURES INTENDED TO TRAP SEDIMENT SHALL BE CONSTRUCTED AS A FIRST STEP IF ANY LAND-DISTURBING TAKES PLACE.
2. ALL SEDIMENT CONTROL MEASURES ARE TO BE ADJUSTED TO MEET FIELD CONDITIONS AT THE TIME OF CONSTRUCTION AND BE CONSTRUCTED PRIOR TO ANY GRADING OR DISTURBANCE OF EXISTING SURFACE MATERIAL ON BALANCE OF SITE. PERIMETER SEDIMENT BARRIERS SHALL BE CONSTRUCTED TO PREVENT SEDIMENT OR TRASH FROM FLOWING OR FLOATING ON TO ADJACENT PROPERTIES.
3. DURING CONSTRUCTION OF THE PROJECT. SOIL STOCK PILES SHALL BE STABILIZED OR PROTECTED WITH SEDIMENT TRAPPING MEASURES. THE CONTRACTOR IS RESPONSIBLE FOR THE TEMPORARY PROTECTIONS AND PERMANENT STABILIZATION OF ALL SOIL STOCKPILES ON SITE AS WELL AS SOIL INTENTIONALLY TRANSPORTED FROM THE PROJECT SITE.
4. SURFACE RUNOFF FROM DISTURBED AREAS THAT IS COMPRISED OF FLOWS FROM DRAINAGE AREAS GREATER THAN OR EQUAL TO THREE ACRES SHALL BE CONTROLLED BY A SEDIMENT BASIN. THE SEDIMENT BASIN SHALL BE DESIGNED AND CONSTRUCTED TO ACCOMMODATE THE ANTICIPATED SEDIMENT LOADING FROM THE LAND-DISTURBING ACTIVITY. THE OUTFALL DEVICE OR SYSTEM DESIGN SHALL TAKE INTO ACCOUNT THE TOTAL DRAINAGE AREA FLOWING THROUGH THE DISTURBED AREA TO BE SERVED BY THE BASIN.
5. AFTER ANY SIGNIFICANT RAINFALL SEDIMENT CONTROL STRUCTURES WILL BE INSPECTED FOR INTEGRITY. ANY DAMAGED DEVICES SHALL BE CORRECTED IMMEDIATELY.
6. CONCENTRATED RUNOFF SHALL NOT FLOW DOWN OUT OR FILL SLOPES UNLESS CONTAINED WITHIN AN ADEQUATE TEMPORARY OR PERMANENT CHANNEL. FLUME OR SLOPE DRAIN STRUCTURE.
7. WHENEVER WATER STEPS FROM A SLOPE FACE. ADEQUATE DRAINAGE OR OTHER PROTECTION SHALL BE PROVIDED.
8. SEDIMENT WILL BE PREVENTED FROM ENTERING ANY STORM DRAIN SYSTEM, DITCH, OR CHANNEL ALL STORM SEWER INLETS THAT ARE MADE OPERABLE DURING CONSTRUCTION SHALL BE PROTECTED SO THAT SEDIMENT-LADEN WATER CANNOT ENTER THE CONVEYANCE SYSTEM WITHOUT FIRST BEING FILTERED OR OTHERWISE TREATED TO REMOVE SEDIMENT. GRATE INLETS AND CURB INLETS SHALL BE PROTECTED WITH GRATE INLET PROTECTION (GR8 PROTECTOR) AND CURB INLET PROTECTION PRODUCED BY SUNTREE ISLES, INC., OR EQUAL.
9. BEFORE TEMPORARY OR NEWLY CONSTRUCTED STORMWATER CONVEYANCE CHANNELS ARE MADE OPERATIONAL. ADEQUATE OUTLET PROTECTION AND ANY REQUIRED TEMPORARY OR PERMANENT CHANNEL LINING SHALL BE INSTALLED IN BOTH THE CONVEYANCE CHANNEL AND RECEIVING CHANNEL.
10. WHEN WORK IN A LIVE WATERCOURSE IS PERFORMED, PRECAUTIONS SHALL BE TAKEN TO MINIMIZE ENRICHMENT. CONTROL SEDIMENT TRANSPORT AND STABILIZE THE WORK AREA TO THE GREATEST EXTENT POSSIBLE DURING CONSTRUCTION. NONERODIBLE MATERIAL SHALL BE USED FOR THE CONSTRUCTION OF CAUSEWAYS AND COFFERDAMS. EARTHEN FILL MAY BE USED FOR THESE STRUCTURES IF ARMORED BY NONERODIBLE COVER MATERIALS.
11. WHERE CONSTRUCTION VEHICLE ACCESS ROUTES INTERSECT PAVED PUBLIC ROADS. PROVISIONS SHALL BE MADE TO MINIMIZE THE TRANSPORT OF SEDIMENT BY TRACKING ONTO THE PAVED SURFACE. WHERE SEDIMENT IS TRANSPORTED ONTO A PUBLIC ROAD SURFACE WITH CURB AND CUTTERS. THE ROAD SHALL BE CLEANED THOROUGHLY AT THE END OF EACH DAY. SEDIMENT SHALL BE REMOVED FROM THE ROADS BY SHOVELING OR SWEEPING AND TRANSPORTED TO A SEDIMENT CONTROL DISPOSAL AREA. STREET WASHING SHALL BE ALLOWED ONLY AFTER SEDIMENT IS REMOVED IN THIS MANNER. THIS PROVISION SHALL APPLY TO INDIVIDUAL SUBDIVISION LOTS AS WELL AS TO LARGER LAND-DISTURBING ACTIVITIES. CLEANING, WET SWEEPING, AND DUST CONTROL MUST BE DONE AS OFTEN AS NEEDED OR REQUESTED EACH DAY AND SITE MUST BE THOROUGHLY CLEANED AT THE END OF EACH DAY. CONTRACTOR SHALL MAINTAIN EXISTING DRAINAGE SYSTEM, AS LONG AS POSSIBLE.

FEC RAIL CROSSINGS

1. CONTRACTOR TO FOLLOW FEC REQUIREMENTS AS DETAILED IN SHEETS C-41 & C-42 FOR ALL WORK COMPLETED IN FEC RIGHT-OF-WAY.

EXISTING LEGEND:

- EX. CONTROL POINT
- EX. WOOD POWER POLE
- EX. METAL LIGHT POLE
- EX. STREET SIGN
- EX. OAK TREE
- EX. PALM TREE
- EX. SHRUB
- EX. SANITARY SEWER MANHOLE
- EX. LIFT STATION
- EX. SANITARY SEWER PIPE
- EX. FORCE MAIN
- EX. GRATE INLET
- EX. CATCH BASIN
- EX. STORM DRAIN MANHOLE
- EX. HEADWALL
- EX. STORM DRAINAGE PIPE
- EX. WATER LINE
- EX. FIRE HYDRANT
- EX. WATER VALVE
- EX. BACK FLOW PREVENTER
- EX. MONITOR WELL
- EX. SPIGOT
- EX. WATER METER
- EX. GAS LINE
- EX. GAS VALVE
- EX. WOOD LIGHT POLE
- EX. METAL POWER POLE
- EX. TELEPHONE MANHOLE
- EX. PHONE RISER
- EX. ELECTRICAL CONTROL BOX
- EX. FENCE
- EX. RIGHT-OF-WAY
- EX. EASEMENT
- EX. PROPERTY LINE
- EX. RAILROAD TRACKS
- EX. TOP OF BANK
- EX. TOE OF SLOPE
- EX. DITCH
- EX. ROAD CENTERLINE
- EX. BACK OF CURB
- EX. FACE OF CURB
- EX. EDGE OF PAVEMENT
- EX. EDGE OF CONCRETE
- EX. EDGE OF DIRT ROAD
- EX. EDGE OF GRAVEL ROAD
- EX. BUILDING

PROPOSED LEGEND:

- PROPOSED STREET SIGN
- PROPOSED SANITARY SEWER MANHOLE
- PROPOSED SANITARY SEWER PIPE
- PROPOSED GRATE INLET
- PROPOSED STORM DRAIN MANHOLE
- PROPOSED HEADWALL
- PROPOSED STORM DRAINAGE PIPE
- PROPOSED WATER LINE
- PROPOSED FIRE HYDRANT
- PROPOSED WATER VALVE
- PROPOSED BACK FLOW PREVENTER
- PROPOSED GAS LINE
- PROPOSED GAS VALVE
- PROPOSED RIGHT-OF-WAY
- PROPOSED EASEMENT
- PROPOSED MAJOR CONTOUR
- PROPOSED MINOR CONTOUR
- PROPOSED ROAD CENTERLINE
- PROPOSED BACK OF CURB
- PROPOSED FACE OF CURB
- PROPOSED EDGE OF PAVEMENT
- PROPOSED EDGE OF CONCRETE / SIDEWALK
- PROPOSED SIDEWALK / CONCRETE
- PROPOSED ASPHALT PAVING
- PROPOSED DRIVEWAY

ABBREVIATIONS:

CIP	CAST IN PLACE
CONC	CONCRETE
DIP	DUCTILE IRON PIPE
EL	ELEVATION
EOP	EDGE OF PAVEMENT
EX	EXISTING
PT	PRESSURE TREATED
SS	SANITARY SEWER
VCP	VITREOUS CLAY PIPE

NOTE:
1. CONTRACTOR REQUIRED TO VIDEO INSPECT AND CLEAN ALL PIPE INSTALLED IN STORM DRAIN SYSTEM. CLEAN UNTIL OUTFALL (EXCEPT IN FDOT ROW)
2. CONTRACTOR TO PERFORM FDOT LEAK TEST ON ALL INSPECTED PIPE.
3. CONTRACTOR TO FOLLOW FDOT DESIGN STANDARDS 2013 INDICES.
4. EXISTING IMPACTED DRIVEWAYS WITHIN LIMITS OF PROJECT ARE TO BE RESTORED TO CITY OF FORT PIERCE STANDARDS AT SAME LOCATION AND SIZE, EXCEPT AS NOTED.
5. CONTRACTOR SHALL USE EXTREME CAUTION WHEN WORKING IN OR AROUND AREAS OF OVERHEAD AND UNDERGROUND UTILITIES.

TAYLOR ENGINEERING INC.
10151 DEERWOOD PARK BLVD.
BLDG. 300, SUITE 300
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(904)-731-7040
1675 PALM BEACH LAKES, SUITE 210
WEST PALM BEACH, FLORIDA 33401
(561)-640-7310
CERTIFICATE OF AUTHORIZATION # 4815

SEAL

MICHAEL P. WHELAN P.E.# 55496

PROJECT TITLE

NORTH 2ND STREET ROADWAY IMPROVEMENTS
CITY OF FORT PIERCE
ST. LUCIE COUNTY, FLORIDA

Call (2) Business Days Before you Dig. It's the Law!!!
Sunshine State One Call of Florida, Inc.
1-800-432-4770

REVISIONS / SUBMISSIONS	DATE	ZONE	NO

PROJECT NO	C2013-064
DATE	JULY 2014
DESIGNED	HCV
DRAWN	RLJ
CHECKED	AF
REVIEWED	MPW
SCALE	AS SHOWN

DRAWING TITLE

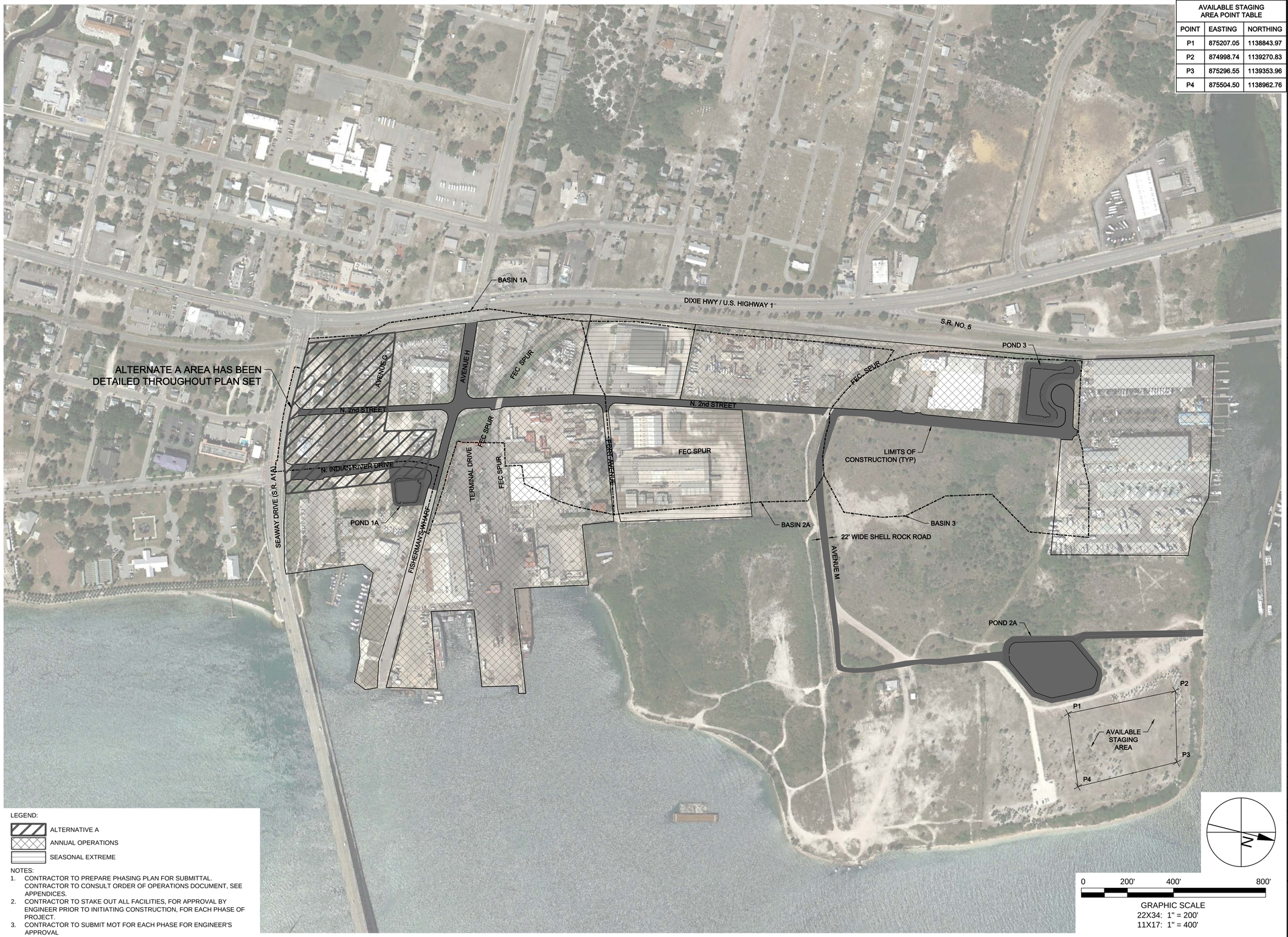
PROJECT NOTES

C-2

SHEET 2 OF 49

ANTON, 7/18/2014 12:02:23 PM , x:\sys\Projects\c2008-056 Ft Pierce 2nd Street\Construction\C2008-056-C-Project Notes.dwg

AVAILABLE STAGING AREA POINT TABLE		
POINT	EASTING	NORTHING
P1	875207.05	1138843.97
P2	874998.74	1139270.83
P3	875296.55	1139353.96
P4	875504.50	1138962.76



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SCALE	AS SHOWN

DRAWING TITLE

PHASING PLAN

C-2A

SHEET 3 OF 49

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SCALE	AS SHOWN

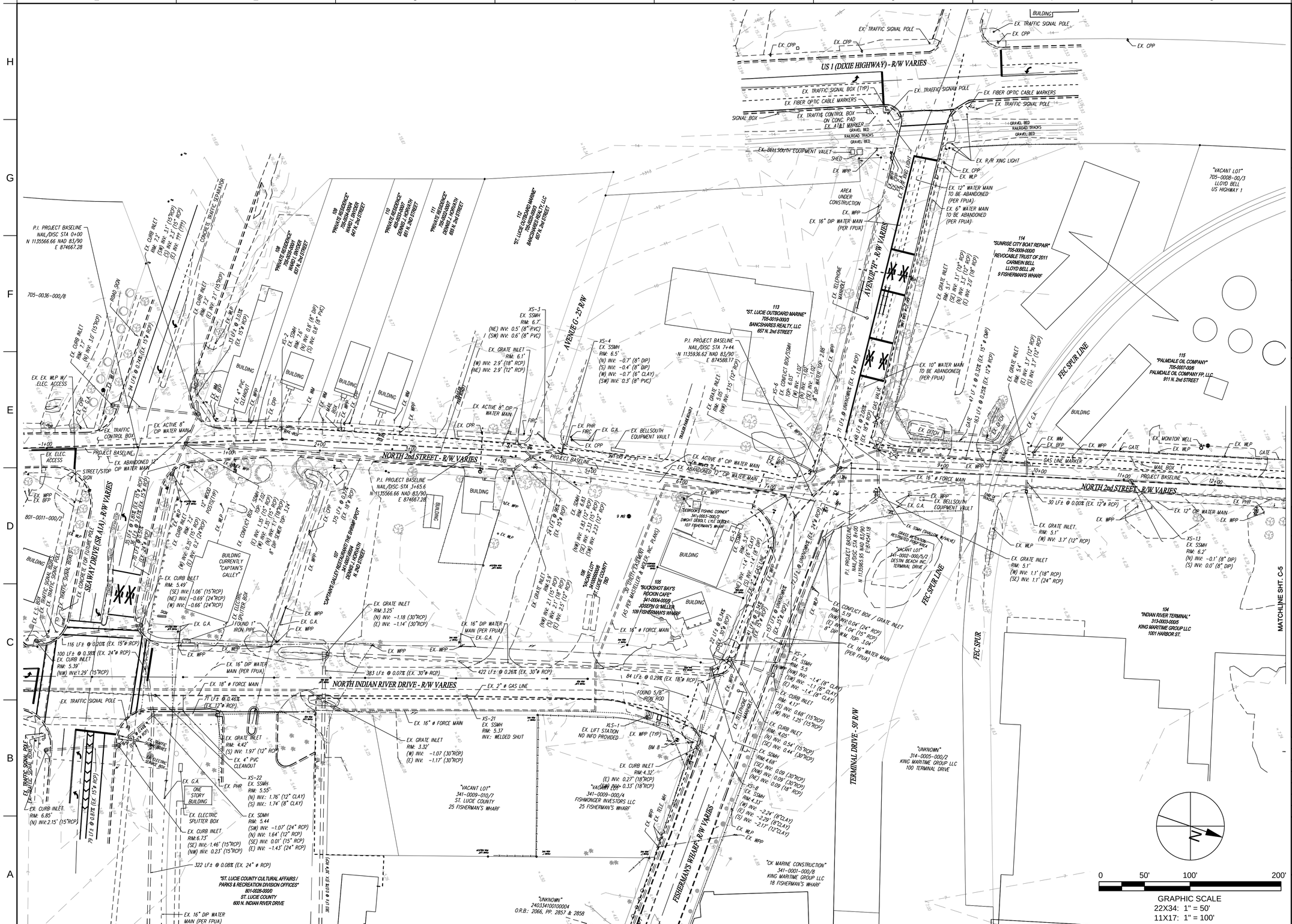
DRAWING TITLE

RIGHT-OF-WAY OVERVIEW

C-3

SHEET 4 OF 49

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PROJECT NO	C2013-064
DATE	JULY 2014
DESIGNED	HCV
DRAWN	RLJ
CHECKED	AF
REVIEWED	MPW
SCALE	AS SHOWN

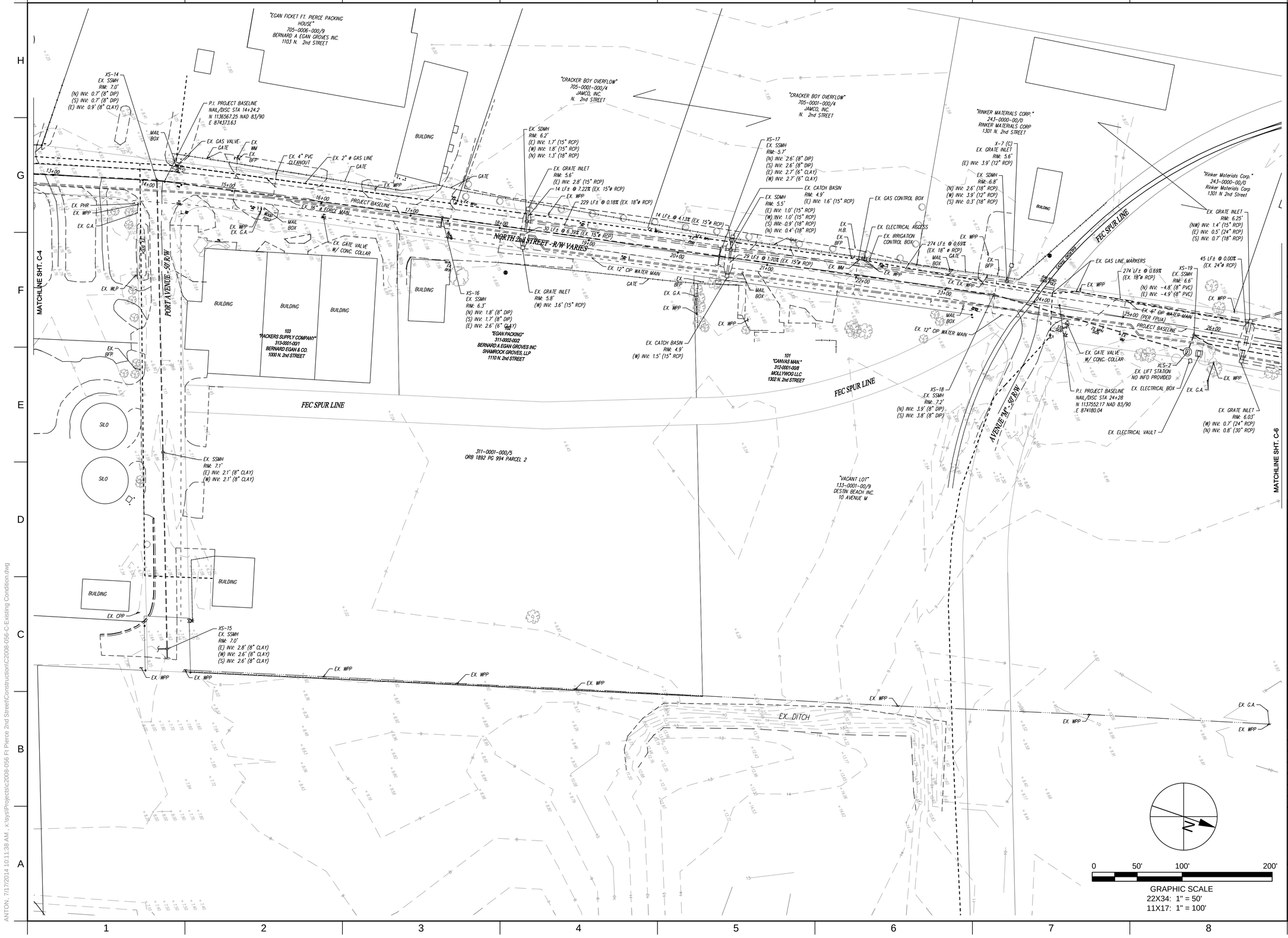
DRAWING TITLE

EXISTING CONDITIONS

C-4

SHEET 5 OF 49

ANTON , 7/17/2014 10:11:32 AM , x:\sys\Projects\c2008-056 Ft Pierce 2nd Street\Construction\C2008-056-C-Existing Condition.dwg



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PROJECT NO	C2013-064
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DRAWN	RLJ
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REVIEWED	MPW
SCALE	AS SHOWN

DRAWING TITLE

EXISTING CONDITIONS

C-5

SHEET 6 OF 49

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PROJECT NO	C2013-064
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CHECKED	AF
REVIEWED	MPW
SCALE	AS SHOWN

DRAWING TITLE

EXISTING CONDITIONS

C-6

SHEET 7 OF 49

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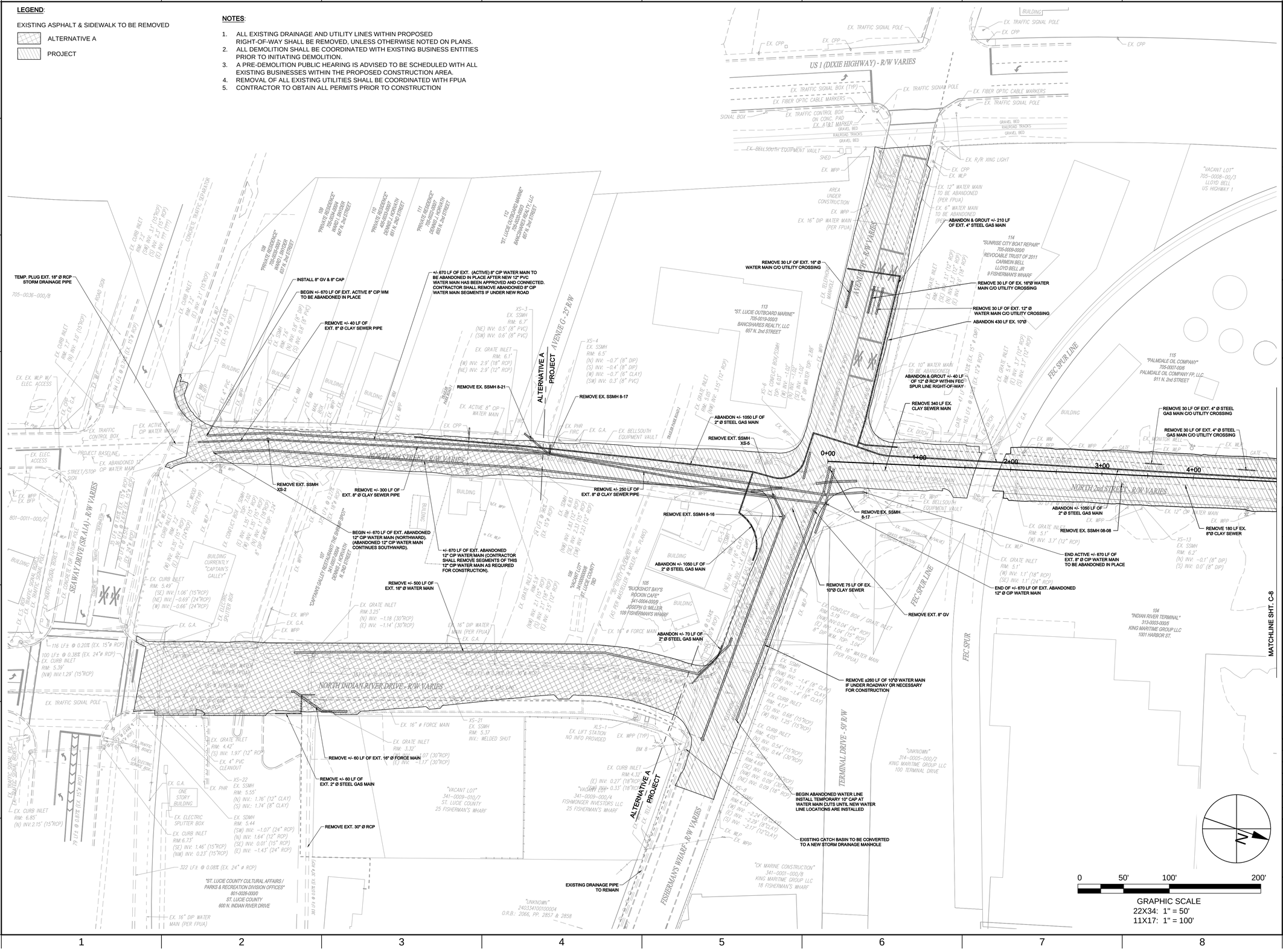
EXISTING ASPHALT & SIDEWALK TO BE REMOVED

ALTERNATIVE A

PROJECT

NOTES:

1. ALL EXISTING DRAINAGE AND UTILITY LINES WITHIN PROPOSED RIGHT-OF-WAY SHALL BE REMOVED, UNLESS OTHERWISE NOTED ON PLANS.
2. ALL DEMOLITION SHALL BE COORDINATED WITH EXISTING BUSINESS ENTITIES PRIOR TO INITIATING DEMOLITION.
3. A PRE-DEMOLITION PUBLIC HEARING IS ADVISED TO BE SCHEDULED WITH ALL EXISTING BUSINESSES WITHIN THE PROPOSED CONSTRUCTION AREA.
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5. CONTRACTOR TO OBTAIN ALL PERMITS PRIOR TO CONSTRUCTION



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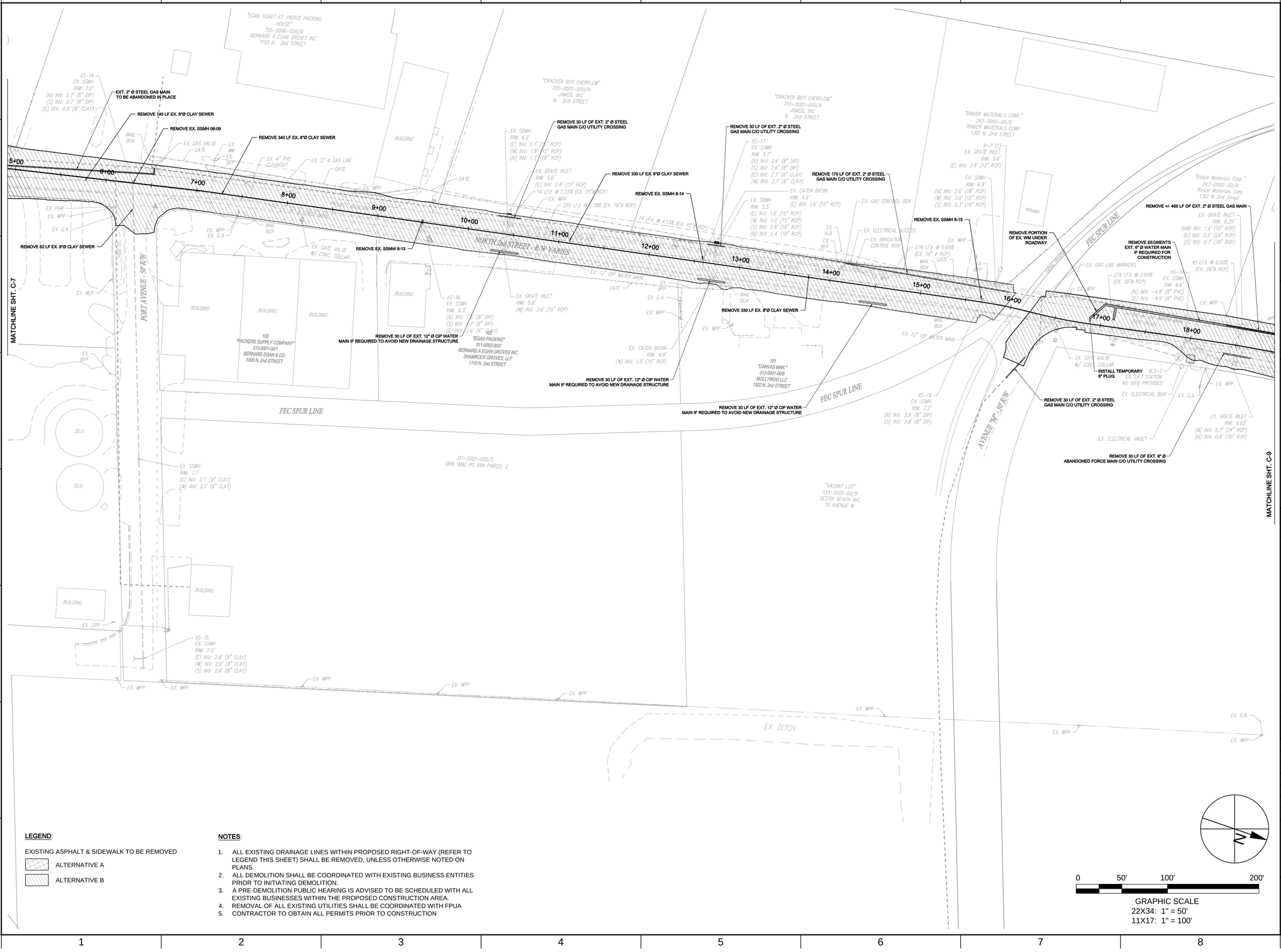
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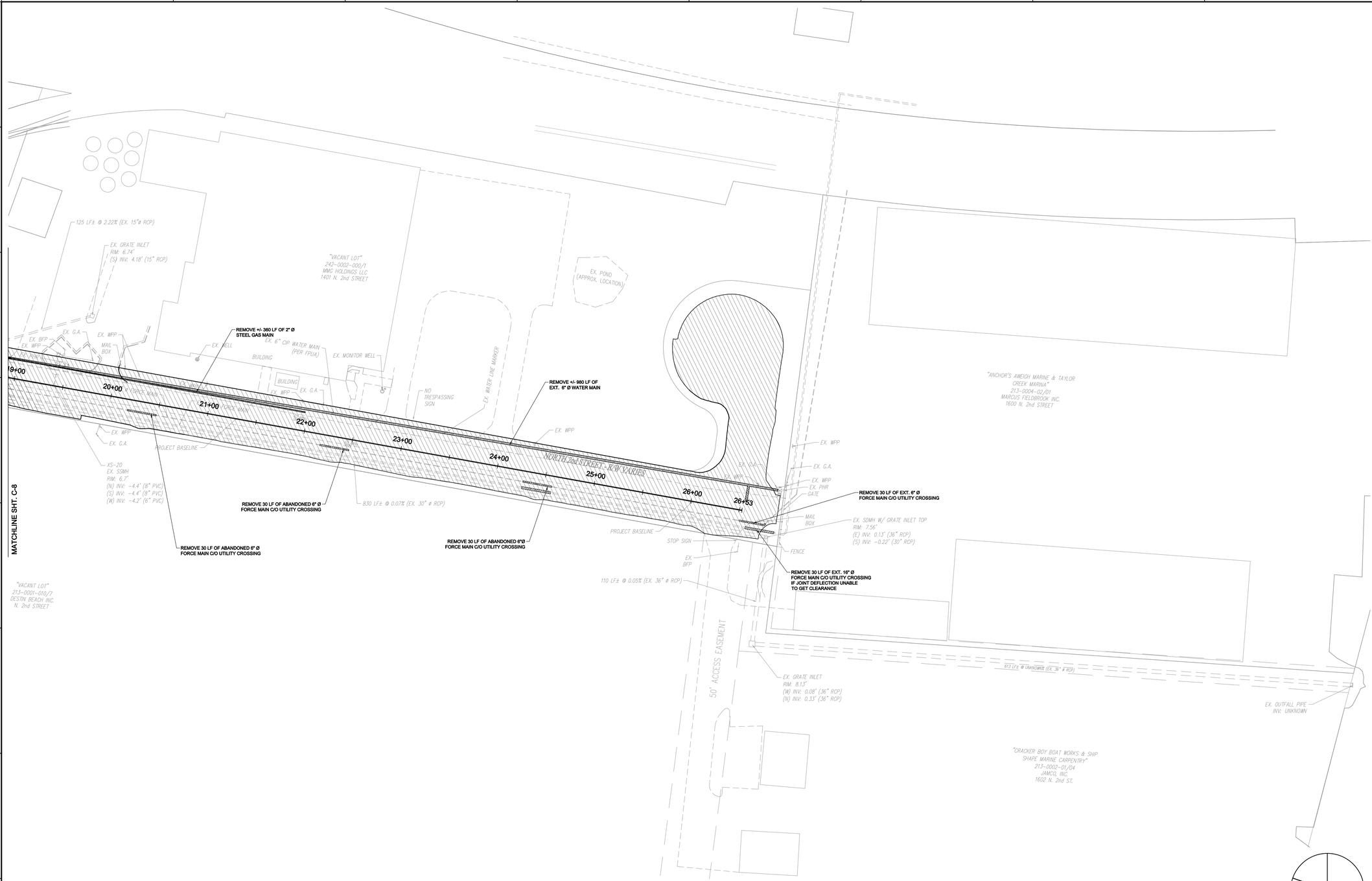
DEMOLITION PLAN

C-7

SHEET 8 OF 49

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"EGAN FICKET FT. PIERCE PACKING HOUSE"
705-0006-000/9
BERNARD A EGAN GROVES INC.
1103 N. 2nd STREET
"CRACKER BOY OVERFLOW"
705-0001-000/4
JAMCO, INC.
N. 2nd STREET
"RINKER MATERIALS CORP."
243-0000-00/0
RINKER MATERIALS CORP
1301 N. 2nd STREET
"Rinker Materials Corp."
243-0000-00/0
Rinker Materials Corp
1301 N 2nd Street
EXT. 2" Ø STEEL GAS MAIN TO BE ABANDONED IN PLACE
REMOVE 145 LF EX. 8"Ø CLAY SEWER
REMOVE EX. SSMH 08-09
REMOVE 340 LF EX. 8"Ø CLAY SEWER
REMOVE 62 LF EX. 8"Ø CLAY SEWER
REMOVE EX. SSMW 8-13
REMOVE 30 LF OF EXT. 2" Ø STEEL GAS MAIN C/O UTILITY CROSSING
REMOVE 330 LF EX. 8"Ø CLAY SEWER
REMOVE EX. SSMH 8-14
REMOVE 30 LF OF EXT. 12" Ø CIP WATER MAIN IF REQUIRED TO AVOID NEW DRAINAGE STRUCTURE
REMOVE 30 LF OF EXT. 2" Ø STEEL GAS MAIN C/O UTILITY CROSSING
REMOVE 170 LF OF EXT. 2" Ø STEEL GAS MAIN C/O UTILITY CROSSING
REMOVE EX. SSMH 8-15
REMOVE 330 LF EX. 8"Ø CLAY SEWER
REMOVE 30 LF OF EXT. 12" Ø CIP WATER MAIN IF REQUIRED TO AVOID NEW DRAINAGE STRUCTURE
REMOVE PORTION OF EX. WM UNDER ROADWAY
REMOVE +/- 460 LF OF EXT. 2" Ø STEEL GAS MAIN
REMOVE SEGMENTS EXT. 6" Ø WATER MAIN IF REQUIRED FOR CONSTRUCTION
INSTALL TEMPORARY 6" PLUG
REMOVE 30 LF OF EXT. 2" Ø STEEL GAS MAIN C/O UTILITY CROSSING
REMOVE 30 LF OF EXT. 6" Ø ABANDONED FORCE MAIN C/O UTILITY CROSSING
5+00
6+00
7+00
8+00
9+00
10+00
11+00
12+00
13+00
14+00
15+00
16+00
17+00
18+00
NORTH 2nd STREET - R/W VARIES
PORT AVENUE - 50' R/W
AVENUE 'M' - 50' R/W
FEC SPUR LINE
MATCHLINE SHT. C-7
MATCHLINE SHT. C-9
103
"PACKERS SUPPLY COMPANY"
313-0001-00/1
BERNARD EGAN & CO.
1000 N. 2nd STREET
"EGAN PACKING"
314-0003-00/2
BERNARD A EGAN GROVES INC
SHAMROCK GROVES, LLP
1116 N. 2nd STREET
101
"CANVAS MAN,"
312-0001-00/8
MOLLYWOZ LLC
1302 N. 2nd STREET
311-0001-000/5
ORB 1892 PG 994 PARCEL 2
"VACANT LOT"
133-0001-00/9
DESTIN BEACH INC.
10 AVENUE M
EX. DITCH
EX. WPP
EX. G.A.
EX. GRATE INLET
EX. SSMH
EX. CATCH BASIN
EX. GAS VALVE
EX. GAS CONTROL BOX
EX. ELECTRICAL ACCESS
EX. IRRIGATION CONTROL BOX
EX. ELECTRICAL BOX
EX. ELECTRICAL VAULT
EX. GAS LINE MARKERS
EX. 12" CIP WATER MAIN
EX. GATE VALVE W/ CONC. COLLAR
EX. 4" PVC CLEANOUT
EX. 2" Ø GAS LINE
EX. PHR
EX. WLP
EX. BFP
EX. CPP
MAIL BOX
BUILDING
SILO
GATE
XS-14
EX. SSMH
RIM: 7.0'
(N) INV: 0.7' (8" DIP)
(S) INV: 0.7' (8" DIP)
(E) INV: 0.9' (8" CLAY)
XS-15
EX. SSMH
RIM: 7.0'
(E) INV: 2.8' (8" CLAY)
(W) INV: 2.6' (8" CLAY)
(S) INV: 2.6' (8" CLAY)
XS-16
EX. SSMH
RIM: 6.3'
(N) INV: 1.5' (8" DIP)
(S) INV: 1.7' (8" DIP)
(E) INV: 2.6' (6" CLAY)
XS-17
EX. SSMH
RIM: 5.7'
(N) INV: 2.6' (8" DIP)
(S) INV: 2.6' (8" DIP)
(E) INV: 2.7' (6" CLAY)
(W) INV: 2.7' (6" CLAY)
XS-18
EX. SSMH
RIM: 7.2'
(N) INV: 3.9' (8" DIP)
(S) INV: 3.8' (8" DIP)
EX. SDMH
RIM: 6.2'
(E) INV: 1.7' (15" RCP)
(W) INV: 1.8' (15" RCP)
(N) INV: 1.3' (18" RCP)
EX. SDMH
RIM: 5.5'
(E) INV: 1.0' (15" RCP)
(W) INV: 1.0' (15" RCP)
(S) INV: 0.9' (18" RCP)
(N) INV: 0.4' (18" RCP)
EX. GRATE INLET
RIM: 5.6'
(E) INV: 2.8' (15" RCP)
14 LF± @ 7.22% (EX. 15"ø RCP)
EX. WPP
229 LF± @ 0.18% (EX. 18"ø RCP)
14 LF± @ 4.13% (EX. 15"ø RCP)
EX. GRATE INLET
RIM: 5.8'
(W) INV: 3.6" (15" RCP)
EX. CATCH BASIN
RIM: 4.9'
(W) INV: 1.5' (15" RCP)
EX. GRATE INLET
RIM: 5.6'
(E) INV: 3.9' (12" RCP)
EX. SDMH
RIM: 6.8'
(N) INV: 2.6" (18" RCP)
(W) INV: 3.9' (12" RCP)
(S) INV: 0.3" (18" RCP)
X-7 (C)
EX. GRATE INLET
RIM: 5.6'
(E) INV: 3.9' (12" RCP)
EX. GRATE INLET
RIM: 6.25'
(NW) INV: 1.4" (15" RCP)
(E) INV: 0.5" (24" RCP)
(S) INV: 0.7" (18" RCP)
274 LF± @ 0.69%
(EX. 18"ø RCP)
45 LF± @ 0.00%
(EX. 24"ø RCP)
(N) INV: -4.8' (8" PVC)
(E) INV: -4.9' (8" PVC)
EX. LIFT STATION
NO INFO PROVIDED
EX. GRATE INLET
RIM: 6.03'
(W) INV: 0.7' (24" RCP)
(N) INV: 0.8' (30" RCP)
EX. GATE VALVE W/ CONC. COLLAR
EX. WPP
EX. G.A.
EX. BFP
EX. WPP
EX. WPP
EX. WPP
EX. WPP
EX. WPP
EX. WPP
EX. WPP
EX. WPP
EX. WPP
EX. WPP
EX. G.A.
EX. WPP
EX. WPP
EX. DITCH
EX. WPP
EX. WPP
EX. WPP
EX. WPP
EX. WPP
EX. WPP
EX. WPP
EX. WPP
EX. WPP
EX. WPP



LEGEND:

EXISTING ASPHALT & SIDEWALK TO BE REMOVED

ALTERNATIVE A

ALTERNATIVE B

NOTES:

1. ALL EXISTING DRAINAGE LINES WITHIN PROPOSED RIGHT-OF-WAY (REFER TO LEGEND THIS SHEET) SHALL BE REMOVED, UNLESS OTHERWISE NOTED ON PLANS.
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CERTIFICATE OF AUTHORIZATION # 4815

SEAL

MICHAEL P. WHELAN P.E.# 55496

PROJECT TITLE

NORTH 2ND STREET ROADWAY IMPROVEMENTS

CITY OF FORT PIERCE
ST. LUCIE COUNTY, FLORIDA

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NO	ZONE	REVISIONS / SUBMISSIONS	DATE

PROJECT NO	C2013-064
DATE	JULY 2014
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DRAWN	RLJ
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REVIEWED	MPW
SCALE	AS SHOWN

DRAWING TITLE

DEMOLITION PLAN

C-9

SHEET 10 OF 49

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ROADWAY GEOMETRY POINT LOCATIONS

NORTH INDIAN DRIVE EOP STATION & OFFSET TABLE		
POINT	STATION	OFFSET
NI-1	0+74.62	-23.50'
NI-2	0+76.26	-23.50'
NI-3	1+23.75	-23.50'
NI-4	0+62.33	42.92'
NI-5	0+74.16	41.50'
NI-6	1+29.96	41.50'
NI-7	1+43.23	49.50'
NI-8	1+71.40	47.78'
NI-9	1+82.74	49.27'
NI-10	2+03.92	49.50'
NI-11	2+17.18	41.50'
NI-12	3+11.77	41.50'
NI-13	3+17.17	41.26'
NI-14	5+18.45	23.66'
NI-15	5+21.76	23.51'
NI-16	5+41.76	23.51'
NI-17	6+63.22	23.52'
NI-18	6+62.84	-23.50'
NI-19	6+59.79	-23.50'
NI-20	5+44.68	-23.50'

AVENUE H/FISHERMAN EOP STATION & OFFSET TABLE		
POINT	STATION	OFFSET
HF-7	0+86.64	24.00'
HF-12	0+71.26	-24.00'
HF-13	3+67.99	-24.00'
HF-14	4+08.73	24.00'
HF-15	4+80.72	-17.00'
HF-16	5+18.15	-17.00'
HF-17	5+17.21	17.00'
HF-18	5+73.12	-17.00'
HF-19	5+87.23	-17.00'
HF-20	5+73.12	17.00'
HF-21	5+87.23	17.00'
HF-22	6+65.71	17.00'
HF-23	7+82.73	17.00'
HF-24	8+05.02	17.57'
HF-25	8+23.74	21.30'
HF-26	8+03.74	-17.00'
HF-27	8+23.74	-19.30'

NORTH 2ND STREET A EOP STATION & OFFSET TABLE		
POINT	STATION	OFFSET
2A-2	0+75.81	-25.41'
2A-3	1+07.17	-12.00'
2A-4	1+16.61	-12.00'
2A-5	7+16.80	-12.00'
2A-6	6+85.50	12.00'
2A-7	4+14.28	12.00'
2A-8	1+37.13	12.00'
2A-9	1+16.61	12.00'
2A-10	0+73.64	12.00'
2A-11	0+68.06	12.02'

NORTH 2ND ST B EOP STATION & OFFSET TABLE		
POINT	STATION	OFFSET
2B-1	0+38.56	24.00'
2B-2	0+70.69	-17.00'
2B-3	1+10.49	-17.00'
2B-4	1+26.82	24.00'
2B-5	1+38.82	35.78'
2B-6	1+83.73	29.04'
2B-7	1+93.50	24.00'
2B-8	1+63.96	-17.00'
2B-9	1+63.96	-18.50'
2B-10	1+99.19	-18.50'
2B-11	1+99.19	-17.00'

BEGIN BASELINE
AVENUE H & FISHERMAN'S WHARF
STA.: 0+00.00
OFFSET: 0.00
N: 1135913.63
E: 874112.15

INTERSECTION
US 1 (DIXIE HIGHWAY)
STA.: 2+10.93
OFFSET: 0.00
N: 1135913.63
E: 874112.15

US 1 (DIXIE HIGHWAY) - R/W VARIES

END OF PAVING

5' WIDE CONC. SIDEWALK

48' (EOP)

AVENUE "H" - R/W VARIES

INTERSECTION
SEAWAY DRIVE (SR A1A)
STA.: 2+91.62
OFFSET: 0.00
N: 1135219.93
E: 874779.68

BEGIN BASELINE
N. 2nd STREET - A
STA.: 0+00.00
OFFSET: 0.00
N: 1135219.93
E: 874779.68

SEAWAY DRIVE (SR A1A) - R/W VARIES

TRAILER PARK
(REMOVED)

AVENUE G - 25' R/W

5' WIDE STANDARD CONC. SIDEWALK (TYP)

NEW DRIVEWAY (TYP.)

NEW HANDICAPPED RAMP
PER FDOT INDEX 304 (TYP.)

BEGIN BASELINE
N. 2nd STREET - B
STA.: 0+00.00
OFFSET: 0.00
N: 1135952.42
E: 874543.16

INTERSECTION
AVENUE H & FISHERMAN'S WHARF
STA.: 4+32.76
OFFSET: 0.00
N: 1135952.42
E: 874543.16

FEC SPUR LINE

PALM DALE OIL COMPANY

PROPOSED NEW
RIGHT-OF-WAY
ACQUISITION

END OF PAVING

NORTH 2nd STREET - R/W VARIES

MOD FDOT TYPE F 18"
CURB & GUTTER (TYP)

5' WIDE REINFORCED CONC. SIDEWALK (TYP)

5' WIDE CONC. SIDEWALK (TYP.)

CAPTAIN'S GALLEY

CAPTAIN JAX

DEBROOKS FISHING CORNER

ISLAND RADIUS POINT
STA.: 5+19.07
OFFSET: 3.50L
N: 1135741.26
E: 874855.07

18" CURB & GUTTER (TYP.)

BUCKSHOT BAY

INTERSECTION
SEAWAY DRIVE (SR A1A)
STA.: 5+39.22
OFFSET: 0.00
N: 1135250.83
E: 875025.17

END OF PAVING

NORTH INDIAN RIVER DRIVE - R/W VARIES

BEGIN BASELINE
N. INDIAN RIVER DRIVE
STA.: 0+00.00
OFFSET: 0.00
N: 1135250.83
E: 875025.17

ISLAND RADIUS POINT
STA.: 3+13.14
OFFSET: 10.79R
N: 1135550.83
E: 874934.77

PROPOSED RETENTION POND 1A

93.2'
50.9'

INTERSECTION
AVENUE H & FISHERMAN'S WHARF
STA.: 4+45.43
OFFSET: 0.00
N: 1135951.92
E: 874555.81

INTERSECTION
AVENUE H & FISHERMAN'S WHARF
STA.: 7+24.21
OFFSET: 0.00
N: 1135934.84
E: 874833.40

END BASELINE
N. 2nd STREET - A
STA.: 7+65.74
OFFSET: 0.00
N: 1135951.92
E: 874555.81

PROPOSED NEW
RIGHT-OF-WAY
ACQUISITION

MOD FDOT TYPE F 18"
CURB & GUTTER (TYP)

5' WIDE REINFORCED CONC. SIDEWALK (TYP)

5' WIDE STANDARD CONC. SIDEWALK (TYP)

FEC SPUR

INDIAN RIVER
TERMINAL

TERMINAL DRIVE - 50' R/W

END BASELINE
N. INDIAN RIVER DRIVE
STA.: 7+14.84
OFFSET: 0.00
N: 1135934.84
E: 874833.40

END OF PAVING

FISHERMAN'S WHARF - R/W VARIES

END BASELINE
AVENUE H & FISHERMAN'S WHARF
STA.: 8+23.74
OFFSET: 0.00
N: 1135933.15
E: 874932.91

MATCHLINE SHT. C-11

0 50' 100' 200'

GRAPHIC SCALE
22X34: 1" = 50'
11X17: 1" = 100'

SIDEWALK LEGEND:
- 5' WIDE STANDARD CONCRETE SIDWALK
- 5' WIDE REINFORCED CONCRETE SIDWALK
- PROPOSED ROW ACQUISITION

NOTE: SIDEWALK IN PROPOSED ROW TO BE INSTALLED BY OTHERS IN FUTURE. CONTRACTOR TO COORDINATE CONNECTION TO FUTURE WORK.

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WEST PALM BEACH, FLORIDA 33401
(561)-640-7310
CERTIFICATE OF AUTHORIZATION # 4815

SEAL

MICHAEL P. WHELAN P.E.# 55496

PROJECT TITLE

NORTH 2ND STREET
ROADWAY IMPROVEMENTS
CITY OF FORT PIERCE
ST. LUCIE COUNTY, FLORIDA

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SCALE	AS SHOWN

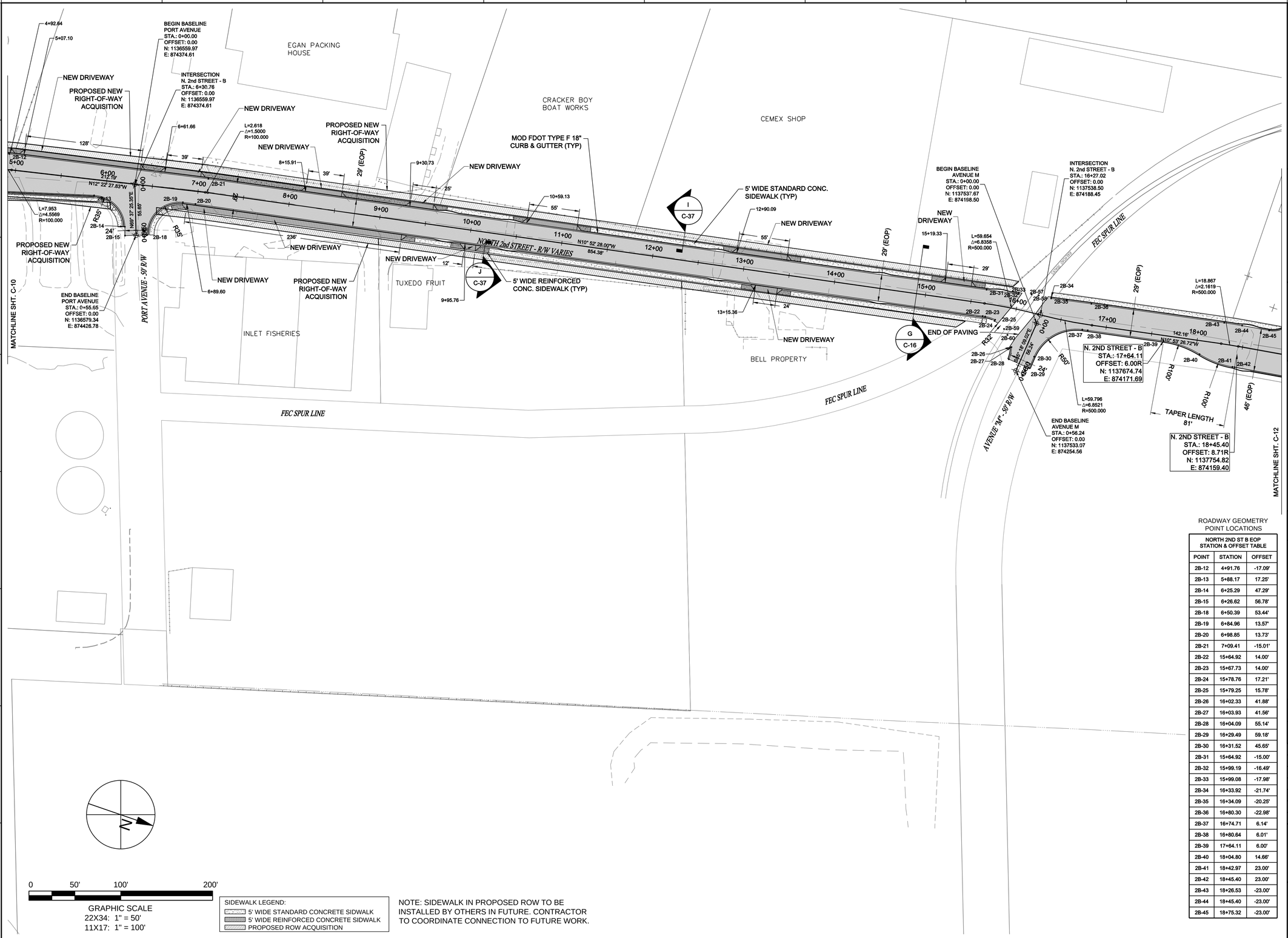
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ROADWAY
GEOMETRIC PLAN

C-10

SHEET 11 OF 49

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0 50' 100' 200'

GRAPHIC SCALE
22X34: 1" = 50'
11X17: 1" = 100'

SIDEWALK LEGEND:
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- 5' WIDE REINFORCED CONCRETE SIDWALK
- PROPOSED ROW ACQUISITION

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ROADWAY GEOMETRY
POINT LOCATIONS

NORTH 2ND ST B EOP
STATION & OFFSET TABLE

POINT	STATION	OFFSET
2B-12	4+91.76	-17.09'
2B-13	5+88.17	17.25'
2B-14	6+25.29	47.29'
2B-15	6+26.62	56.78'
2B-18	6+50.39	53.44'
2B-19	6+84.96	13.57'
2B-20	6+98.85	13.73'
2B-21	7+09.41	-15.01'
2B-22	15+64.92	14.00'
2B-23	15+67.73	14.00'
2B-24	15+78.76	17.21'
2B-25	15+79.25	15.78'
2B-26	16+02.33	41.88'
2B-27	16+03.93	41.56'
2B-28	16+04.09	55.14'
2B-29	16+29.49	59.18'
2B-30	16+31.52	45.65'
2B-31	15+64.92	-15.00'
2B-32	15+99.19	-16.49'
2B-33	15+99.08	-17.98'
2B-34	16+33.92	-21.74'
2B-35	16+34.09	-20.25'
2B-36	16+80.30	-22.98'
2B-37	16+74.71	6.14'
2B-38	16+80.64	6.01'
2B-39	17+64.11	6.00'
2B-40	18+04.80	14.66'
2B-41	18+42.97	23.00'
2B-42	18+45.40	23.00'
2B-43	18+26.53	-23.00'
2B-44	18+45.40	-23.00'
2B-45	18+75.32	-23.00'

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ROADWAY
GEOMETRIC PLAN

C-11

SHEET 12 OF 49

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ROADWAY GEOMETRY POINT LOCATIONS

NORTH 2ND ST B EOP STATION & OFFSET TABLE		
POINT	STATION	OFFSET
2B-46	18+92.62	-29.95'
2B-47	19+22.40	-29.95'
2B-48	19+28.89	-23.00'
2B-49	19+73.67	-23.00'
2B-50	19+82.82	-29.94'
2B-51	20+05.08	-29.94'
2B-52	20+18.52	-23.00'
2B-53	25+97.69	-23.00'
2B-54	26+03.62	23.00'
2B-55	26+22.32	28.42'

CUL-DE-SAC EOP STATION & OFFSET TABLE		
POINT	STATION	OFFSET
CDS-1	0+17.71	37.03'
CDS-2	0+37.71	17.00'
CDS-3	0+60.73	-17.00'
CDS-4	0+88.64	-17.00'
CDS-5	1+28.81	-35.39'
CDS-6	1+43.97	38.19'

FDOT TIMBER POST GUARDRAIL (FDOT INDEX 400)

FT. PIERCE PAL

STEAM LOCOMOTIVE ASSOC., INC.

PROPOSED RETENTION POND # 3

EXT. POND (APPROX. LOCATION)

5' WIDE STANDARD CONC. SIDEWALK (TYP)

5' WIDE REINFORCED CONC. SIDEWALK (TYP)

NEW DRIVEWAY

NEW DRIVEWAY

NEW DRIVEWAY

END BASELINE CUL-DE-SAC
CENTER OF CUL-DE-SAC
STA.: 1+73.00
OFFSET: 0.00
N: 1138486.21
E: 873875.20

S37° 02' 50.46"W
20.98'

L=55.503
Δ=41.2999
R=77.000

34' (EOP)

46' (EOP)

N8° 43' 43.72"W
807.32'

S78° 20' 50.00"W
96.51'

END BASELINE
N. 2nd STREET - B
STA.: 26+52.72
OFFSET: 0.00
N: 1138551.47
E: 874028.27

MOD FDOT TYPE F 18" CURB & GUTTER (TYP)

BEGIN BASELINE
CUL-DE-SAC
STA.: 0+00.00
OFFSET: 0.00
N: 1138551.47
E: 874028.27

NORTH 2nd STREET - R/W VARIES

TAYLOR CREEK MARINA

CRACKER BOY BOAT WORKS

50' ACCESS EASEMENT

SHIP SHOP

MATCHLINE SHT. C-11

GRAPHIC SCALE
22X34: 1" = 50'
11X17: 1" = 100'
0 50' 100' 200'

SIDEWALK LEGEND:
5' WIDE STANDARD CONCRETE SIDWALK
5' WIDE REINFORCED CONCRETE SIDWALK
PROPOSED ROW ACQUISITION

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CERTIFICATE OF AUTHORIZATION # 4815

SEAL

MICHAEL P. WHELAN P.E.# 55496

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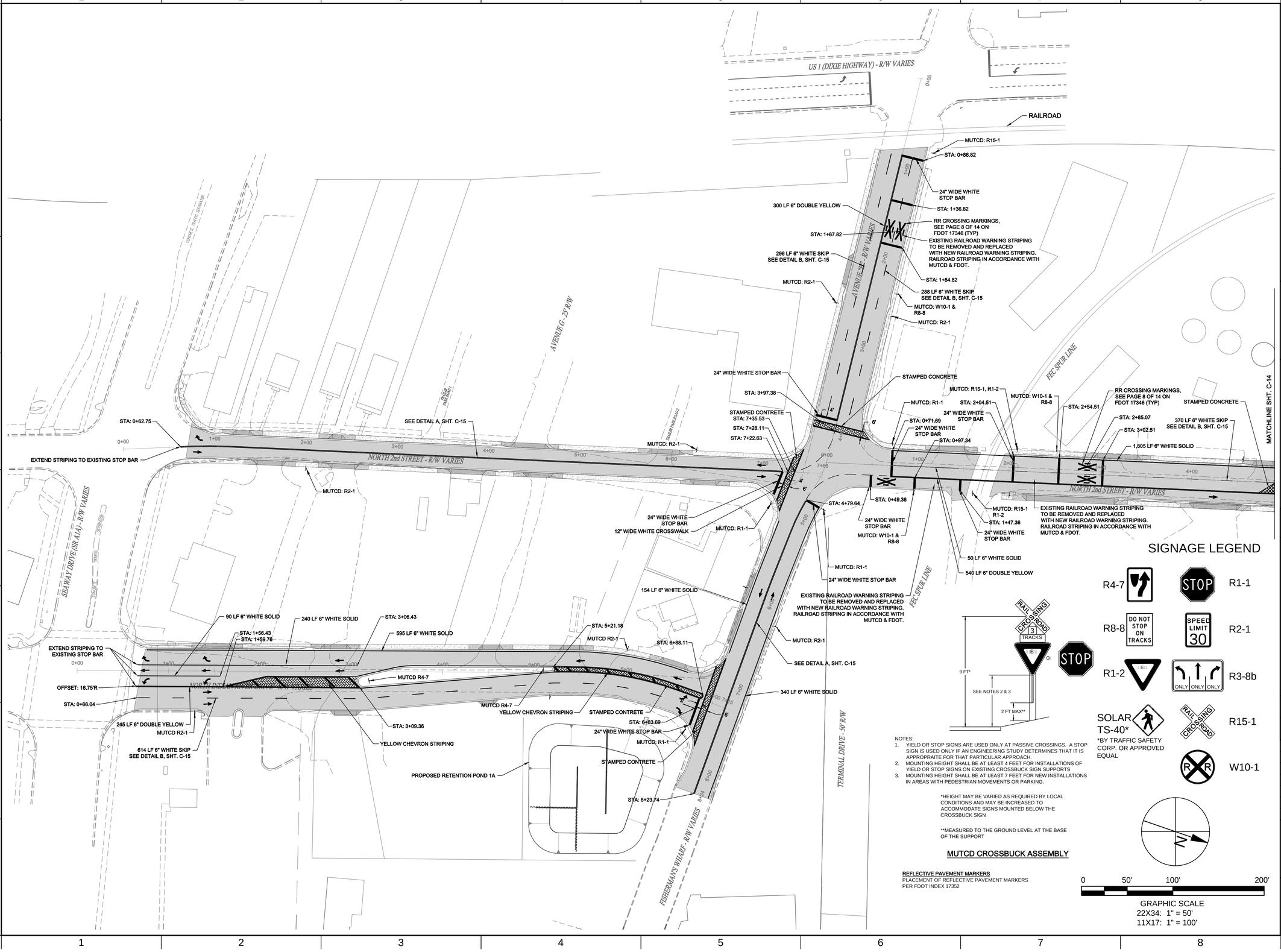
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ROADWAY GEOMETRIC PLAN

C-12

SHEET 13 OF 49

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SIGNAGE LEGEND

R4-7	STOP	R1-1
R8-8 (DO NOT STOP ON TRACKS)	SPEED LIMIT 30	R2-1
R1-2	ONLY ONLY ONLY	R3-8b
SOLAR TS-40*	RAIL CROSSING ROAD	R15-1
	R R	W10-1

*BY TRAFFIC SAFETY CORP, OR APPROVED EQUAL

RAIL CROSSING ROAD 3 TRACKS

9 FT*

SEE NOTES 2 & 3

2 FT MAX**

STOP

NOTES:
1. YIELD OR STOP SIGNS ARE USED ONLY AT PASSIVE CROSSINGS. A STOP SIGN IS USED ONLY IF AN ENGINEERING STUDY DETERMINES THAT IT IS APPROPRAITE FOR THAT PARTICULAR APPROACH.
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3. MOUNTING HEIGHT SHALL BE AT LEAST 7 FEET FOR NEW INSTALLATIONS IN AREAS WITH PEDESTRIAN MOVEMENTS OR PARKING.

*HEIGHT MAY BE VARIED AS REQUIRED BY LOCAL CONDITIONS AND MAY BE INCREASED TO ACCOMMODATE SIGNS MOUNTED BELOW THE CROSSBUCK SIGN

**MEASURED TO THE GROUND LEVEL AT THE BASE OF THE SUPPORT

MUTCD CROSSBUCK ASSEMBLY

REFLECTIVE PAVEMENT MARKERS
PLACEMENT OF REFLECTIVE PAVEMENT MARKERS PER FDOT INDEX 17352

0 50' 100' 200'

GRAPHIC SCALE
22X34: 1" = 50'
11X17: 1" = 100'

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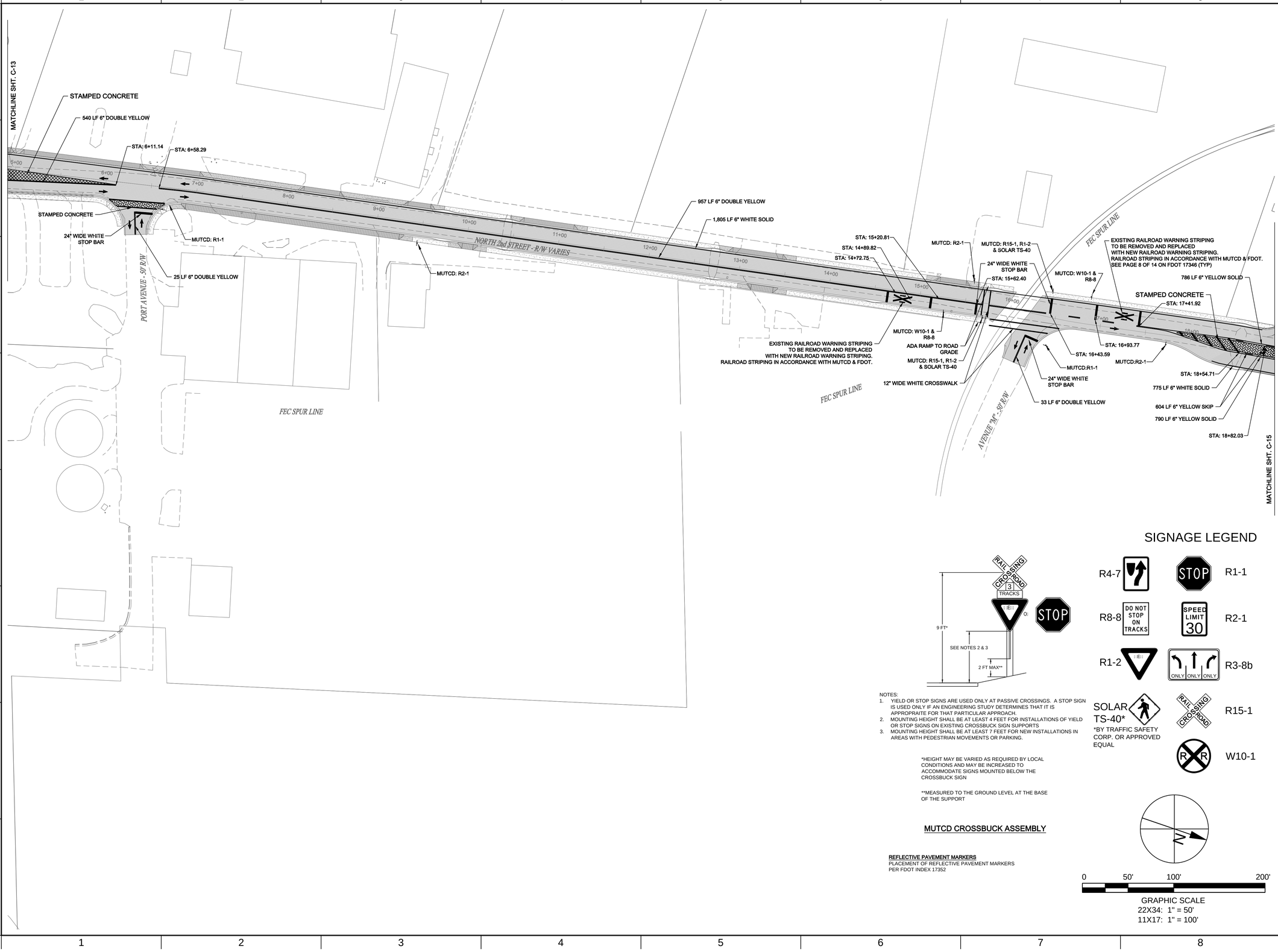
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PAVEMENT MARKING & SIGNAGE PLAN

C-13

SHEET 14 OF 49

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MUTCD CROSSBUCK ASSEMBLY

REFLECTIVE PAVEMENT MARKERS
PLACEMENT OF REFLECTIVE PAVEMENT MARKERS PER FDOT INDEX 17352

SIGNAGE LEGEND

*BY TRAFFIC SAFETY CORP. OR APPROVED EQUAL

0 50' 100' 200'

GRAPHIC SCALE
22X34: 1" = 50'
11X17: 1" = 100'

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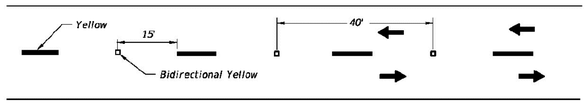
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PAVEMENT MARKING & SIGNAGE PLAN

C-14

SHEET 15 OF 49

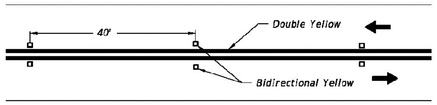
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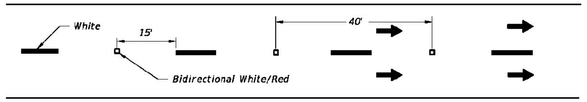
SKIP LINE

DETAIL A

NOT TO SCALE



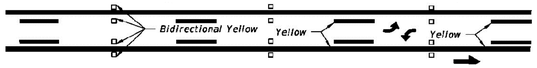
DOUBLE SOLID LINE



MULTILANE

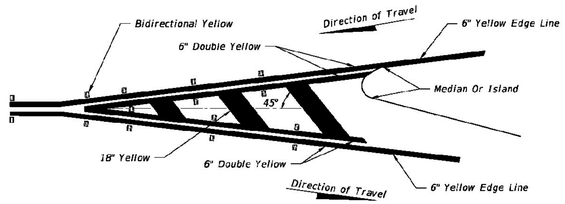
DETAIL B

NOT TO SCALE

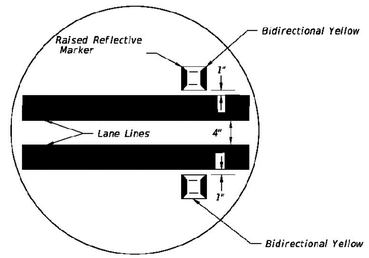


DETAIL C

NOT TO SCALE

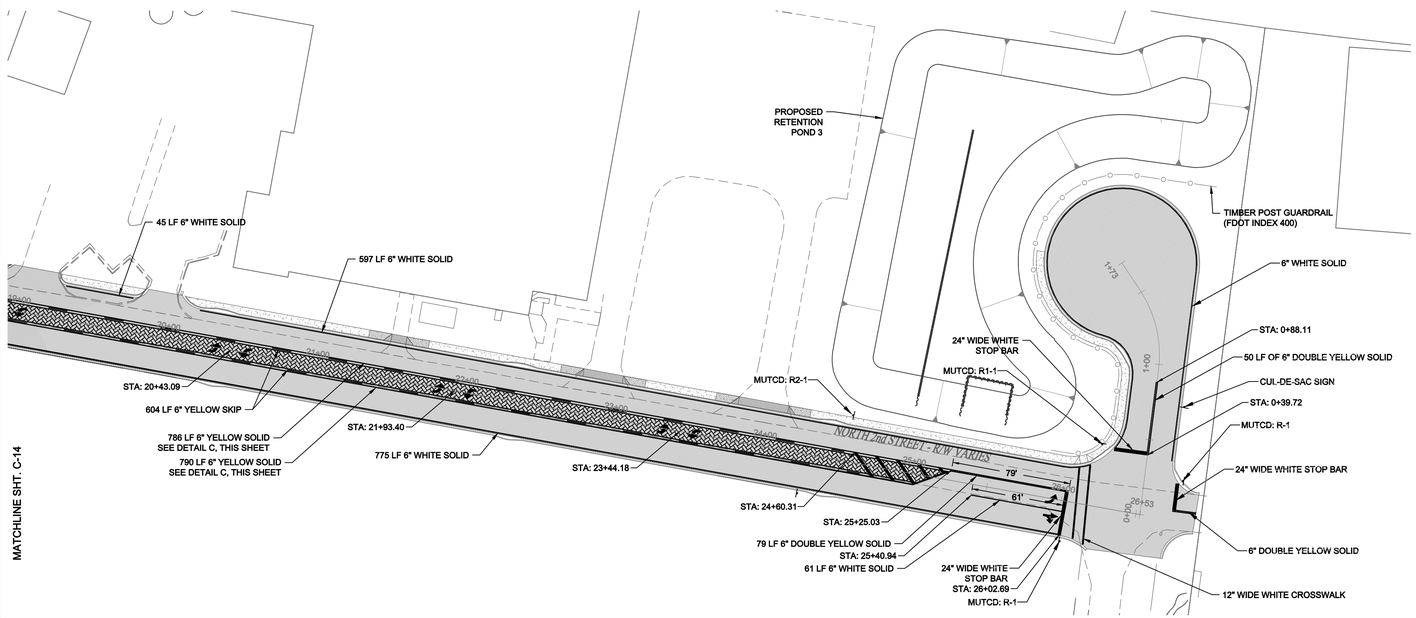


RPM PLACEMENT FOR TRAFFIC SEPARATION
(TRAFFIC FLOWS IN OPPOSITE DIRECTION)



DETAILS FROM FDOT DESIGN STANDARDS INDEX 17352

NOT TO SCALE



SIGNAGE LEGEND

R4-7 — R1-1 (STOP)

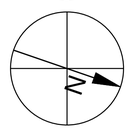
R8-8 (DO NOT STOP ON TRACKS) — R2-1 (SPEED LIMIT 30)

R1-2 — R3-8b (ONLY ONLY ONLY)

SOLAR TS-40*
*BY TRAFFIC SAFETY CORP. OR APPROVED EQUAL

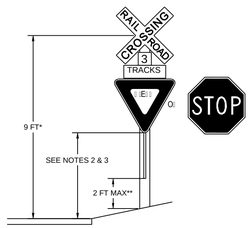
R15-1 (RAIL CROSSING ROAD)

W10-1



0 50' 100' 200'

GRAPHIC SCALE
22X34: 1" = 50'
11X17: 1" = 100'



NOTES:
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MUTCD CROSSBUCK ASSEMBLY

REFLECTIVE PAVEMENT MARKERS
PLACEMENT OF REFLECTIVE PAVEMENT MARKERS PER FDOT INDEX 17352

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REVIEWED	MPW
SCALE	AS SHOWN

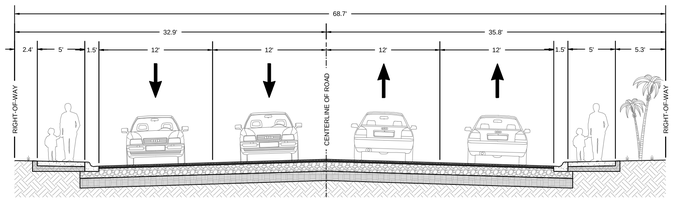
DRAWING TITLE

PAVEMENT MARKING & SIGNAGE PLAN

C-15

SHEET 16 OF 49

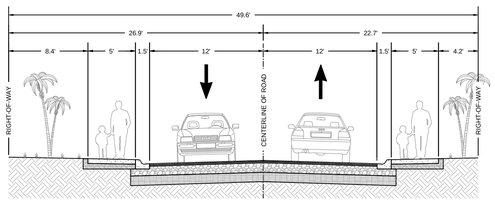
ANTON, 8/25/2014 4:24:44 PM , X:\sys\Projects\c2008-056 Ft Pierce 2nd Street\Construction\C2008-056-C-Mark-Sign.dwg



A AVENUE H

22X34: 1" = 8'
11X17: 1" = 16'

0 8' 16'



B NORTH 2nd STREET - A

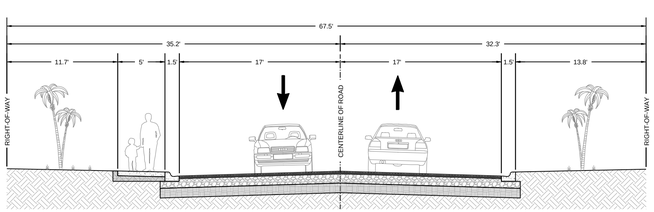
22X34: 1" = 8'
11X17: 1" = 16'

0 8' 16'

C FISHERMAN'S WHARF

22X34: 1" = 8'
11X17: 1" = 16'

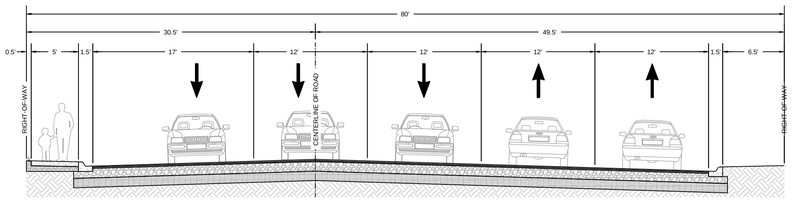
0 8' 16'



D NORTH INDIAN RIVER DRIVE (NORTH INTERSECTION)

22X34: 1" = 8'
11X17: 1" = 16'

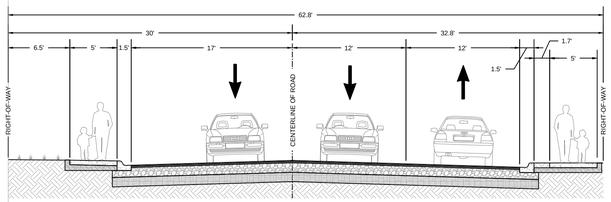
0 8' 16'



E NORTH INDIAN RIVER DRIVE (SOUTH INTERSECTION)

22X34: 1" = 8'
11X17: 1" = 16'

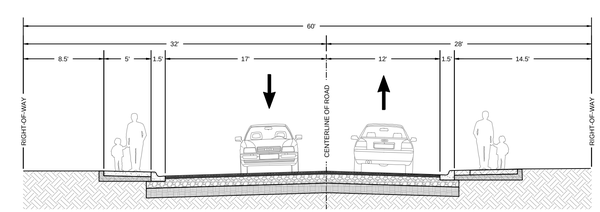
0 8' 16'



F NORTH 2nd STREET - B (SOUTH INTERSECTION)

22X34: 1" = 8'
11X17: 1" = 16'

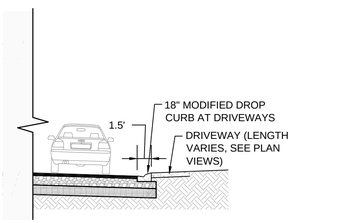
0 8' 16'



G NORTH 2nd STREET - B (NO TURN LANE)

22X34: 1" = 8'
11X17: 1" = 16'

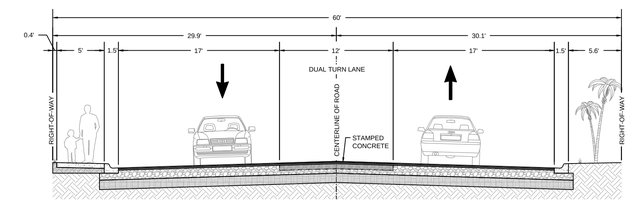
0 8' 16'



TYPICAL DRIVEWAY ENTRANCE

22X34: 1" = 8'
11X17: 1" = 16'

0 8' 16'



H NORTH 2nd STREET - B (DUAL TURN LANE)

22X34: 1" = 8'
11X17: 1" = 16'

0 8' 16'

TAYLOR ENGINEERING INC.
10151 DEERWOOD PARK BLVD.
BLDG. 300, SUITE 300
JACKSONVILLE, FLORIDA 32256
(904)-731-7040
1675 PALM BEACH LAKES, SUITE 210
WEST PALM BEACH, FLORIDA 33401
(561)-640-7310
CERTIFICATE OF AUTHORIZATION # 4815

SEAL

MICHAEL P. WHELAN P.E.# 55496

PROJECT TITLE

NORTH 2ND STREET
ROADWAY IMPROVEMENTS
CITY OF FORT PIERCE
ST. LUCIE COUNTY, FLORIDA

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1-800-432-4770

NO	ZONE	REVISIONS / SUBMISSIONS	DATE

PROJECT NO	C2013-064
DATE	JULY 2014
DESIGNED	HCV
DRAWN	RLJ
CHECKED	AF
REVIEWED	MPW
SCALE	AS SHOWN

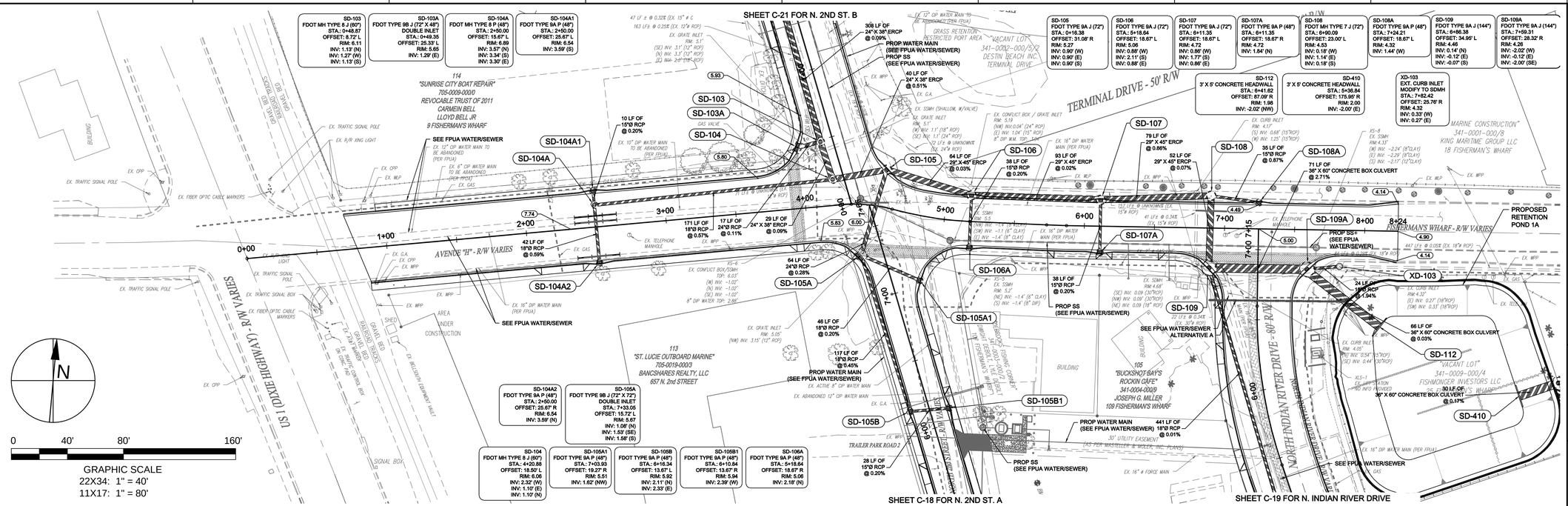
DRAWING TITLE

TYPICAL ROADWAY SECTIONS

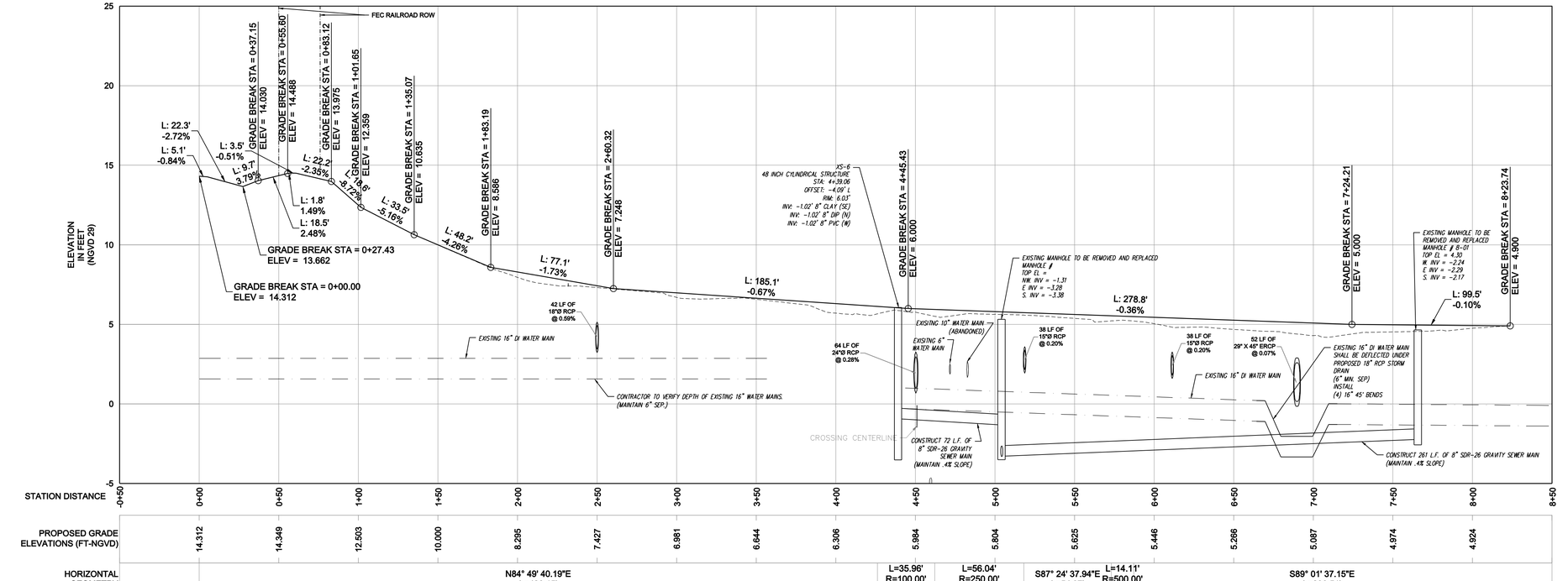
C-16

SHEET 17 OF 49

ANTON, 7/17/2014 10:13:30 AM , x:\sys\Projects\c2008-056 Ft Pierce 2nd Street\Construction\C2008-056-C-Roadway Sections.dwg



AVENUE 'H' & FISHERMAN'S WHARF PLAN VIEW



AVENUE 'H' & FISHERMAN'S WHARF PROFILE VIEW

HORIZONTAL SCALE (22x34) :1" = 40'
VERTICAL SCALE (22x34): 1" = 4'

TAYLOR ENGINEERING INC.
10151 DEERWOOD PARK BLVD.
BLDG. 300, SUITE 300
JACKSONVILLE, FLORIDA 32256
(904)-731-7040
1675 PALM BEACH LAKES, SUITE 210
WEST PALM BEACH, FLORIDA 33401
(561)-640-7310
CERTIFICATE OF AUTHORIZATION # 4815

SEAL

MICHAEL P. WHELAN P.E.# 55496

PROJECT TITLE

NORTH 2ND STREET ROADWAY IMPROVEMENTS
CITY OF FORT PIERCE
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PROJECT NO	C2013-064
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DESIGNED	HCV
DRAWN	RLJ
CHECKED	AF
REVIEWED	MPW
SCALE	AS SHOWN

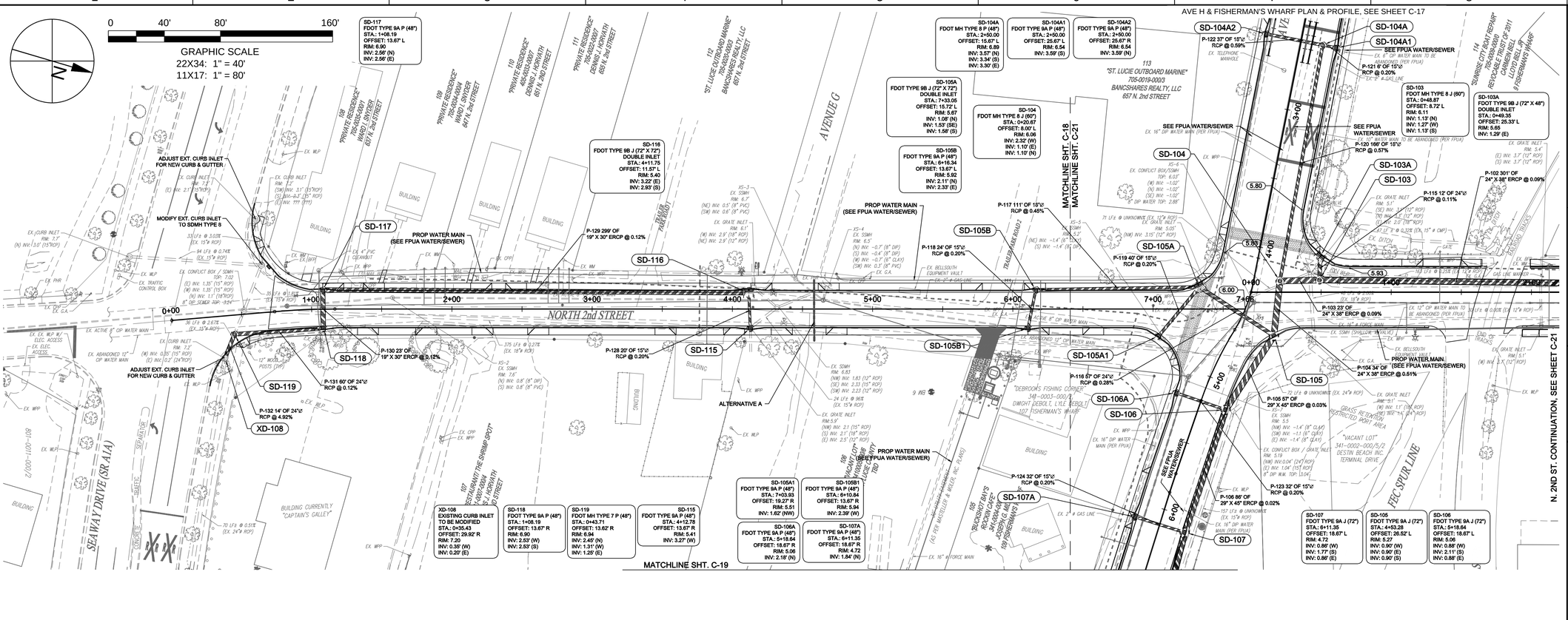
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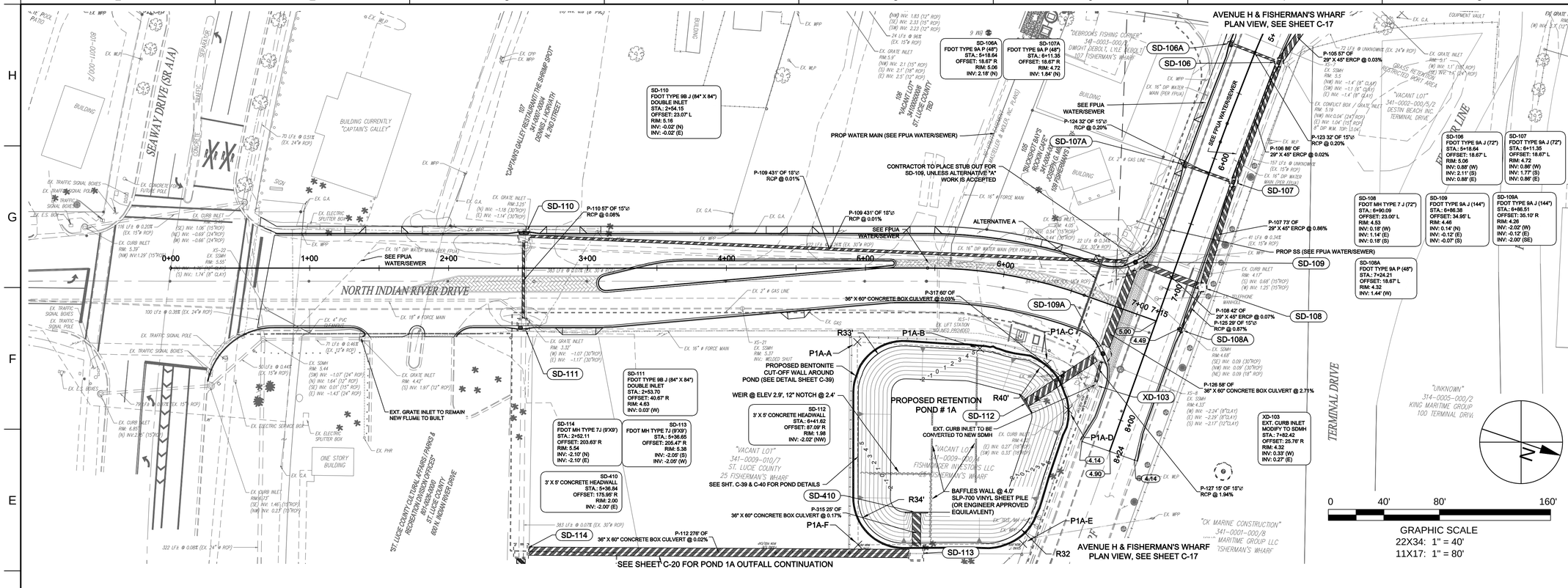
STORM DRAINAGE PLAN & ROADWAY PROFILE

C-17

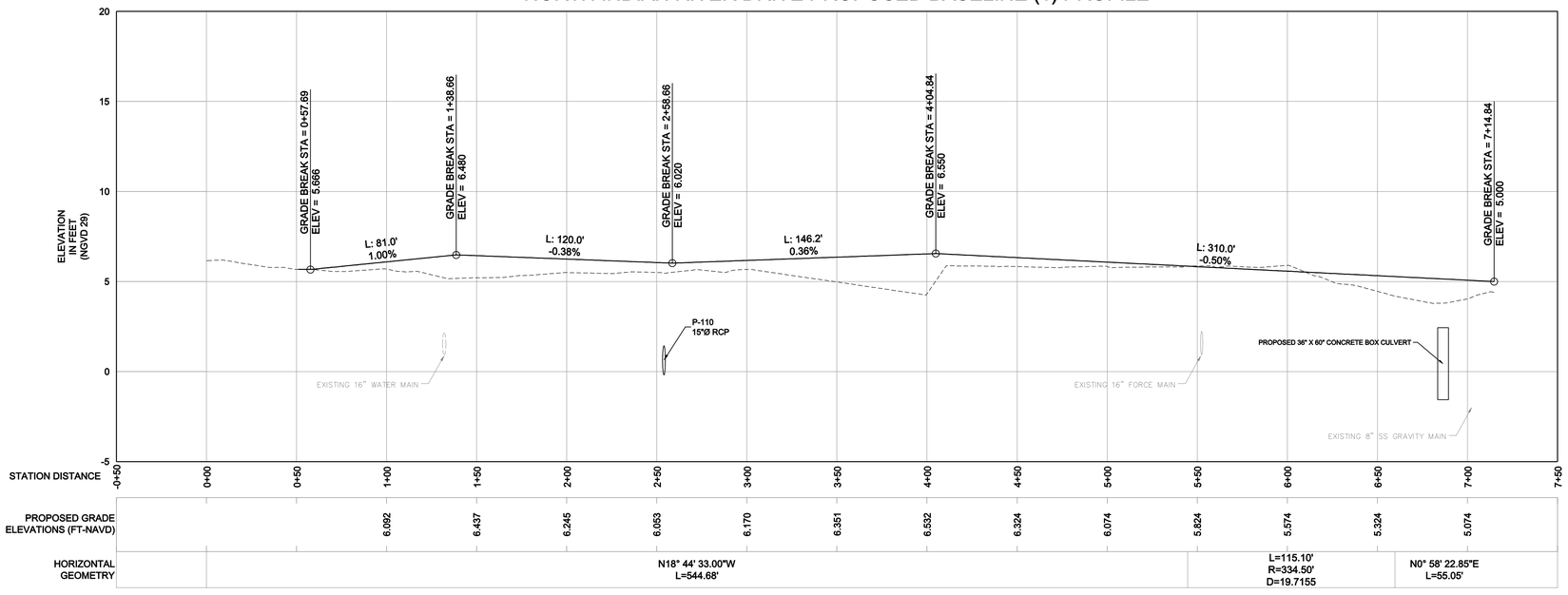
SHEET 18 OF 49

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GRAPHIC SCALE
22X34: 1" = 40'
11X17: 1" = 80'
0 40' 80' 160'
AVE H & FISHERMAN'S WHARF PLAN & PROFILE, SEE SHEET C-17
NORTH 2nd STREET
SEAWAY DRIVE (SR A1A)
AVENUE G
FEC SPUR LINE
N. 2ND ST. CONTINUATION, SEE SHEET C-21
MATCHLINE SHT. C-19
MATCHLINE SHT. C-18
MATCHLINE SHT. C-21
ALTERNATIVE A
SD-117
SD-116
SD-115
SD-118
SD-119
XD-108
SD-104A
SD-104A1
SD-104A2
SD-104
SD-103
SD-103A
SD-103A
SD-105A
SD-105B
SD-105B1
SD-105A1
SD-106A
SD-106
SD-107A
SD-107
SD-105
SD-106
ADJUST EXT. CURB INLET FOR NEW CURB & GUTTER
MODIFY EXT. CURB INLET TO SDMH TYPE 8
ADJUST EXT. CURB INLET FOR NEW CURB & GUTTER
PROP WATER MAIN (SEE FPUA WATER/SEWER)
SEE FPUA WATER/SEWER
P-129 299' OF 19" X 30" ERCP @ 0.12%
P-128 20' OF 15"Ø RCP @ 0.20%
P-130 23' OF 19" X 30" ERCP @ 0.12%
P-131 60' OF 24"Ø RCP @ 0.12%
P-132 14' OF 24"Ø RCP @ 4.92%
P-117 111' OF 18"Ø RCP @ 0.45%
P-118 24' OF 15"Ø RCP @ 0.20%
P-119 40' OF 15"Ø RCP @ 0.20%
P-116 67' OF 24"Ø RCP @ 0.28%
P-124 32' OF 15"Ø RCP @ 0.20%
P-123 32' OF 15"Ø RCP @ 0.20%
P-122 37' OF 15"Ø RCP @ 0.59%
P-121 6' OF 15"Ø RCP @ 0.20%
P-120 166' OF 18"Ø RCP @ 0.57%
P-115 12' OF 24"Ø RCP @ 0.11%
P-102 301' OF 24" X 38" ERCP @ 0.09%
P-103 23' OF 24" X 38" ERCP @ 0.09%
P-104 34' OF 24" X 38" ERCP @ 0.51%
P-105 57' OF 29" X 45" ERCP @ 0.03%
P-106 88' OF 29" X 45" ERCP @ 0.02%
XD-108 EXISTING CURB INLET TO BE MODIFIED STA.: 0+35.43 OFFSET: 29.92' R RIM: 7.20 INV: 0.35' (W) INV: 0.20' (E)
SD-118 FDOT TYPE 9A P (48") STA.: 1+08.19 OFFSET: 13.67' R RIM: 6.90 INV: 2.83' (W) INV: 2.83' (S)
SD-119 FDOT MH TYPE 7 P (48") STA.: 0+43.71 OFFSET: 13.62' R RIM: 8.94 INV: 2.45' (N) INV: 1.31' (W) INV: 1.25' (E)
SD-115 FDOT TYPE 9A P (48") STA.: 4+12.78 OFFSET: 13.67' R RIM: 5.41 INV: 3.27' (W)
SD-105A1 FDOT TYPE 9A P (48") STA.: 7+03.93 OFFSET: 19.27' R RIM: 5.51 INV: 1.62' (NW)
SD-105B1 FDOT TYPE 9A P (48") STA.: 6+10.64 OFFSET: 13.67' R RIM: 5.94 INV: 2.39' (W)
SD-106A FDOT TYPE 9A P (48") STA.: 5+18.64 OFFSET: 18.67' R RIM: 5.06 INV: 2.18' (N)
SD-107A FDOT TYPE 9A P (48") STA.: 9+11.35 OFFSET: 18.67' R RIM: 4.72 INV: 1.84' (N)
SD-107 FDOT TYPE 9A J (72") STA.: 6+11.35 OFFSET: 18.67' L RIM: 4.72 INV: 0.88' (W) INV: 1.77' (S) INV: 0.88' (E)
SD-105 FDOT TYPE 9A J (72") STA.: 4+53.28 OFFSET: 26.52' L RIM: 5.27 INV: 0.90' (W) INV: 0.90' (E) INV: 0.90' (S)
SD-106 FDOT TYPE 9A J (72") STA.: 5+18.64 OFFSET: 18.67' L RIM: 5.06 INV: 0.88' (W) INV: 2.11' (S) INV: 0.88' (E)
SD-104A FDOT MH TYPE 8 P (48") STA.: 2+50.00 OFFSET: 15.67' L RIM: 6.89 INV: 3.57' (N) INV: 3.34' (S) INV: 3.30' (E)
SD-104A1 FDOT TYPE 9A P (48") STA.: 2+50.00 OFFSET: 25.67' L RIM: 6.54 INV: 3.59' (S)
SD-104A2 FDOT TYPE 9A P (48") STA.: 2+50.00 OFFSET: 25.67' R RIM: 6.54 INV: 3.59' (N)
SD-104 FDOT MH TYPE 8 J (60") STA.: 0+20.67 OFFSET: 8.00' L RIM: 6.05 INV: 2.32' (W) INV: 1.10' (E) INV: 1.10' (N)
SD-105A FDOT TYPE 9B J (72" X 72") DOUBLE INLET STA.: 7+33.05 OFFSET: 15.72' L RIM: 6.67 INV: 1.05' (N) INV: 1.53' (SE) INV: 1.58' (S)
SD-105B FDOT TYPE 9A P (48") STA.: 6+16.34 OFFSET: 13.67' L RIM: 5.92 INV: 2.11' (N) INV: 2.33' (E)
SD-116 FDOT TYPE 9B J (72" X 72") DOUBLE INLET STA.: 4+11.75 OFFSET: 11.57' L RIM: 5.40 INV: 3.22' (E) INV: 2.93' (S)
SD-103 FDOT MH TYPE 8 J (60") STA.: 0+48.87 OFFSET: 8.72' L RIM: 6.11 INV: 1.13' (N) INV: 1.27' (W) INV: 1.13' (S)
SD-103A FDOT TYPE 9B J (72" X 48") DOUBLE INLET STA.: 0+49.36 OFFSET: 25.33' L RIM: 5.65 INV: 1.29' (E)
109 "PRIVATE RESIDENCE" 705-003-0004 WARD L SNYDER 657 N. 2nd STREET
110 "PRIVATE RESIDENCE" 705-003-0007 DENNIS J HOWARTH 661 N. 2nd STREET
111 "PRIVATE RESIDENCE" 705-003-0007 DENNIS J HOWARTH 661 N. 2nd STREET
112 "ST. LUCIE OUTBOARD MARINE" 705-003-0003 BANCSHARES REALTY, LLC 657 N. 2nd STREET
113 "ST. LUCIE OUTBOARD MARINE" 705-0019-0003 BANCSHARES REALTY, LLC 657 N. 2nd STREET
114 "SUNRISE CITY BOAT REPAIR" 705-003-0000 REYDOBLE TRUST OF 2011 CARMEN REY LLOYD BELL 9 FISHERMAN'S WHARF
105 "BEACHSIDE FISHING CHARTERS" 705-003-0000 JOSEPH M. MAGLIOLO 105 FISHERMAN'S WHARF
107 "RESTAURANT/THE SHRIMP SPOT" 705-003-0000 J. HOWARTH 107 FISHERMAN'S WHARF
"DEBROOM'S FISHING CORNER" 341-0003-0005/0 DWIGHT PIERCE L. LILE KROLT 107 FISHERMAN'S WHARF
"VACANT LOT" 341-0002-0005/2 DESTIN BEACH INC. TERMINAL DRIVE
TRAILER PARK ROAD
GRASS RETENTION AREA (RESTRICTED POST AREA)
BUILDING CURRENTLY "CAPTAIN'S GALLEY"
EX. MLP
EX. WPP
EX. WM
EX. GAS LINE
EX. CPP
EX. CURB INLET
EX. TRAFFIC CONTROL BOX
EX. CONFLICT BOX / SDMH
EX. ACTIVE 8" CPP WATER MAIN
EX. ABANDONED 10" CPP WATER MAIN
EX. ELEC. ACCESS
EX. PHR
EX. C.A.
EX. GRATE INLET
EX. SSMH
EX. BELLSOUTH EQUIPMENT VAULT
EX. 16" WATER MAIN
EX. 12" CPP WATER MAIN
EX. 8" CPP WATER MAIN
EX. 16" FORCE MAIN
EX. 16" DIP WATER MAIN (PER FPUA)
EX. 8" DIP WATER MAIN (PER FPUA)
EX. 6" DIP WATER MAIN (PER FPUA)
EX. 4" PVC CEANDUT
EX. 6" GAS LINE
EX. TELEPHONE MANHOLE
EX. 6" CPP WATER MAIN TO BE ABANDONED (PER FPUA)
EX. 16" DIP WATER MAIN (PER FPUA)
EX. 8" DIP WATER MAIN TO BE ABANDONED (PER FPUA)
EX. 12" DIP WATER MAIN TO BE ABANDONED (PER FPUA)
EX. 16" DIP WATER MAIN (PER FPUA)
EX. 8" DIP WATER MAIN (PER FPUA)
EX. 6" DIP WATER MAIN (PER FPUA)
EX. 16" FORCE MAIN
EX. 12" CPP WATER MAIN
EX. 8" CPP WATER MAIN
EX. 16" DIP WATER MAIN (PER FPUA)
EX. 8" DIP WATER MAIN (PER FPUA)
EX. 6" DIP WATER MAIN (PER FPUA)
EX. 4" FORCE MAIN
EX. 16" WATER MAIN
EX. 12" CPP WATER MAIN
EX. 8" CPP WATER MAIN
EX. 16" FORCE



NORTH INDIAN RIVER DRIVE PROPOSED BASELINE (1) PROFILE



HORIZONTAL SCALE (22x34) :1" = 40'
VERTICAL SCALE (22x34): 1" = 4'

TAYLOR ENGINEERING INC.
10151 DEERWOOD PARK BLVD.
BLDG. 300, SUITE 300
JACKSONVILLE, FLORIDA 32256
(904)-731-7040
1675 PALM BEACH LAKES, SUITE 210
WEST PALM BEACH, FLORIDA 33401
(561)-640-7310
CERTIFICATE OF AUTHORIZATION # 4815

SEAL

MICHAEL P. WHELAN P.E.# 55496

PROJECT TITLE

NORTH 2ND STREET ROADWAY IMPROVEMENTS

CITY OF FORT PIERCE
ST. LUCIE COUNTY, FLORIDA

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1-800-432-4770

DATE	REVISIONS / SUBMISSIONS	ZONE	NO.

PROJECT NO	C2013-064
DATE	JULY 2014
DESIGNED	HCV
DRAWN	RLJ
CHECKED	AF
REVIEWED	MPW
SCALE	AS SHOWN

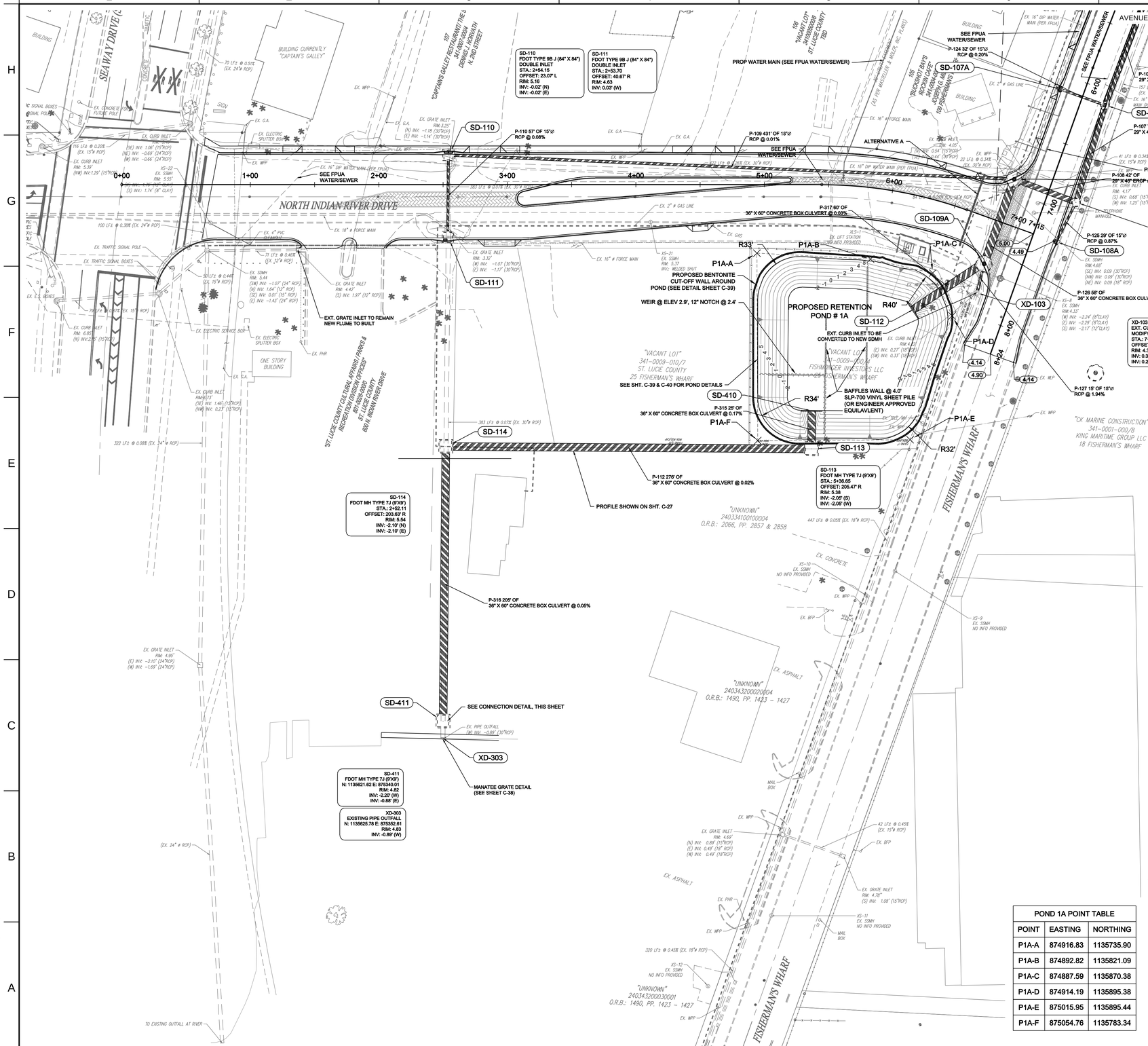
DRAWING TITLE

STORM DRAINAGE PLAN & ROADWAY PROFILE

C-19

SHEET 20 OF 49

ANTON, 7/25/2014 1:24:20 PM , x:\sys\Projects\c2008-056 Ft Pierce 2nd Street\Construction\C2008-056-C-Roadway Profiles.dwg



POND 1A OUTFALL CONNECTION MANHOLE DETAIL

NOT TO SCALE

POND 1A POINT TABLE		
POINT	EASTING	NORTHING
P1A-A	874916.83	1135735.90
P1A-B	874892.82	1135821.09
P1A-C	874887.59	1135870.38
P1A-D	874914.19	1135895.38
P1A-E	875015.95	1135895.44
P1A-F	875054.76	1135783.34

0 40' 80' 160'

GRAPHIC SCALE
22X34: 1" = 40'
11X17: 1" = 80'

TAYLOR ENGINEERING INC.
10151 DEERWOOD PARK BLVD.
BLDG. 300, SUITE 300
JACKSONVILLE, FLORIDA 32256
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1675 PALM BEACH LAKES, SUITE 210
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PROJECT NO	C2013-064
DATE	JULY 2014
DESIGNED	HCV
DRAWN	RLJ
CHECKED	AF
REVIEWED	MPW
SCALE	AS SHOWN

DRAWING TITLE

STORM DRAINAGE PLAN

C-20

SHEET 21 OF 49

ANTON, 7/25/2014 1:24:43 PM, x:\sys\Projects\C2008-056 Ft Pierce 2nd Street\Construction\C2008-056-C-Roadway Profiles.dwg

AVE H & FISHERMAN'S WHARF PLAN & PROFILE, SEE SHEET C-17

MATCHLINE SHT. C-18
MATCHLINE SHT. C-21

SEE FPUA WATER/SEWER
EX. 16" DIP WATER MAIN (PER FPUA)

SD-104 · SD-103A · SD-103 · SD-105A · SD-105A1 · SD-106A · SD-106 · SD-105 · SD-107 · SD-109 · SD-108

P-120 166' OF 18"ø RCP @ 0.57%
P-102 301' OF 24" X 38" ERCP @ 0.09%
P-115 12' OF 24"ø RCP @ 0.11%
P-119 40' OF 18"ø RCP @ 0.20%
P-117 111' OF 18"ø RCP @ 0.45%
P-103 23' OF 24" X 38" ERCP @ 0.09%
P-104 34' OF 24" X 38" ERCP @ 0.51%
P-116 57' OF 24"ø RCP @ 0.28%
P-105 67' OF 29" X 45" ERCP @ 0.03%
P-106 86' OF 29" X 45" ERCP @ 0.02%
P-123 32' OF 15"ø RCP @ 0.20%
P-107 73' OF 29" X 45" ERCP @ 0.86%
P-108 42' OF 29" X 45" ERCP @ 0.07%
P-101 93' OF 19" X 30" ERCP @ 0.02%
P-100 12' OF 19" X 30" ERCP @ 0.11%
P-318 24' OF 18"ø RCP @ 0.07%
P-327 25' OF 24" X 38" ERCP @ 0.17%
P-319 165' OF 30"ø RCP @ 0.01%
P-320 340' OF 30"ø RCP @ 0.00%

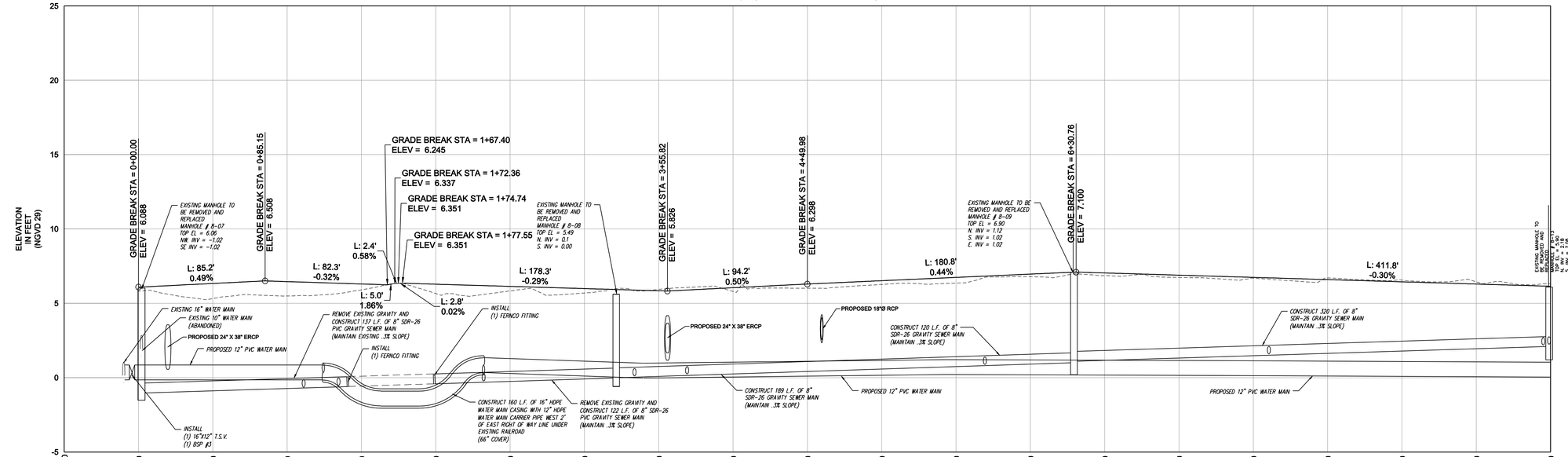
SD-102 — FDOT TYPE 9B J (72" X 42") DOUBLE INLET; STA.: 3+55.92; OFFSET: 17.92' L; RIM: 5.15; INV: 2.58' (N)
SD-101 — FDOT TYPE 9A J (72"); STA.: 4+55.00; OFFSET: 15.67' L; RIM: 5.64; INV: 2.56' (NE); INV: 2.56' (S)
SD-413 — FDOT MH TYPE 8 P (48"); STA.: 6+28.95; OFFSET: 8.59' L; RIM: 6.90; INV: 2.53' (S); INV: 2.53' (N)
SD-102A — FDOT MH TYPE 8 J (60"); STA.: 3+55.90; OFFSET: 4.89' L; RIM: 5.49; INV: 1.40' (S); INV: 1.60' (E)
SD-102B — FDOT TYPE 9B J (72" X 42") DOUBLE INLET; STA.: 3+55.82; OFFSET: 24.93' R; RIM: 4.94; INV: 1.71' (W)
SD-100 — FDOT TYPE 9A P (48"); STA.: 4+66.05; OFFSET: 25.67' R; RIM: 5.48; INV: 2.56' (SW)
SD-412 — FDOT MH TYPE 8 J (60"); STA.: 4+59.22; OFFSET: 1.74' L; RIM: 6.29; INV: 2.54' (SW); INV: 2.54' (NE); INV: 2.54' (N)
SD-104 — FDOT MH TYPE 8 J (60"); STA.: 4+20.88; OFFSET: 18.50' L; RIM: 6.05; INV: 2.32' (W); INV: 1.10' (E); INV: 1.10' (N)
SD-105 — FDOT TYPE 9A J (72"); STA.: 4+53.28; OFFSET: 26.52' L; RIM: 5.27; INV: 0.90' (W); INV: 0.90' (E); INV: 0.90' (S)
SD-103 — FDOT MH TYPE 8 J (60"); STA.: 0+48.87; OFFSET: 8.72' L; RIM: 6.11; INV: 1.13' (N); INV: 1.27' (W); INV: 1.13' (S)
SD-103A — FDOT TYPE 9B J (72" X 48") DOUBLE INLET; STA.: 0+49.35; OFFSET: 22.33' L; RIM: 5.65; INV: 1.29' (E)

115 "PALMDALE OIL COMPANY" 705-0006-0006 PALMDALE OIL COMPANY FP, LLC 911 N. 2nd STREET
104 "INDIAN RIVER TERMINAL" 313-0003-0005 KING MARITIME GROUP LLC 1001 HARBOR ST.
"EGAN FICKET FT. PIERCE PACKING HOUSE" 705-0006-0000/9 BERNARD A EGAN GROVES INC. 1103 N. 2nd STREET
103 "PACKERS SUPPLY COMPANY" 313-0001-0000 BERNARD EGAN & CO. 1000 N. 2nd STREET

NORTH 2nd STREET
PORT AVENUE
FEC SPUR LINE
PROP SS (SEE FPUA WATER/SEWER)
PROP WATER MAIN (SEE FPUA WATER/SEWER)
PORT AVENUE PLAN & PROFILE SEE SHEET C-26
MATCHLINE SHT. C-22
MATCHLINE SHT. C-21

GRAPHIC SCALE
22X34: 1" = 40'
11X17: 1" = 80'
0 40' 80' 160'

N. 2nd STREET - B PROFILE



MATCHLINE AT STATION 9+50.00

HORIZONTAL SCALE (22x34) :1" = 40'
VERTICAL SCALE (22x34): 1" = 4'

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WEST PALM BEACH, FLORIDA 33401
(561)-640-7310
CERTIFICATE OF AUTHORIZATION # 4815

SEAL

MICHAEL P. WHELAN P.E.# 55496

PROJECT TITLE

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CITY OF FORT PIERCE
ST. LUCIE COUNTY, FLORIDA

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DATE	REVISIONS / SUBMISSIONS	ZONE	NO

PROJECT NO	C2013-064
DATE	JULY 2014
DESIGNED	HCV
DRAWN	RLJ
CHECKED	AF
REVIEWED	MPW
SCALE	AS SHOWN

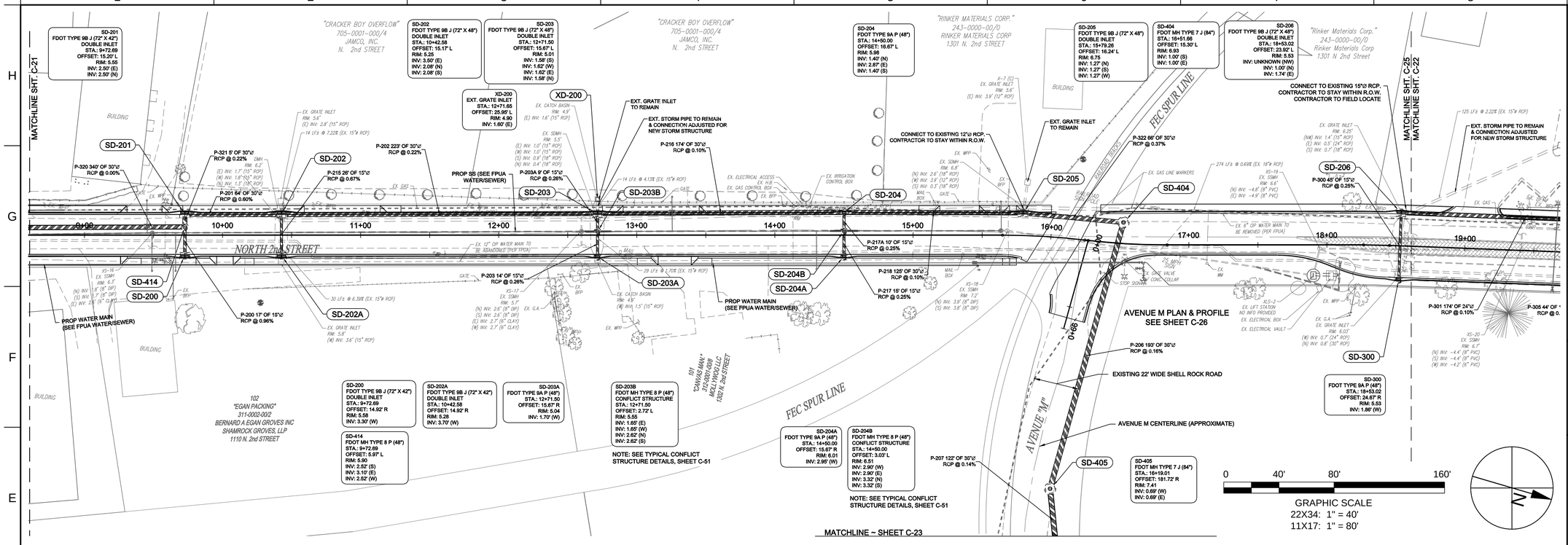
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STORM DRAINAGE PLAN & ROADWAY PROFILE

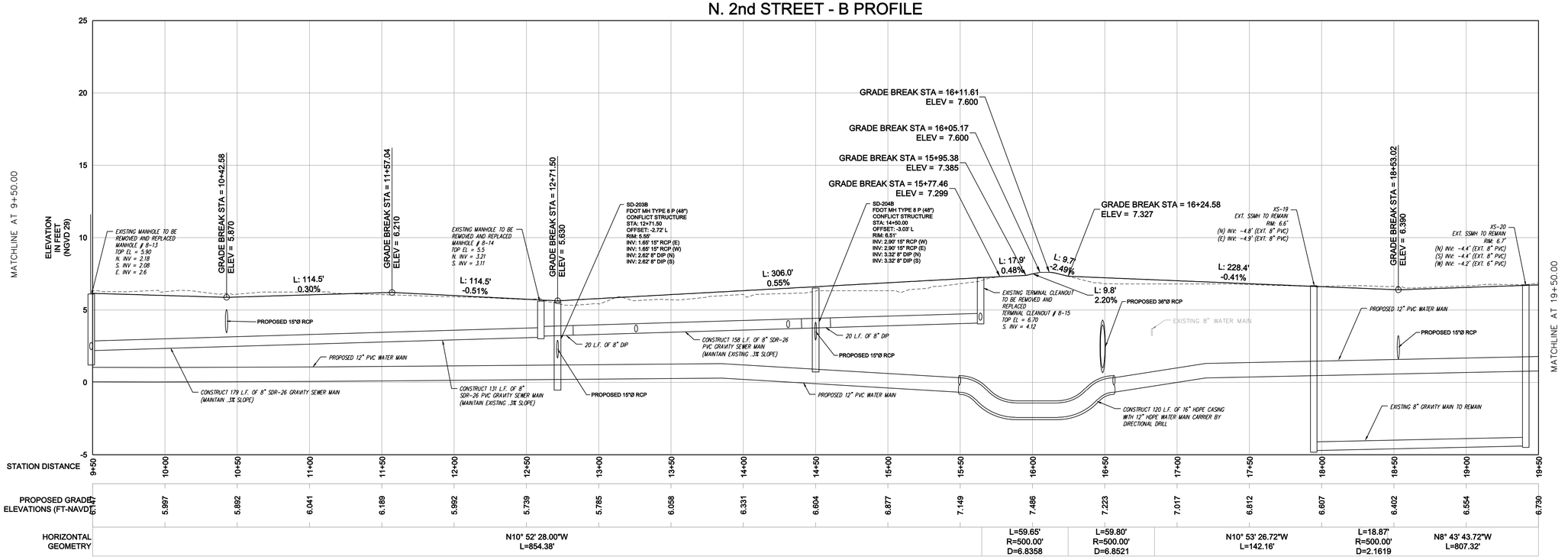
C-21

SHEET 22 OF 49

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N. 2nd STREET - B PROFILE



HORIZONTAL SCALE (22x34) :1" = 40'
VERTICAL SCALE (22x34): 1" = 4'

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REVIEWED	MPW
SCALE	AS SHOWN

DRAWING TITLE

STORM DRAINAGE PLAN & ROADWAY PROFILE

C-22

SHEET 23 OF 49

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DRAWING TITLE

STORM DRAINAGE PLAN

C-23

SHEET 24 OF 49

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P-209 511' OF 36"ø RCP @ 0.10%

EXISTING 22' SHELL ROCK ROAD

AVENUE M CENTERLINE (APPROXIMATE)

PROFILE SHOWN ON SHT. C-29 & C-30

50'

MATCHLINE SHT. C-24
MATCHLINE SHT. C-23

16'

16'

P-210 511' OF 36"ø RCP @ 0.07%

50'

SD-408

SD-408
FDOT MH TYPE 7 J (84")
N: 1137867.66 E: 875266.68
RIM: 8.70
INV: -0.46' (W)
INV: -0.46' (N)

SD-409
FDOT MH TYPE 7 J (84")
N: 1138353.36 E: 875087.41
RIM: 8.62
INV: -0.82' (S)
INV: -0.82' (N)

SD-409

16'

P-211 138' OF 36"ø RCP @ 0.00%

SD-415
FDOT MH TYPE 7 J (84")
N: 1138488.31 E: 875034.58
RIM: 8.28
INV: -0.82' (S)
INV: -0.82' (N)

SD-415

SD-416
36" STRAIGHT CONCRETE ENDWALL
N: 1138531.76 E: 875022.75
RIM: 3.01
INV: -0.82' (S)

P-323 42' OF 36"ø RCP @ 0.00%

SD-416

SEE SHT. C-40 FOR POND DETAILS

PROPOSED BENTONITE CUT-OFF WALL AROUND POND (SEE DETAIL SHEET C-39)

P2A-A

P2A-B

P2A-J

R56'

R57'

PLACE RIP-RAP FOR EROSION CONTROL
10' X 10' AREA WITH #47 GRAVEL BED.
γ = 260 LB/FT^3 (LIMESTONE)
12" THICK, MINIMUM SIZE 3"

235' DIVERSION WALL @ 5.0'
SLP-700 OR ENGINEER
APPROVED EQUIVALENT

MATCHLINE A

P2A-H

R57'

PROPOSED RETENTION POND #2A

EXISTING 22' SHELL ROCK ROAD

AVENUE M CENTERLINE (APPROXIMATE)

P2A-G

0 40' 80' 160'

GRAPHIC SCALE
22X34: 1" = 40'
11X17: 1" = 80'

N

12" NOTCH AT +3.0'

P-328 83' OF 36"ø RCP @ 0.61%

SD-122

POND 2A SPILLWAY OUTFALL
N: 1139328.78 E: 874726.70
INV: -0.50' (S)
INV: -0.50' (S)

SD-121

SD-121
60" X 120" X 12" BOX WEIR
N: 1139246.37 E: 874747.77
RIM: 3.50
INV: 0.00' (N)
INV: 0.00' (N)

P-326 83' OF 36"ø RCP @ 0.61%

RIP-RAP ENDWALL

SEE SHT. C-40 FOR POND DETAILS

PROPOSED BENTONITE CUT-OFF WALL AROUND POND (SEE DETAIL SHEET C-39)

P2A-A

P2A-B

P2A-I

P2A-J

R56'

R57'

MATCHLINE A

OF 36"ø @ 0.00%

PLACE RIP-RAP FOR EROSION CONTROL
10' X 10' AREA WITH #47 GRAVEL BED.
γ = 260 LB/FT^3 (LIMESTONE)
12" THICK, MINIMUM SIZE 3"

235' DIVERSION WALL @ 5.0'
SLP-700 OR ENGINEER
APPROVED EQUIVALENT

SD-416

R57'

P2A-H

PROPOSED RETENTION POND #2A

P2A-C

R57'

ELL ROCK ROAD

NE (APPROXIMATE)

R58'

P2A-D

R56'

R56'

P2A-G

P2A-E

P2A-F

POND 2A POINT TABLE		
POINT	EASTING	NORTHING
P2A-A	874953.63	1138489.53
P2A-B	874872.36	1138789.28
P2A-C	874990.03	1138951.74
P2A-D	875086.34	1138951.09
P2A-E	875145.80	1138842.86
P2A-F	875183.03	1138762.19
P2A-G	875175.21	1138674.04
P2A-H	875063.13	1138520.69
P2A-I	874860.94	1138831.44
P2A-J	874900.52	1138802.43

N

0 40' 80' 160'

GRAPHIC SCALE
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11X17: 1" = 80'

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SEAL

MICHAEL P. WHELAN P.E.# 55496

PROJECT TITLE

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CHECKED	AF
REVIEWED	MPW
SCALE	AS SHOWN

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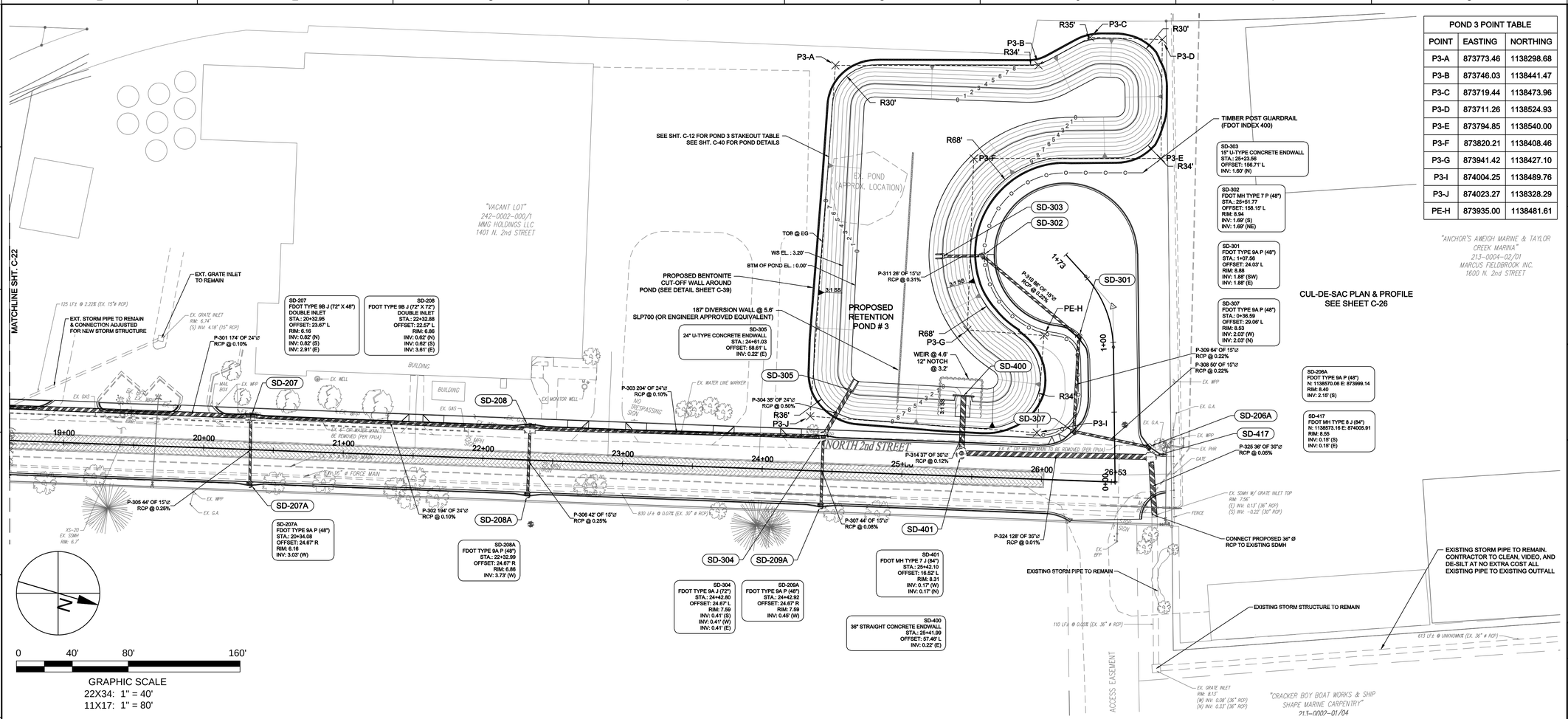
STORM DRAINAGE PLAN

C-24

SHEET 25 OF 49

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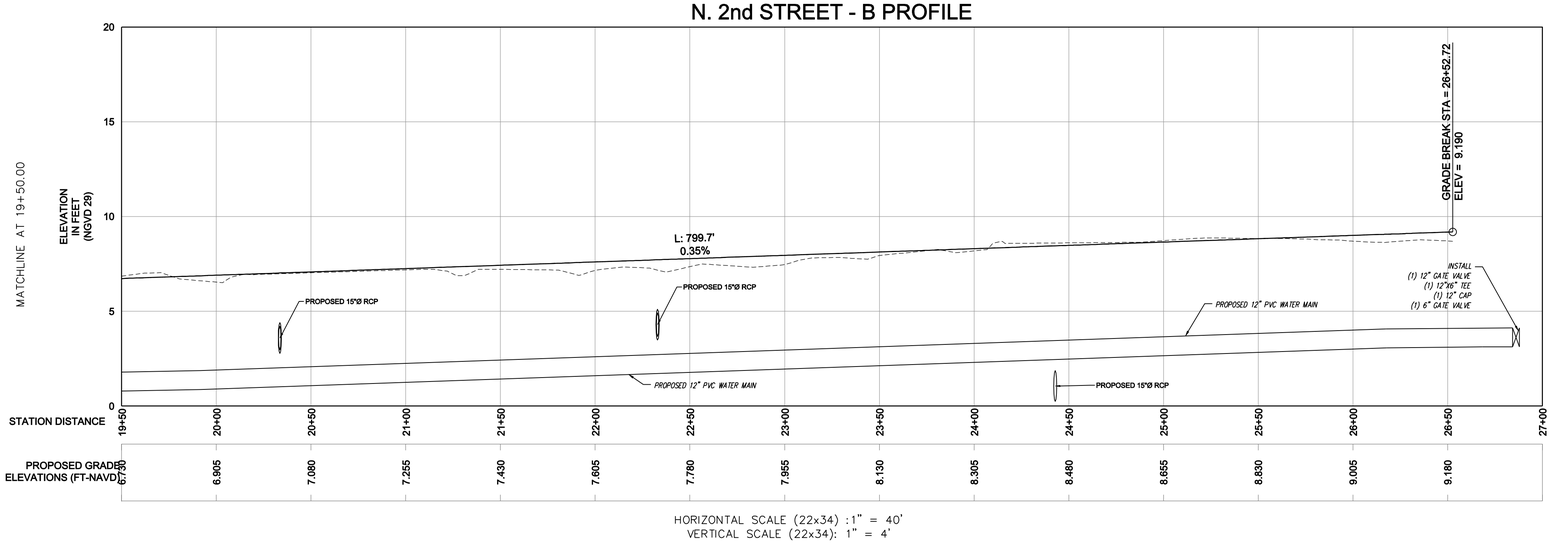
POND 3 POINT TABLE		
POINT	EASTING	NORTHING
P3-A	873773.46	1138298.68
P3-B	873746.03	1138441.47
P3-C	873719.44	1138473.96
P3-D	873711.26	1138524.93
P3-E	873794.85	1138540.00
P3-F	873820.21	1138408.46
P3-G	873941.42	1138427.10
P3-I	874004.25	1138489.76
P3-J	874023.27	1138328.29
PE-H	873935.00	1138481.61



0 40' 80' 160'

GRAPHIC SCALE
22X34: 1" = 40'
11X17: 1" = 80'

N. 2nd STREET - B PROFILE



HORIZONTAL SCALE (22x34) :1" = 40'
VERTICAL SCALE (22x34): 1" = 4'

NOTE: CONTRACTOR TO NOTIFY ENGINEER OF ANY DAMAGE WITHIN PIPE

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CERTIFICATE OF AUTHORIZATION # 4815

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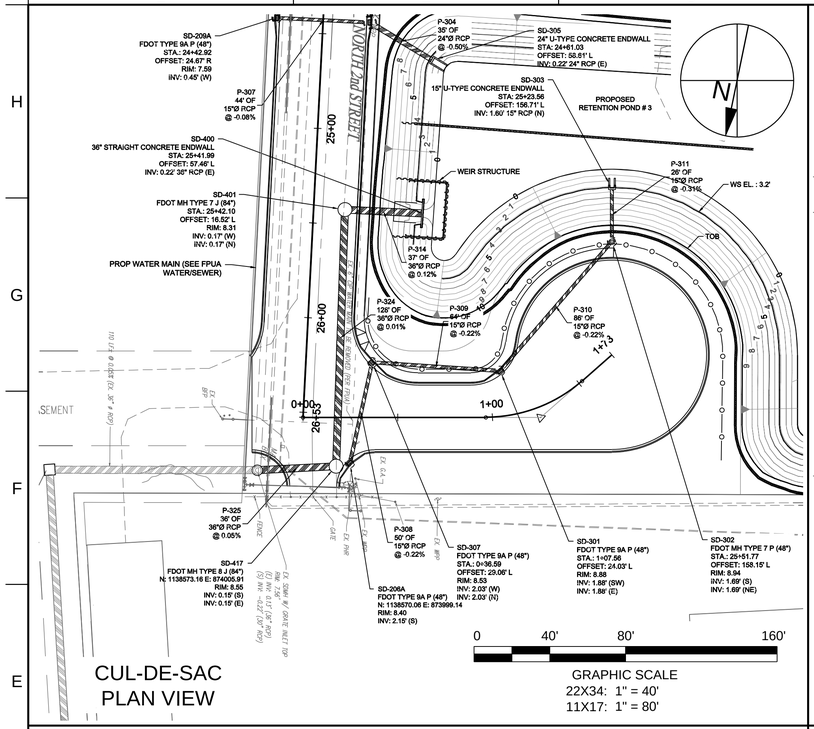
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DRAWN	RLJ
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REVIEWED	MPW
SCALE	AS SHOWN

DRAWING TITLE
STORM DRAINAGE PLAN & ROADWAY PROFILE

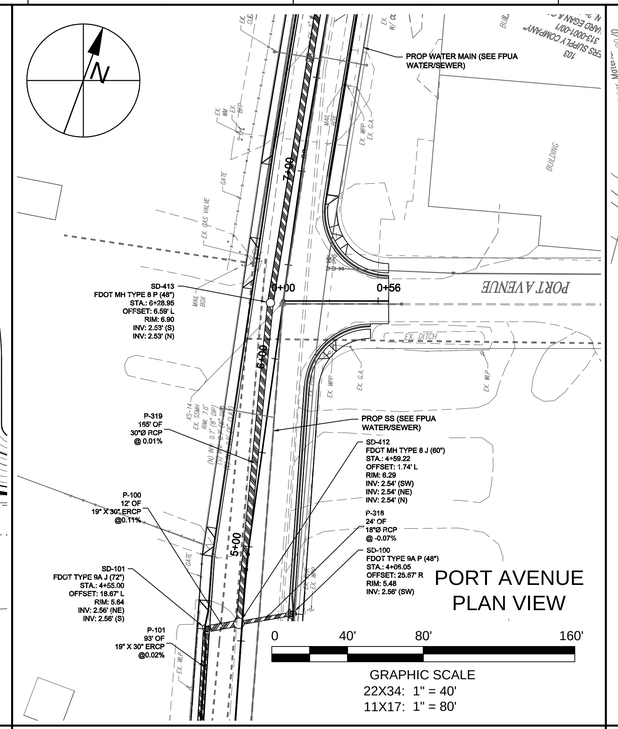
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SHEET 26 OF 49

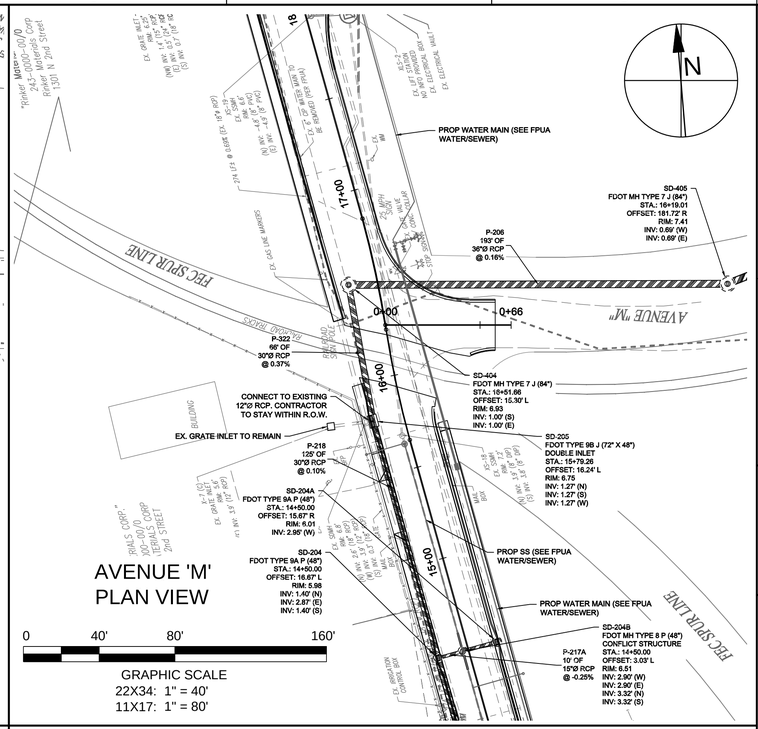
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CUL-DE-SAC PLAN VIEW

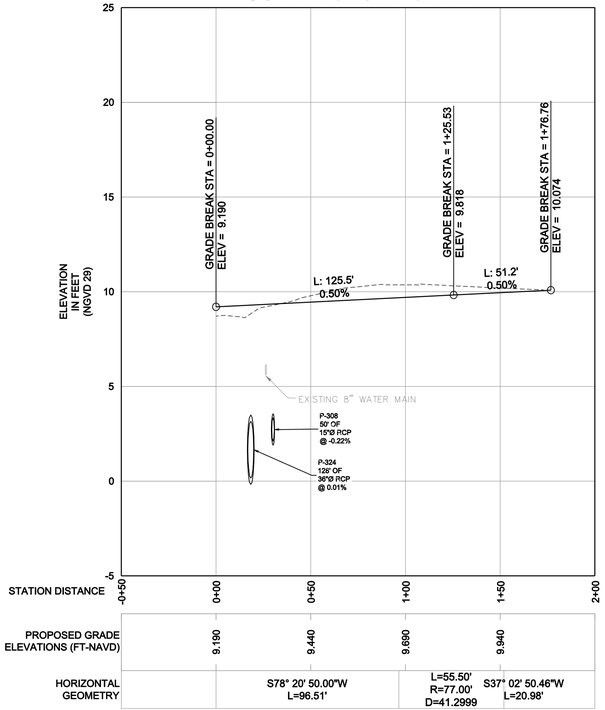


PORT AVENUE PLAN VIEW



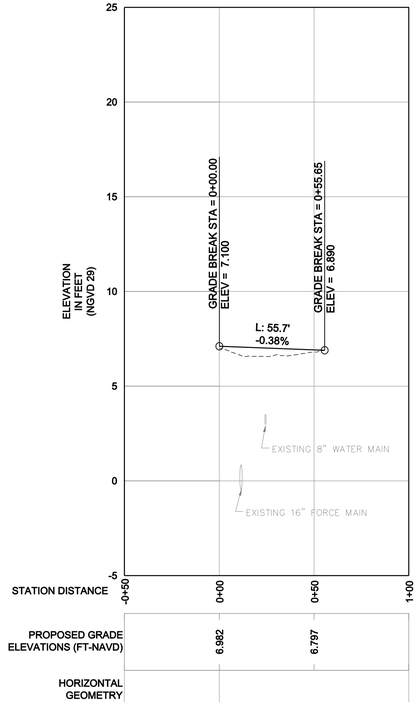
AVENUE 'M' PLAN VIEW

CUL-DE-SAC PROFILE



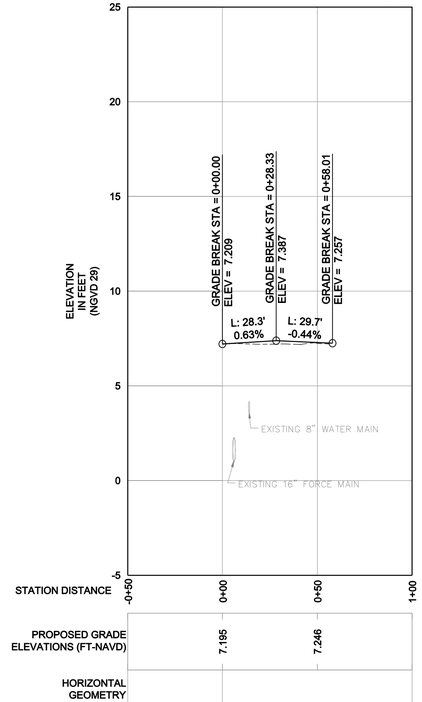
HORIZONTAL SCALE :1" = 40'
VERTICAL SCALE : 1" = 4'

PORT AVENUE PROPOSED BASELINE (1) PROFILE



HORIZONTAL SCALE :1" = 40'
VERTICAL SCALE : 1" = 4'

AVENUE M PROPOSED BASELINE (1) PROFILE



HORIZONTAL SCALE :1" = 40'
VERTICAL SCALE : 1" = 4'

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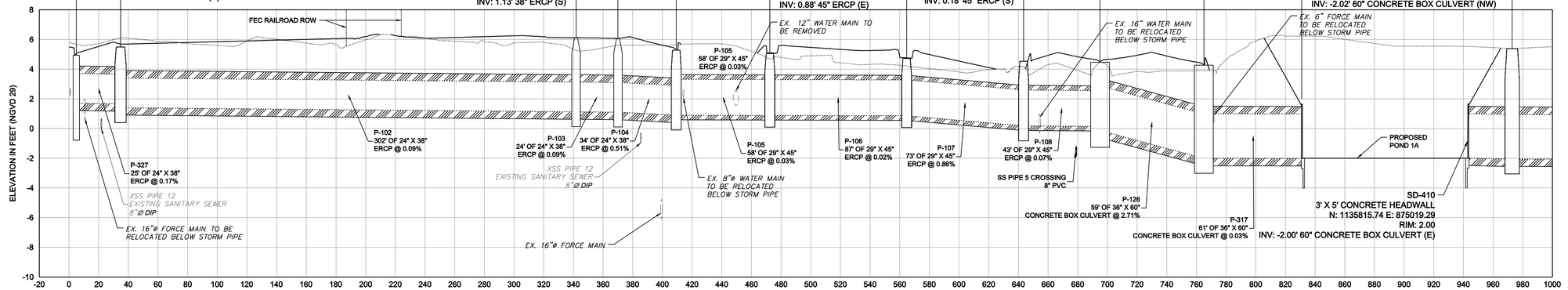
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STORM DRAINAGE
PLAN & ROADWAY
PROFILE

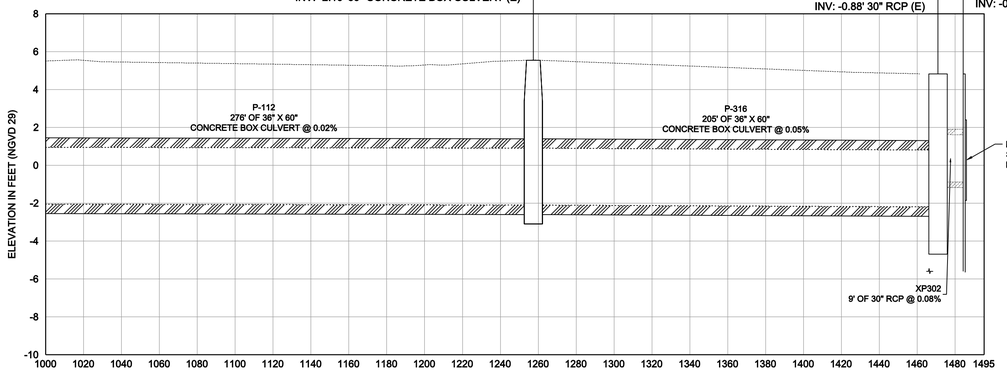
C-26

SHEET 27 OF 49

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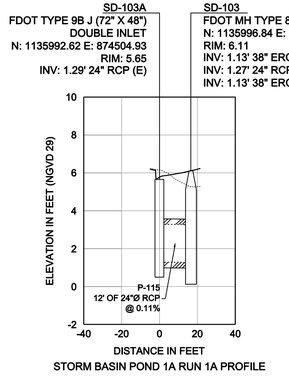
STORM BASIN POND 1A RUN 1 PROFILE



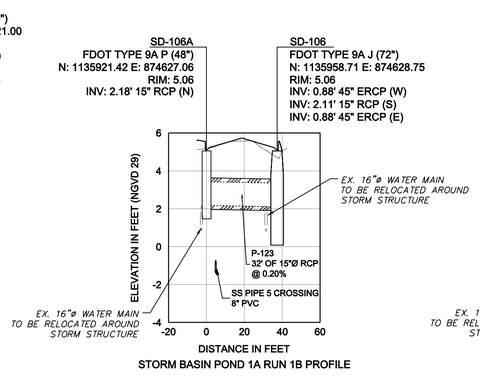
STORM BASIN POND 1A RUN 1 PROFILE

GEOTECHNICAL RECOMMEDATIONS

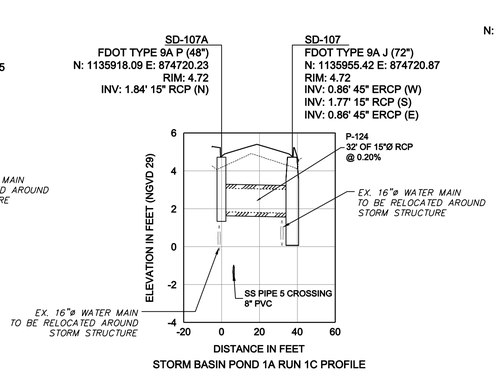
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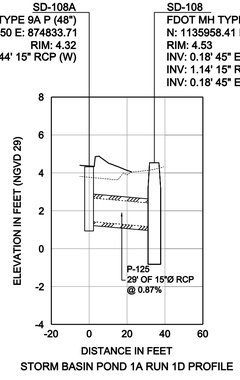
STORM BASIN POND 1A RUN 1A PROFILE



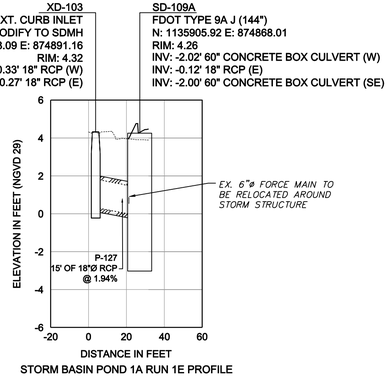
STORM BASIN POND 1A RUN 1B PROFILE



STORM BASIN POND 1A RUN 1C PROFILE



STORM BASIN POND 1A RUN 1D PROFILE



STORM BASIN POND 1A RUN 1E PROFILE

LEGEND:
EXISTING GRADE
PROPOSED GRADE

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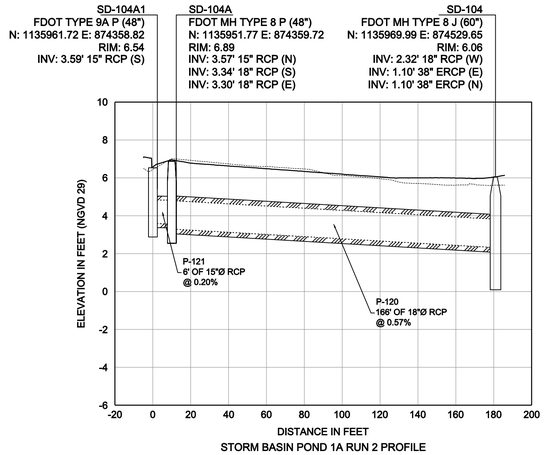
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STORM DRAINAGE
PROFILES

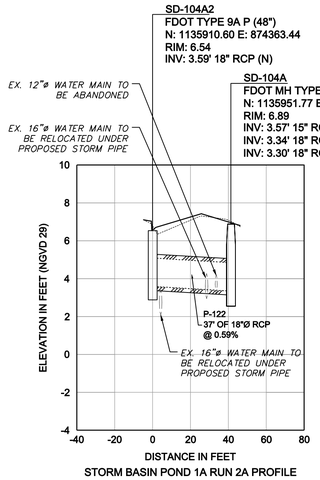
C-27

SHEET 28 OF 49

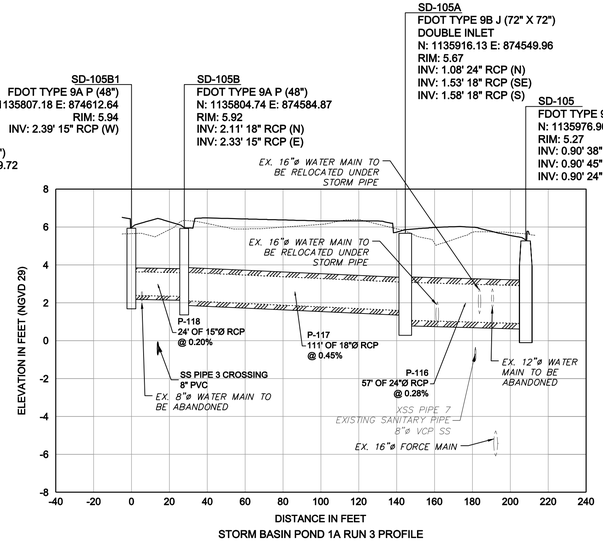
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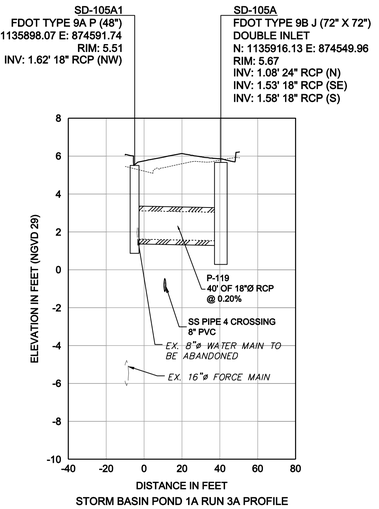
STORM BASIN POND 1A RUN 2 PROFILE



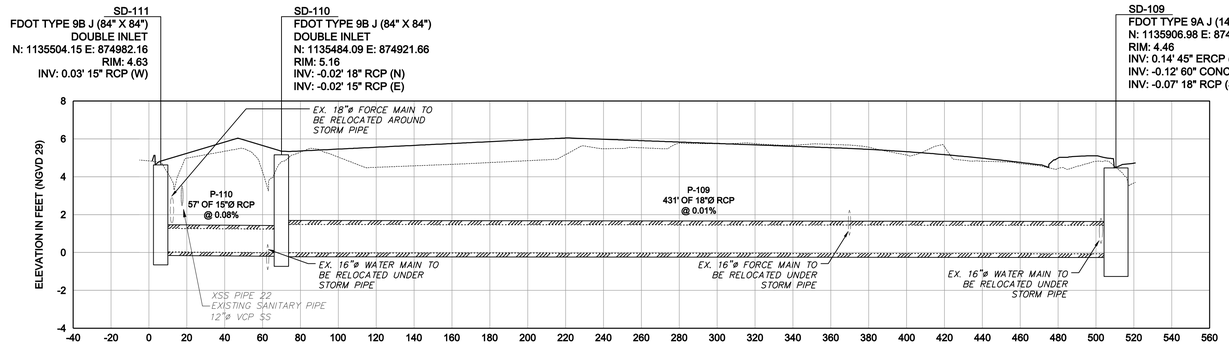
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STORM BASIN POND 1A RUN 3 PROFILE



STORM BASIN POND 1A RUN 3A PROFILE



STORM BASIN POND 1A RUN 4 PROFILE

GEOTECHNICAL RECOMMEDATIONS

1. CONTRACTOR SHALL REFER TO GEOTECHNICAL REPORT DATED SEPTEMBER 30, 2008 BY DUKELBERGER ENGINEERING & TESTING, INC.. PROJECT # : PSL - 08 - 2735.

LEGEND:
EXISTING GRADE
PROPOSED GRADE

TAYLOR ENGINEERING INC.
10151 DEERWOOD PARK BLVD.
BLDG. 300, SUITE 300
JACKSONVILLE, FLORIDA 32256
(904)-731-7040
1675 PALM BEACH LAKES, SUITE 210
WEST PALM BEACH, FLORIDA 33401
(561)-640-7310
CERTIFICATE OF AUTHORIZATION # 4815

SEAL

MICHAEL P. WHELAN P.E.# 55496

PROJECT TITLE

NORTH 2ND STREET
ROADWAY IMPROVEMENTS
ST. LUCIE COUNTY, FLORIDA

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NO	ZONE	REVISIONS / SUBMISSIONS	DATE

PROJECT NO	C2013-064
DATE	JULY 2014
DESIGNED	HCV
DRAWN	RLJ
CHECKED	AF
REVIEWED	MPW
SCALE	AS SHOWN

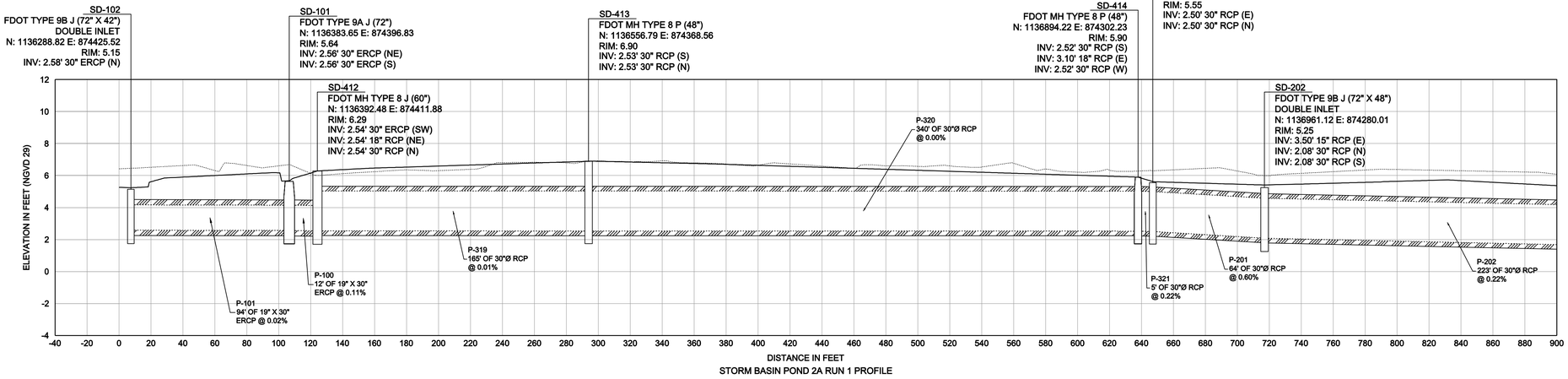
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STORM DRAINAGE
PROFILES

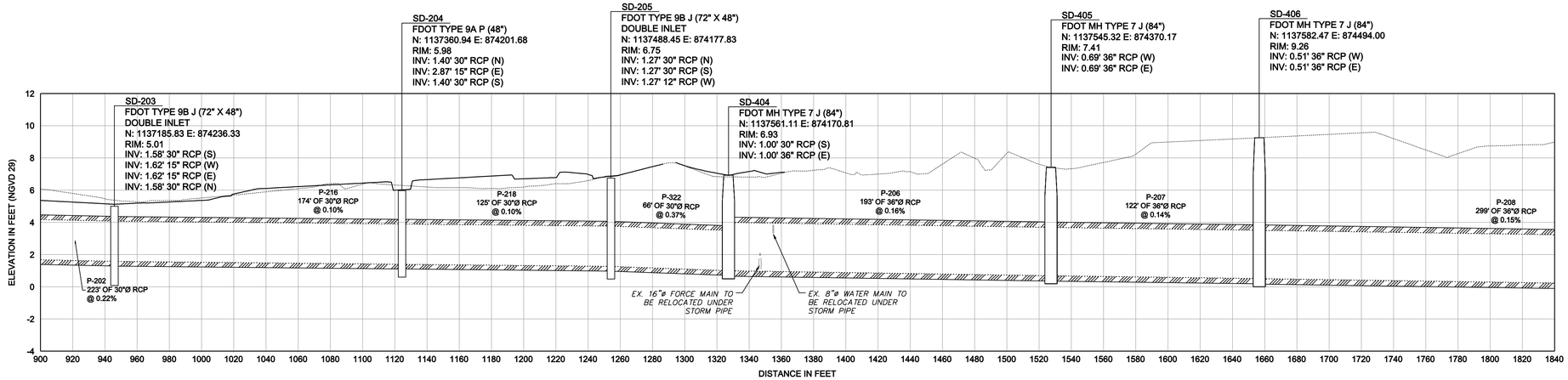
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SHEET 29 OF 49

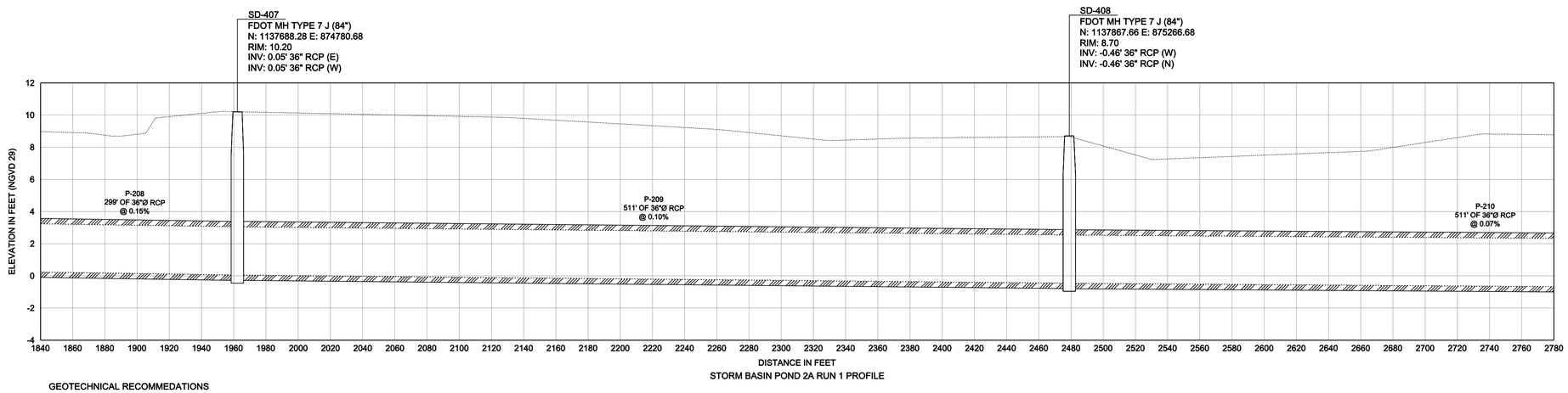
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STORM BASIN POND 2A RUN 1 PROFILE



STORM BASIN POND 2A RUN 1 PROFILE



STORM BASIN POND 2A RUN 1 PROFILE

GEOTECHNICAL RECOMMEDATIONS

1. CONTRACTOR SHALL REFER TO GEOTECHNICAL REPORT DATED SEPTEMBER 30, 2008 BY DUKELBERGER ENGINEERING & TESTING, INC.. PROJECT # : PSL - 08 - 2735.

LEGEND:
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PROPOSED GRADE

TAYLOR ENGINEERING INC.
10151 DEERWOOD PARK BLVD.
BLDG. 300, SUITE 300
JACKSONVILLE, FLORIDA 32256
(904)-731-7040
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WEST PALM BEACH, FLORIDA 33401
(561)-640-7310
CERTIFICATE OF AUTHORIZATION # 4815

SEAL

MICHAEL P. WHELAN P.E.# 55496

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ST. LUCIE COUNTY, FLORIDA

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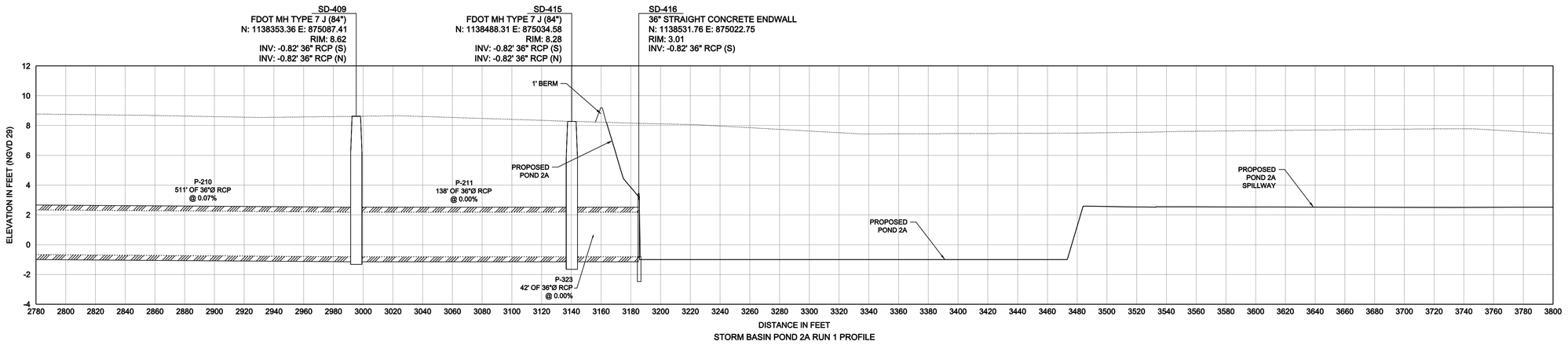
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STORM DRAINAGE PROFILES

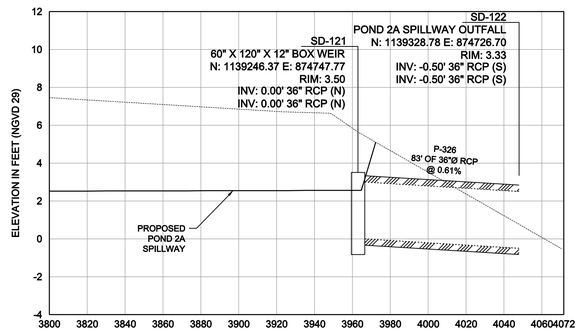
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SHEET 30 OF 49

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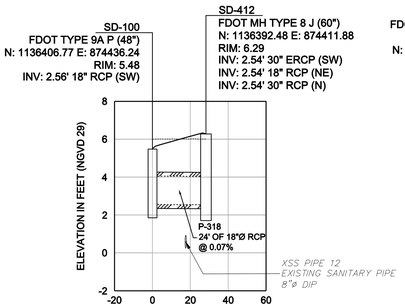
STORM BASIN POND 2A RUN 1 PROFILE



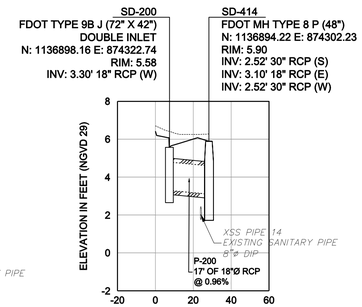
STORM BASIN POND 2A RUN 1C PROFILE

GEOTECHNICAL RECOMMEDATIONS

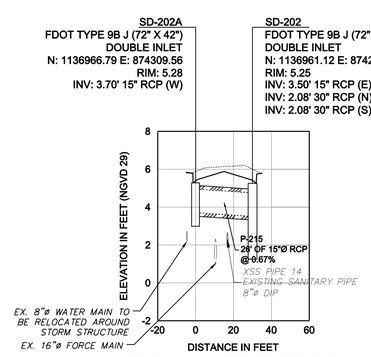
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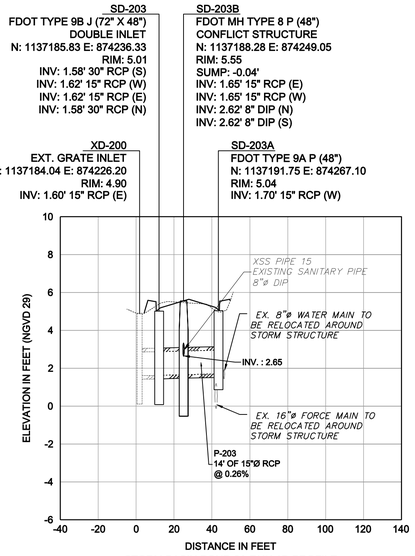
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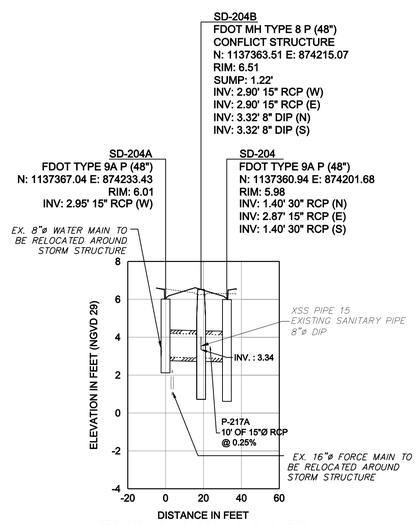
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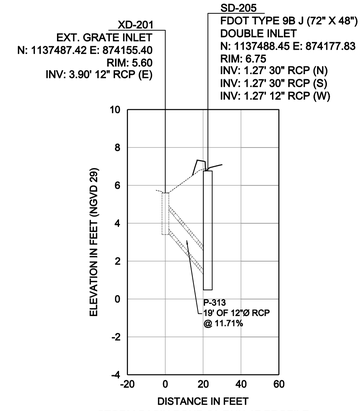
STORM BASIN POND 2A RUN 1C PROFILE



STORM BASIN POND 2A RUN 1D PROFILE



STORM BASIN POND 2A RUN 1E PROFILE



STORM BASIN POND 2A RUN 1F PROFILE

LEGEND:
EXISTING GRADE
PROPOSED GRADE

TAYLOR ENGINEERING INC.
10151 DEERWOOD PARK BLVD.
BLDG. 300, SUITE 300
JACKSONVILLE, FLORIDA 32256
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1675 PALM BEACH LAKES, SUITE 210
WEST PALM BEACH, FLORIDA 33401
(561)-640-7310
CERTIFICATE OF AUTHORIZATION # 4815

SEAL

MICHAEL P. WHELAN P.E.# 55496

PROJECT TITLE

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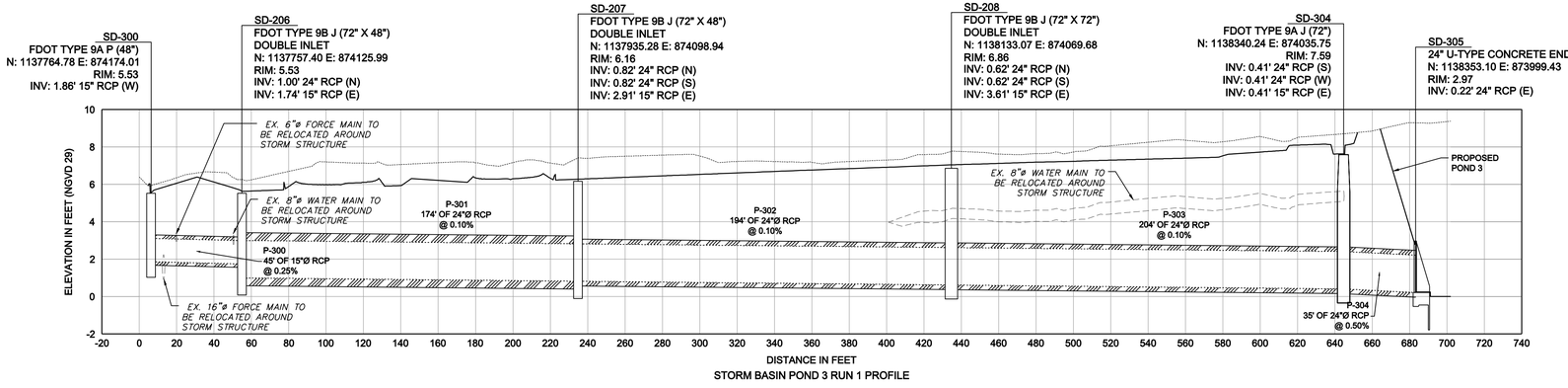
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STORM DRAINAGE PROFILES

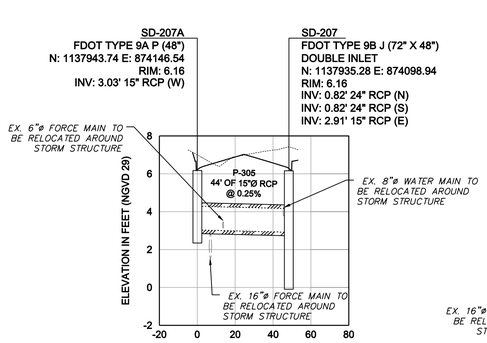
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SHEET 31 OF 49

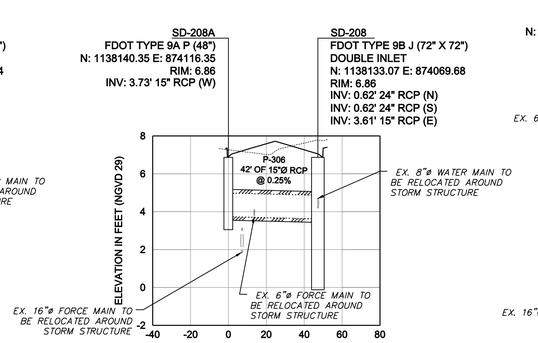
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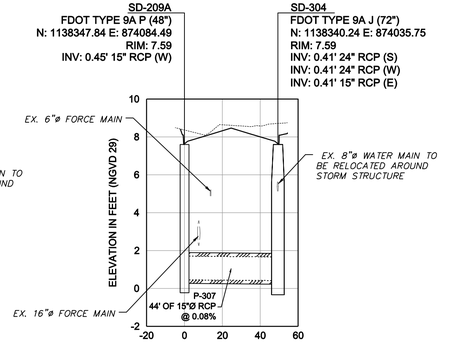
STORM BASIN POND 3 RUN 1 PROFILE



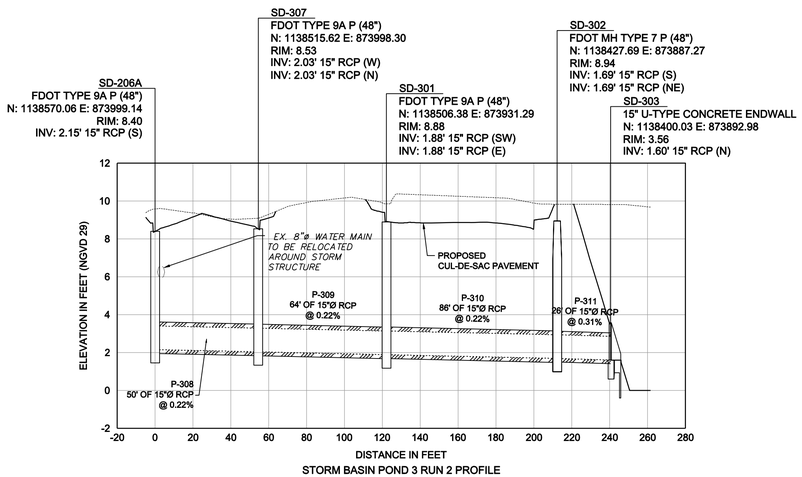
STORM BASIN POND 3 RUN 1A PROFILE



STORM BASIN POND 3 RUN 1B PROFILE



STORM BASIN POND 3 RUN 1C PROFILE



STORM BASIN POND 3 RUN 2 PROFILE

GEOTECHNICAL RECOMMEDATIONS

1. CONTRACTOR SHALL REFER TO GEOTECHNICAL REPORT DATED SEPTEMBER 30, 2008 BY DUKELBERGER ENGINEERING & TESTING, INC.. PROJECT # : PSL - 08 - 2735.

LEGEND:
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PROPOSED GRADE

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1675 PALM BEACH LAKES, SUITE 210
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CERTIFICATE OF AUTHORIZATION # 4815

SEAL

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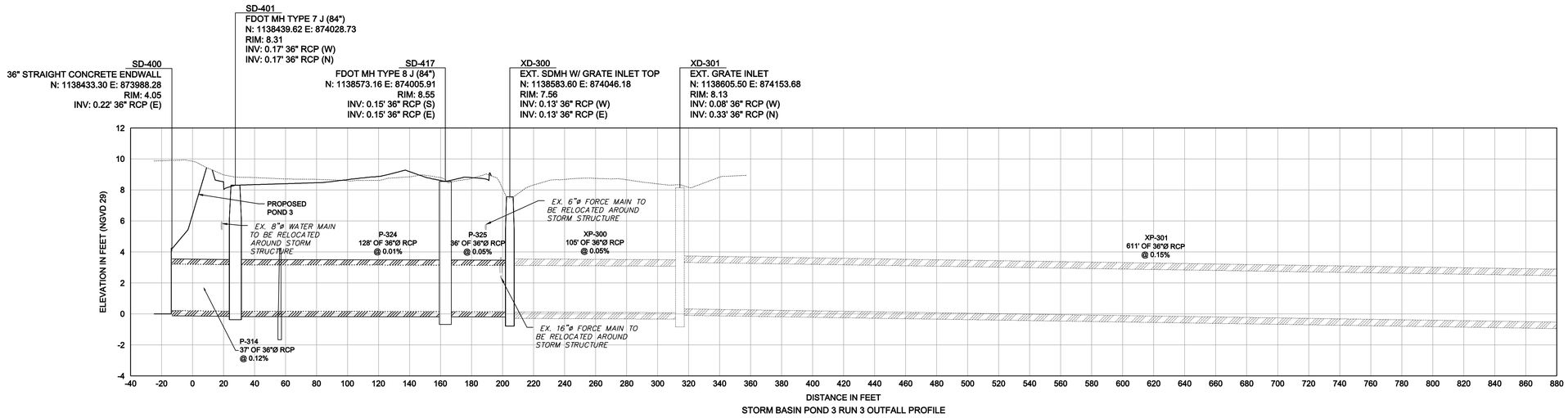
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STORM DRAINAGE
PROFILES

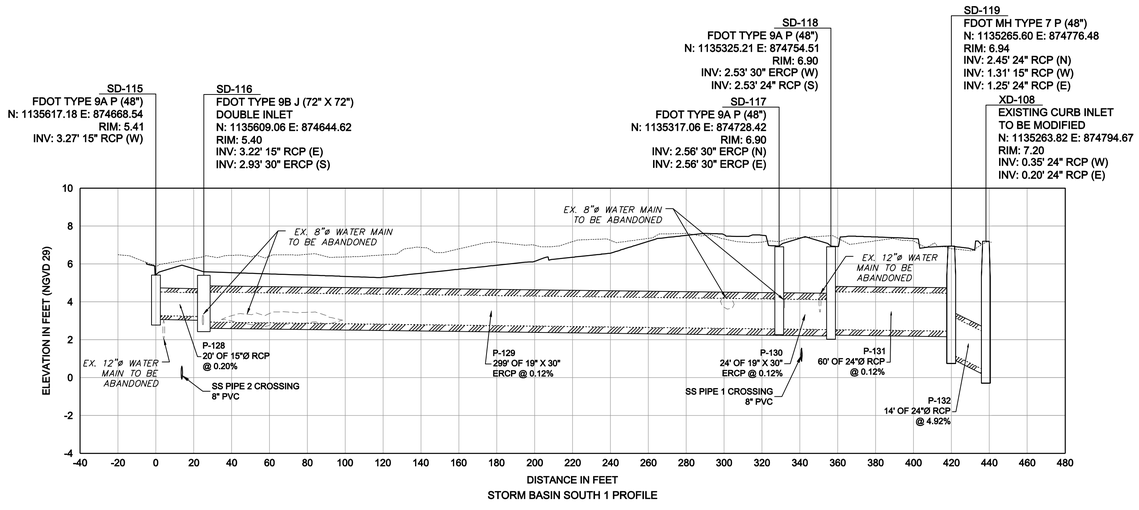
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SHEET 32 OF 49

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STORM BASIN POND 3 RUN 3 OUTFALL PROFILE



STORM BASIN SOUTH 1 PROFILE

GEOTECHNICAL RECOMMEDATIONS

1. CONTRACTOR SHALL REFER TO GEOTECHNICAL REPORT DATED SEPTEMBER 30, 2008 BY DUKELBERGER ENGINEERING & TESTING, INC.. PROJECT # : PSL - 08 - 2735.

LEGEND:
EXISTING GRADE
PROPOSED GRADE

TAYLOR ENGINEERING INC.
10151 DEERWOOD PARK BLVD.
BLDG. 300, SUITE 300
JACKSONVILLE, FLORIDA 32256
(904)-731-7040
1675 PALM BEACH LAKES, SUITE 210
WEST PALM BEACH, FLORIDA 33401
(561)-640-7310
CERTIFICATE OF AUTHORIZATION # 4815

SEAL

MICHAEL P. WHELAN P.E.# 55496

PROJECT TITLE

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ST. LUCIE COUNTY, FLORIDA

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REVIEWED	MPW
SCALE	AS SHOWN

DRAWING TITLE

STORM DRAINAGE PROFILES

C-32

SHEET 33 OF 49

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SOUTHERN DRAINAGE STRUCTURES

DRAINAGE STRUCTURE TABLE				
STRUCTURE NAME	GRATE/TOP ELEVATION	INVERTS	TYPE/NOTES	FDOT INDEX
SD-115	5.41	3.27 (W) 15" RCP pipe: P-128	FDOT TYPE 9A P (48")	214
SD-116	5.40	3.22 (E) 15" RCP pipe: P-128 2.93 (S) 30" ERCP pipe: P-129	FDOT TYPE 9B J (72" X 72") DOUBLE INLET	214
SD-117	6.90	2.56 (N) 30" ERCP pipe: P-129 2.56 (E) 30" ERCP pipe: P-130	FDOT TYPE 9A P (48")	214
SD-118	6.90	2.53 (W) 30" ERCP pipe: P-130 2.53 (S) 24" RCP pipe: P-131	FDOT TYPE 9A P (48")	214
SD-119	6.94	2.45 (N) 24" RCP pipe: P-131 1.31 (W) 15" RCP pipe: XP-108 1.25 (E) 24" RCP pipe: P-132	FDOT MH TYPE 7 P (48")	201

POND 1A DRAINAGE STRUCTURES

DRAINAGE STRUCTURE TABLE				
STRUCTURE NAME	GRATE/TOP ELEVATION	INVERTS	TYPE/NOTES	FDOT INDEX
SD-102A	5.49	1.66 (E) 38" ERCP pipe: P-327 1.40 (S) 38" ERCP pipe: P-102	FDOT MH TYPE 8 J (60")	UNDEFINED
SD-102B	4.94	1.71 (W) 38" ERCP pipe: P-327	FDOT TYPE 9B J (72" X 42") DOUBLE INLET	214
SD-103	6.11	1.13 (N) 38" ERCP pipe: P-102 1.27 (W) 24" RCP pipe: P-115 1.13 (S) 38" ERCP pipe: P-103	FDOT MH TYPE 8 J (60")	201
SD-103A	5.65	1.29 (E) 24" RCP pipe: P-115	FDOT TYPE 9B J (72" X 48") DOUBLE INLET	214
SD-104	6.06	2.32 (W) 18" RCP pipe: P-120 1.10 (N) 38" ERCP pipe: P-103 1.10 (E) 38" ERCP pipe: P-104	FDOT MH TYPE 8 J (60")	201
SD-104A	6.89	3.57 (N) 15" RCP pipe: P-121 3.34 (S) 18" RCP pipe: P-122 3.30 (E) 18" RCP pipe: P-120	FDOT MH TYPE 8 P (48")	201
SD-104A1	6.54	3.59 (S) 15" RCP pipe: P-121	FDOT TYPE 9A P (48")	214
SD-104A2	6.54	3.59 (N) 18" RCP pipe: P-122	FDOT TYPE 9A P (48")	214
SD-105	5.27	0.90 (W) 38" ERCP pipe: P-104 0.90 (E) 45" ERCP pipe: P-105 0.90 (S) 24" RCP pipe: P-116	FDOT TYPE 9A J (72")	214
SD-105A	5.67	1.08 (N) 24" RCP pipe: P-116 1.53 (SE) 18" RCP pipe: P-119 1.58 (S) 18" RCP pipe: P-117	FDOT TYPE 9B J (72" X 72") DOUBLE INLET	214
SD-105A1	5.51	1.62 (NW) 18" RCP pipe: P-119	FDOT TYPE 9A P (48")	214
SD-105B	5.92	2.11 (N) 18" RCP pipe: P-117 2.33 (E) 15" RCP pipe: P-118	FDOT TYPE 9A P (48")	214
SD-105B1	5.94	2.39 (W) 15" RCP pipe: P-118	FDOT TYPE 9A P (48")	214
SD-106	5.06	0.88 (W) 45" ERCP pipe: P-105 2.11 (S) 15" RCP pipe: P-123 0.88 (E) 45" ERCP pipe: P-106	FDOT TYPE 9A J (72")	214
SD-106A	5.06	2.18 (N) 15" RCP pipe: P-123	FDOT TYPE 9A P (48")	214
SD-107	4.72	0.86 (W) 45" ERCP pipe: P-106 1.77 (S) 15" RCP pipe: P-124 0.86 (E) 45" ERCP pipe: P-107	FDOT TYPE 9A J (72")	214
SD-107A	4.72	1.84 (N) 15" RCP pipe: P-124	FDOT TYPE 9A P (48")	214
SD-108	4.53	0.18 (W) 45" ERCP pipe: P-107 1.14 (E) 15" RCP pipe: P-125 0.18 (S) 45" ERCP pipe: P-108	FDOT MH TYPE 7 J (72")	201
SD-108A	4.32	1.44 (W) 15" RCP pipe: P-125	FDOT TYPE 9A P (48")	214
SD-109	4.46	0.14 (N) 45" ERCP pipe: P-108 -0.12 (E) 60" CONCRETE BOX CULVERT pipe: P-126 -0.07 (S) 18" RCP pipe: P-109	FDOT TYPE 9A J (144")	UNDEFINED
SD-109A	4.26	-0.12 (E) 18" RCP pipe: P-127 -2.02 (W) 60" CONCRETE BOX CULVERT pipe: P-126 -2.00 (SE) 60" CONCRETE BOX CULVERT pipe: P-317	FDOT TYPE 9A J (144")	UNDEFINED
SD-110	5.16	-0.02 (N) 18" RCP pipe: P-109 -0.02 (E) 15" RCP pipe: P-110	FDOT TYPE 9B J (84" X 84") DOUBLE INLET	214
SD-111	4.63	0.03 (W) 15" RCP pipe: P-110	FDOT TYPE 9B J (84" X 84") DOUBLE INLET	214
SD-112	1.98	-2.02 (NW) 60" CONCRETE BOX CULVERT pipe: P-317	3' X 5' CONCRETE HEADWALL	289, 291, 292
SD-113	5.38	-2.05 (S) 60" CONCRETE BOX CULVERT pipe: P-112 -2.05 (W) 60" CONCRETE BOX CULVERT pipe: P-315	FDOT MH TYPE 7J (9'X9')	201
SD-114	5.54	-2.10 (N) 60" CONCRETE BOX CULVERT pipe: P-112 -2.10 (E) 60" CONCRETE BOX CULVERT pipe: P-316	FDOT MH TYPE 7J (9'X9')	201
SD-410	2.00	-2.00 (E) 60" CONCRETE BOX CULVERT pipe: P-315	3' X 5' CONCRETE HEADWALL	289, 291, 292
SD-411	4.82	-2.20 (W) 60" CONCRETE BOX CULVERT pipe: P-316 -0.88 (E) 30" RCP pipe: XP302	FDOT MH TYPE 7J (9'X9')	214

POND 2A DRAINAGE STRUCTURES

DRAINAGE STRUCTURE TABLE				
STRUCTURE NAME	GRATE/TOP ELEVATION	INVERTS	TYPE/NOTES	FDOT INDEX
SD-100	5.48	2.56 (SW) 18" RCP pipe: P-318	FDOT TYPE 9A P (48")	214
SD-101	5.64	2.56 (NE) 30" ERCP pipe: P-100 2.56 (S) 30" ERCP pipe: P-101	FDOT TYPE 9A J (72")	214
SD-102	5.15	2.58 (N) 30" ERCP pipe: P-101	FDOT TYPE 9B J (72" X 42") DOUBLE INLET	214
SD-121	3.50	0.00 (N) 36" RCP pipe: P-326 0.00 (N) 36" RCP pipe: P-328	60" X 120" X 12" BOX WEIR	UNDEFINED
SD-122	3.33	-0.50 (S) 36" RCP pipe: P-326 -0.50 (S) 36" RCP pipe: P-328	POND 2A SPILLWAY OUTFALL	UNDEFINED
SD-200	5.58	3.30 (W) 18" RCP pipe: P-200	FDOT TYPE 9B J (72" X 42") DOUBLE INLET	214
SD-201	5.55	2.50 (E) 30" RCP pipe: P-321 2.50 (N) 30" RCP pipe: P-201	FDOT TYPE 9B J (72" X 42") DOUBLE INLET	214
SD-202	5.25	3.50 (E) 15" RCP pipe: P-215 2.08 (S) 30" RCP pipe: P-201 2.08 (N) 30" RCP pipe: P-202	FDOT TYPE 9B J (72" X 48") DOUBLE INLET	214
SD-202A	5.28	3.70 (W) 15" RCP pipe: P-215	FDOT TYPE 9B J (72" X 42") DOUBLE INLET	214
SD-203	5.01	1.58 (S) 30" RCP pipe: P-202 1.62 (W) 15" RCP pipe: P-212 1.62 (E) 15" RCP pipe: P-203A 1.58 (N) 30" RCP pipe: P-216	FDOT TYPE 9B J (72" X 48") DOUBLE INLET	214
SD-203A	5.04	1.70 (W) 15" RCP pipe: P-203	FDOT TYPE 9A P (48")	214
SD-203B	5.55	1.65 (E) 15" RCP pipe: P-203 1.65 (W) 15" RCP pipe: P-203A 2.62 (N) 8" DIP pipe: SS SPLICE 2 N 2.62 (S) 8" DIP pipe: SS SPLICE 2 S	FDOT MH TYPE 8 P (48") CONFLICT STRUCTURE	201
SD-204	5.98	1.40 (S) 30" RCP pipe: P-216 1.40 (N) 30" RCP pipe: P-218 2.87 (E) 15" RCP pipe: P-217A	FDOT TYPE 9A P (48")	214
SD-204A	6.01	2.95 (W) 15" RCP pipe: P-217	FDOT TYPE 9A P (48")	214
SD-204B	6.51	2.90 (W) 15" RCP pipe: P-217A 2.90 (E) 15" RCP pipe: P-217 SS SPLICE: 3.32 8" DIP	FDOT MH TYPE 8 P (48") CONFLICT STRUCTURE	201
SD-205	6.75	1.27 (S) 30" RCP pipe: P-218 1.27 (W) 12" RCP pipe: P-313 1.27 (N) 30" RCP pipe: P-322	FDOT TYPE 9B J (72" X 48") DOUBLE INLET	214
SD-404	6.93	1.00 (S) 30" RCP pipe: P-322 1.00 (E) 36" RCP pipe: P-206	FDOT MH TYPE 7 J (84")	201
SD-405	7.41	0.69 (W) 36" RCP pipe: P-206 0.69 (E) 36" RCP pipe: P-207	FDOT MH TYPE 7 J (84")	201
SD-406	9.26	0.51 (W) 36" RCP pipe: P-207 0.51 (E) 36" RCP pipe: P-208	FDOT MH TYPE 7 J (84")	201
SD-407	10.20	0.05 (W) 36" RCP pipe: P-208 0.05 (E) 36" RCP pipe: P-209	FDOT MH TYPE 7 J (84")	201
SD-408	8.70	-0.46 (W) 36" RCP pipe: P-209 -0.46 (N) 36" RCP pipe: P-210	FDOT MH TYPE 7 J (84")	201
SD-409	8.62	-0.82 (S) 36" RCP pipe: P-210 -0.82 (N) 36" RCP pipe: P-211	FDOT MH TYPE 7 J (84")	201
SD-412	6.29	2.54 (SW) 30" ERCP pipe: P-100 2.54 (NE) 18" RCP pipe: P-318 2.54 (N) 30" RCP pipe: P-319	FDOT MH TYPE 8 J (60")	201
SD-413	6.90	2.53 (S) 30" RCP pipe: P-319 2.53 (N) 30" RCP pipe: P-320	FDOT MH TYPE 8 P (48")	201
SD-414	5.90	2.52 (S) 30" RCP pipe: P-320 3.10 (E) 18" RCP pipe: P-200 2.52 (W) 30" RCP pipe: P-321	FDOT MH TYPE 8 P (48")	201
SD-415	8.28	-0.82 (S) 36" RCP pipe: P-211 -0.82 (N) 36" RCP pipe: P-323	FDOT MH TYPE 7 J (84")	201
SD-416	3.01	-0.82 (S) 36" RCP pipe: P-323	36" STRAIGHT CONCRETE ENDWALL	250

EX. 15" RCP. UNKNOWN INVERT (NW)

POND 3 DRAINAGE STRUCTURES

DRAINAGE STRUCTURE TABLE				
STRUCTURE NAME	GRATE/TOP ELEVATION	INVERTS	TYPE/NOTES	FDOT INDEX
SD-206	5.53	1.00 (N) 24" RCP pipe: P-301 1.74 (E) 15" RCP pipe: P-300	FDOT TYPE 9B J (72" X 48") DOUBLE INLET	214
SD-206A	8.40	2.15 (S) 15" RCP pipe: P-308	FDOT TYPE 9A P (48")	214
SD-207	6.16	0.82 (N) 24" RCP pipe: P-302 2.91 (E) 15" RCP pipe: P-305 0.82 (S) 24" RCP pipe: P-301	FDOT TYPE 9B J (72" X 48") DOUBLE INLET	214
SD-207A	6.16	3.03 (W) 15" RCP pipe: P-305	FDOT TYPE 9A P (48")	214
SD-208	6.86	0.62 (N) 24" RCP pipe: P-303 3.61 (E) 15" RCP pipe: P-306 0.62 (S) 24" RCP pipe: P-302	FDOT TYPE 9B J (72" X 72") DOUBLE INLET	214
SD-208A	6.86	3.73 (W) 15" RCP pipe: P-306	FDOT TYPE 9A P (48")	214
SD-209A	7.59	0.45 (W) 15" RCP pipe: P-307	FDOT TYPE 9A P (48")	214
SD-300	5.53	1.86 (W) 15" RCP pipe: P-300	FDOT TYPE 9A P (48")	214
SD-301	8.88	1.88 (SW) 15" RCP pipe: P-310 1.88 (E) 15" RCP pipe: P-309	FDOT TYPE 9A P (48")	214
SD-302	8.94	1.69 (S) 15" RCP pipe: P-311 1.69 (NE) 15" RCP pipe: P-310	FDOT MH TYPE 7 P (48")	201
SD-303	3.56	1.60 (N) 15" RCP pipe: P-311	15" U-TYPE CONCRETE ENDWALL	261
SD-304	7.59	0.41 (W) 24" RCP pipe: P-304 0.41 (S) 24" RCP pipe: P-303 0.41 (E) 15" RCP pipe: P-307	FDOT TYPE 9A J (72")	214
SD-305	2.97	0.22 (E) 24" RCP pipe: P-304	24" U-TYPE CONCRETE ENDWALL	261
SD-307	8.53	2.03 (W) 15" RCP pipe: P-309 2.03 (N) 15" RCP pipe: P-308	FDOT TYPE 9A P (48")	214
SD-400	4.05	0.22 (E) 36" RCP pipe: P-314	36" STRAIGHT CONCRETE ENDWALL	250
SD-401	8.31	0.17 (W) 36" RCP pipe: P-314 0.17 (N) 36" RCP pipe: P-324	FDOT MH TYPE 7 J (84")	201
SD-417	8.55	0.15 (S) 36" RCP pipe: P-324 0.15 (E) 36" RCP pipe: P-325	FDOT MH TYPE 8 J (84")	201

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WEST PALM BEACH, FLORIDA 33401
(561)-640-7310
CERTIFICATE OF AUTHORIZATION # 4815

SEAL

MICHAEL P. WHELAN P.E.# 55496

PROJECT TITLE

NORTH 2ND STREET
ROADWAY IMPROVEMENTS
ST. LUCIE COUNTY, FLORIDA

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NO	ZONE	REVISIONS / SUBMISSIONS	DATE

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DATE	JULY 2014
DESIGNED	HCV
DRAWN	RLJ
CHECKED	AF
REVIEWED	MPW
SCALE	AS SHOWN

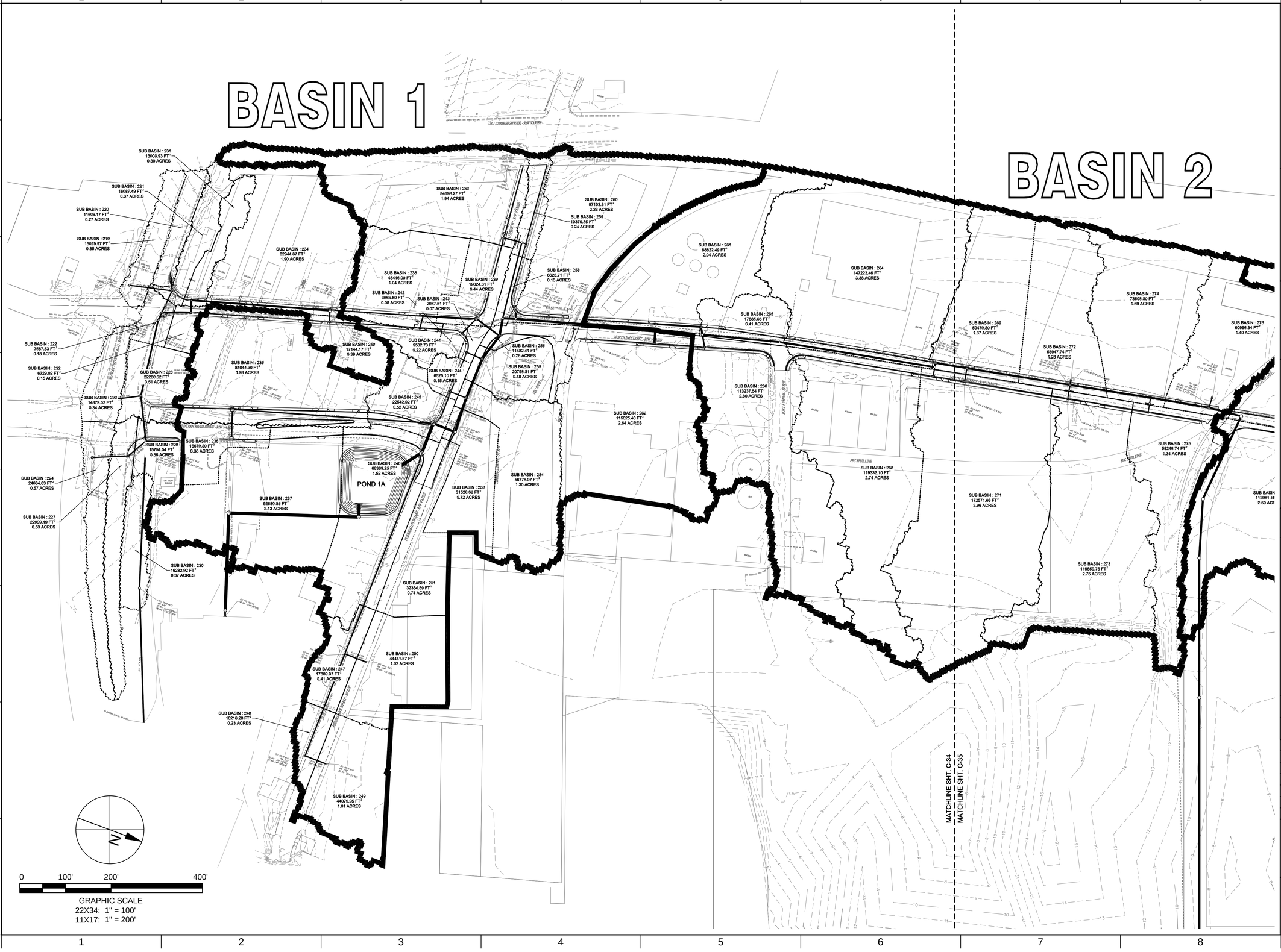
DRAWING TITLE

STORM DRAINAGE
STRUCTURE TABLE

C-33

SHEET 34 OF 49

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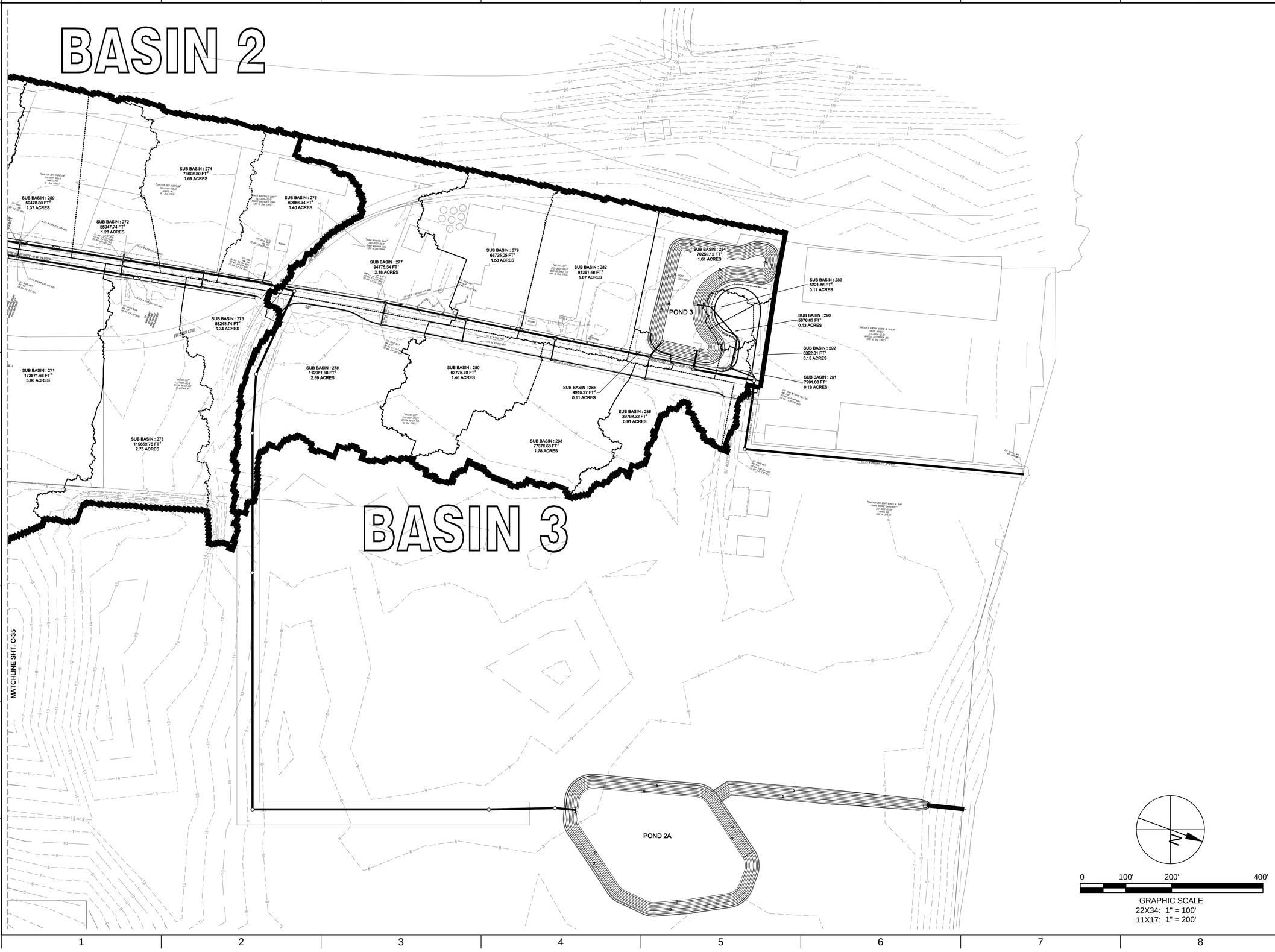
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PROPOSED DRAINAGE
BASINS

C-34

SHEET 35 OF 49

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PROJECT NO	C2013-064
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REVIEWED	MPW
SCALE	AS SHOWN

DRAWING TITLE

PROPOSED DRAINAGE
BASINS

C-35

SHEET 36 OF 49

ANTON, 7/17/2014 10:19:56 AM , x:\sys\Projects\c2008-056 Ft Pierce 2nd Street\Construction\C2008-056-C-Proposed Drainage Basins.dwg



UTILITY INSTALLATION DATA

GENERAL SITE INFORMATION

TOTAL SITE AREA: 40.5 ACRES

NORMAL WET SEASON GROUNDWATER TABLE IS EXPECTED TO BE ABOUT 3 FEET BELOW THE GROUND SURFACE.

DRAINAGE LINE TRENCH INFORMATION

TYPICAL TRENCH WIDTH: 10 FEET

TOTAL TRENCH LENGTH: 7,500 FEET / 500 FT. MAX. PER DAY

MAXIMUM TRENCH DEPTH: (–)5.0 NGVD.

AVERAGE "DRAW DOWN": 4 FEET

MAXIMUM "DRAW DOWN": 7 FEET

DEWATERING VOLUME: 0.15 MG PER DAY (90 DAY MAX PERIOD)

WASTEWATER SYSTEM TRENCH INFORMATION

TYPICAL TRENCH WIDTH: 10 FEET

TOTAL TRENCH LENGTH: 1,900 FEET / 500 FT. MAX. PER DAY

MAXIMUM TRENCH DEPTH:(–)5.5 NGVD.

AVERAGE "DRAW DOWN": 4.0 FEET

MAXIMUM "DRAW DOWN": 7.0 FEET

DEWATERING VOLUME: 0.20 M.G. MAX. PER DAY (90 DAY MAX PERIOD)

POTABLE WATER TRENCH INFORMATION

TYPICAL TRENCH WIDTH: 10 FEET

TOTAL TRENCH LENGTH: 2,800 FEET / 500 FT. MAX. PER DAY

MAXIMUM TRENCH DEPTH: 3.0 NGVD.

AVERAGE "DRAW DOWN": 1.0 FEET

MAXIMUM "DRAW DOWN": 4.0 FEET

DEWATERING VOLUME: 0.10 M.G. MAX. PER DAY (90 DAY MAX PERIOD)

EXCAVATION TRENCH DETAIL

N.T.S.

0 1' 2' 4'

GRAPHIC SCALE
22X34: 1" = 1'
11X17: 1" = 2'

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DEWATERING PLAN

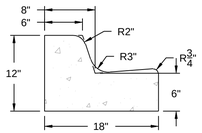
C-36

SHEET 37 OF 49

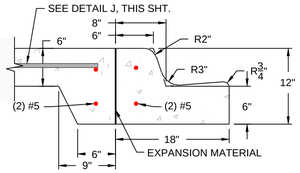
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NOTE: CONTRACTOR TO FOLLOW THE FDOT INDICES:

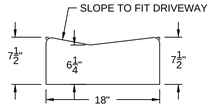
FDOT INDICES	
INDEX	DESCRIPTION
300	CURBS & CURB AND GUTTER
304	DETECTABLE WARNINGS AND SIDEWALK CURB RAMPS
305	CONCRETE PAVEMENT JOINTS
307	MISCELLANEOUS UTILITY DETAILS: CONFLICT STRUCTURES
310	CONCRETE SIDEWALK
400	GUARDRAIL WITH TIMBER POSTS
544	LANDSCAPING
11860	SINGLE COLUMN GROUND SIGNS
17346	SPECIAL MARKING AREAS
17352	TYPICAL PLACEMENT OF REFLECTIVE PAVEMENT MARKERS
17882	RAILROAD GRADE CROSSING TRAFFIC CONTROL DEVICES
21300	STANDARD BAR BENDING DETAILS



MODIFIED TYPE F CURB



MODIFIED TYPE F CURB WITH REINFORCEMENT



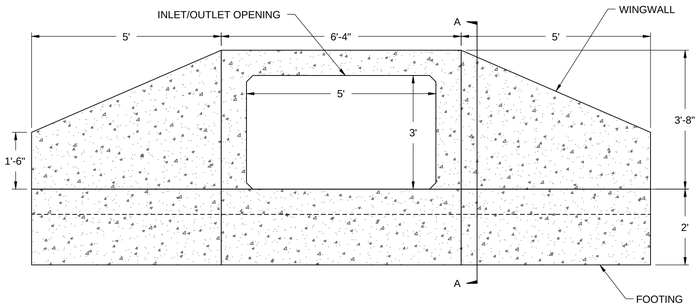
MODIFIED DROP CURB

FDOT INDEX # 300
MODIFIED CURBS

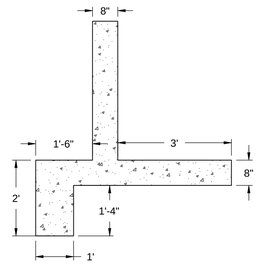
FDOT CURB & GUTTER DETAIL

22X34: 1" = 1'
11X17: 1" = 2'

0 1' 2'



FRONT VIEW



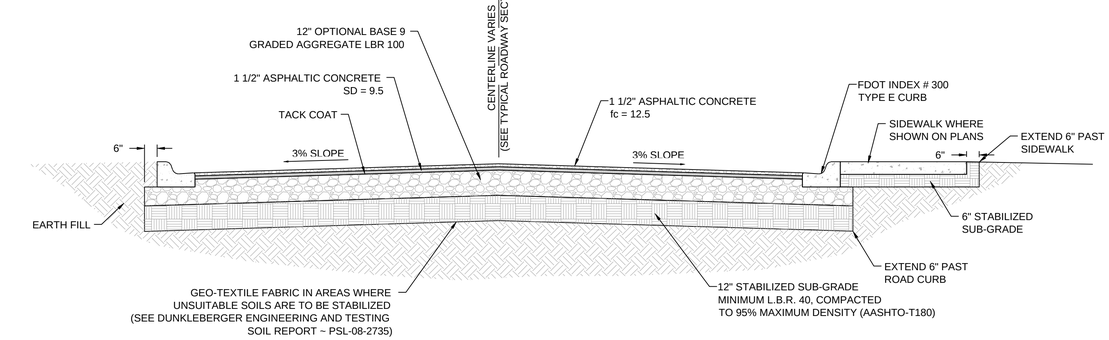
SECTION VIEW A-A

NOTES:
3'X5' CONCRETE HEADWALL TO BE CONSTRUCTED AT STORM DRAIN STRUCTURES SD-112 & SD-410.
CONTRACTOR TO CONSTRUCT IN ACCORDANCE WITH FDOT INDEX 289, 291, & 292.

FDOT 3'X5' CONCRETE HEADWALL DETAIL

22X34: 1" = 2'
11X17: 1" = 4'

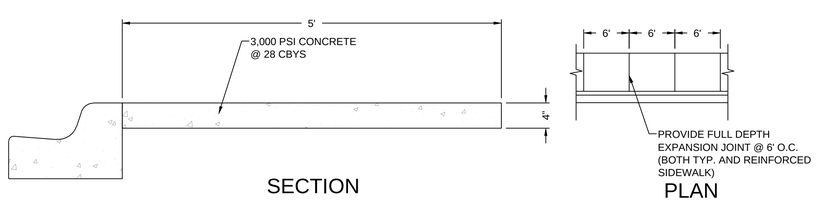
0 2' 4'



TYPICAL ROADWAY CROSS SECTION

22X34: 1" = 3'
11X17: 1" = 6'

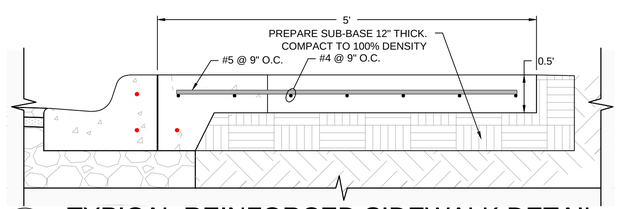
0 3' 6'



I / C-10

TYPICAL SIDEWALK DETAIL

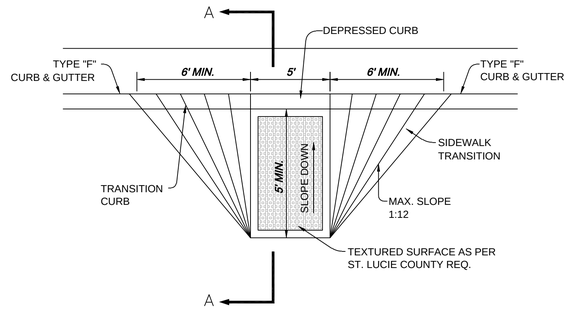
NOT TO SCALE



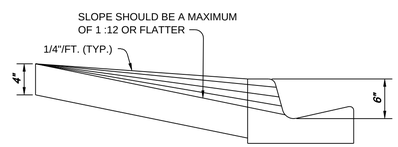
J / C-10

TYPICAL REINFORCED SIDEWALK DETAIL

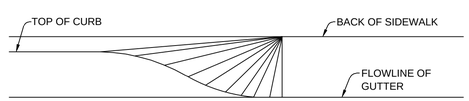
NOT TO SCALE



TRANSITION DETAIL



SECTION "A-A"



TYPICAL HANDICAPPED RAMP DETAIL

NOT TO SCALE

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CERTIFICATE OF AUTHORIZATION # 4815

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REVIEWED	MPW
SCALE	AS SHOWN

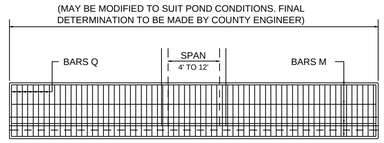
DRAWING TITLE

DETAILS 1

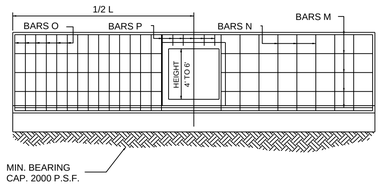
C-37

SHEET 38 OF 49

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PLAN-SHOWING BARS IN FOOTING



HALF ELEV.
SHOWING BARS IN BACK FACE OF WALL

HALF ELEV.
SHOWING BARS IN FRONT FACE OF WALL

NOTE:
1) CONC. DESIGN STRENGTH 3400 P.S.I. (CLASS II F.D.O.T.)
2) CHAMFER ALL EXPOSED EDGES 1/2"
3) 2" CLEARANCE ON ALL BARS
4) FIELD BEND BARS EXTENDING FROM PRECAST BOX CULVERT AND TIE TO ENDWALL STEEL

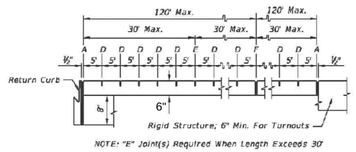
DIMENSIONAL & QUANITATIVE DATA

CULVERT SPAN	CULVERT HEIGHT	MAX. FILL HEIGHT	L	H	CU. YDS.	BAR	SIZE	LENGTH	NO.	SPACE	BAR	SIZE	LENGTH	NO.	SPACE
5'-0"	3'-0"	6'-0"	29'-6"	5'-10 1/2"	7.49	M	4	-	13	18"	P	4	3'-11 1/2"	6	10"
						N	4	6'-1 1/2"	18	17 1/2"	Q	4	4'-0"	62	5 1/2"
						O	4	7'-5 1/2"	30	10"	R	4	3'-3"	6	10"

* WIDTH OF WALL LESS 4"

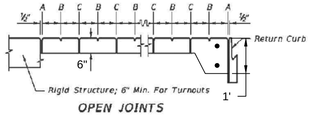
CULVERT HEADWALL DETAIL

NOT TO SCALE



NOTE: "E" Joint(s) Required When Length Exceeds 30'

SAWED JOINTS



OPEN JOINTS

LONGITUDINAL SECTION
(NOT TO SCALE)

JOINT LEGEND

A- ½" Expansion Joints (Preformed Joint Filler)

B- ½" Dummy Joints, Tooled

C- ½" Formed Open Joints

D- 3/16" Saw Cut Joints, 1¼" Deep (within 96 hours) Max. 5' Centers

E- 3/16" Saw Cut Joints, 1¼" Deep (within 12 hours) Max. 30' Centers

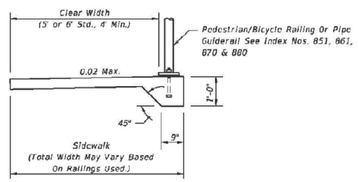
F- ½" Expansion Joint When Run Of Sidewalk Exceeds 120'. Intermediate locations when called for in the plans or at locations as directed by the Engineer.

G- Cold Joint With Bond Breaker, Tooled

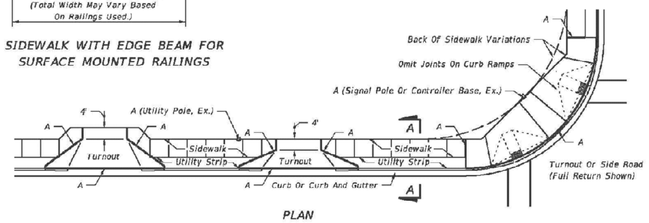
SIDEWALK JOINTS

NOTES FOR CONCRETE SIDEWALK ON CURBED ROADWAYS

1. Sidewalks shall be constructed in accordance with Specification Section 522. Sidewalk curb ramps shall include detectable warnings and be constructed in accordance with Index No. 304. Detectable warnings are not required where sidewalks intersect urban flared turnouts.
2. Bond breaker material can be any impermeable coated or sheet membrane or preformed material having a thickness of not less than 6 mils nor more than ½".
3. For turnouts see Index No. 515.
4. Construct sidewalks with 1' thick Edge Beam through the limits of any surface mounted Pedestrian/Bicycle Picket Railing or Pipe Guiderail shown in the plans.
5. Concrete (Pc = 4,000 psi) with fiber reinforcement

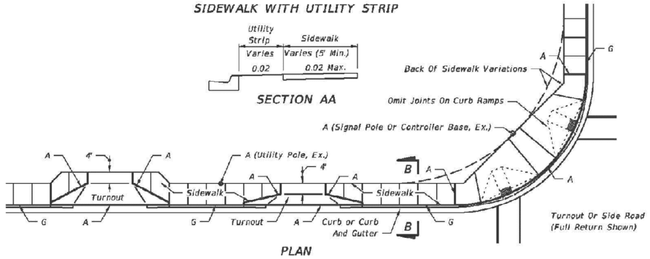


SIDEWALK WITH EDGE BEAM FOR SURFACE MOUNTED RAILINGS



PLAN

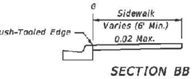
SIDEWALK WITH UTILITY STRIP



SECTION AA

PLAN

SIDEWALK WITHOUT UTILITY STRIP

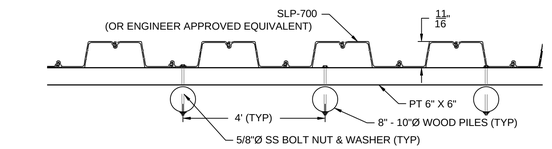


SECTION BB

CONCRETE SIDEWALK ON CURBED ROADWAYS

SIDEWALK DETAILS

NOT TO SCALE

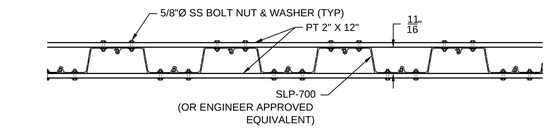


X / XX

PROPOSED WEIR WALL PLAN DETAIL

22X34: 1" = 1'
11X17: 1" = 2'

0 1' 2'

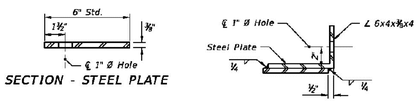


X / XX

PROPOSED BAFFLE WALL PLAN DETAIL

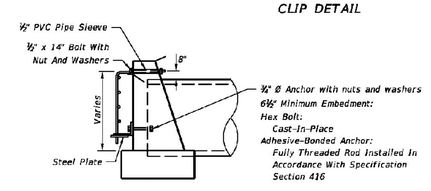
22X34: 1" = 1'
11X17: 1" = 2'

0 1' 2'

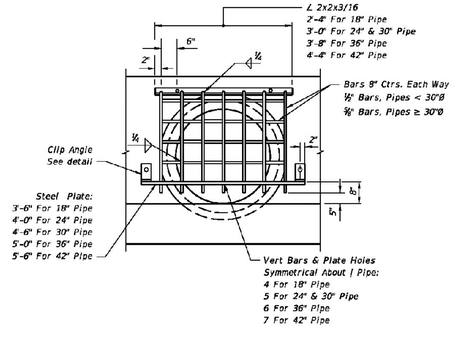


SECTION - STEEL PLATE

CLIP DETAIL



SIDE VIEW



Pipe Dia.	18"	24"	30"	36"	42"
Grate (lbs.)	48	58	74	90	111

FRONT VIEW

Note: Guards to be constructed only at locations specifically called for in plans. Guard, plate & clips, bolts, nuts and sleeves to be included in the contract unit price for Reinforcing Steel (Miscellaneous).

GUARD AT PIPE ENDS

MANATEE GRATE DETAIL

NOT TO SCALE

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WEST PALM BEACH, FLORIDA 33401
(561)-640-7310
CERTIFICATE OF AUTHORIZATION # 4815

SEAL

MICHAEL P. WHELAN P.E.# 55496

PROJECT TITLE

NORTH 2ND STREET ROADWAY IMPROVEMENTS
CITY OF FORT PIERCE
ST. LUCIE COUNTY, FLORIDA

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DESIGNED	HCV
DRAWN	RLJ
CHECKED	AF
REVIEWED	MPW
SCALE	AS SHOWN

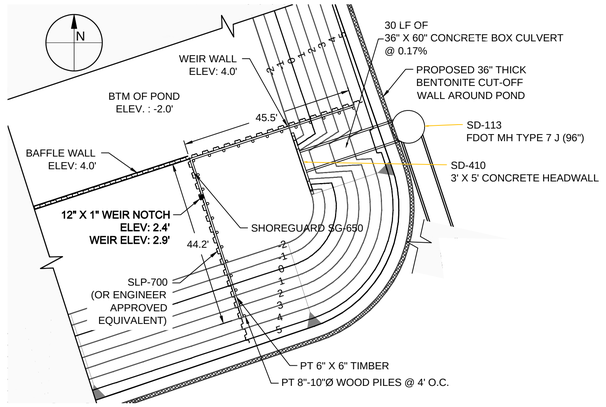
DRAWING TITLE

DETAILS 2

C-38

SHEET 39 OF 49

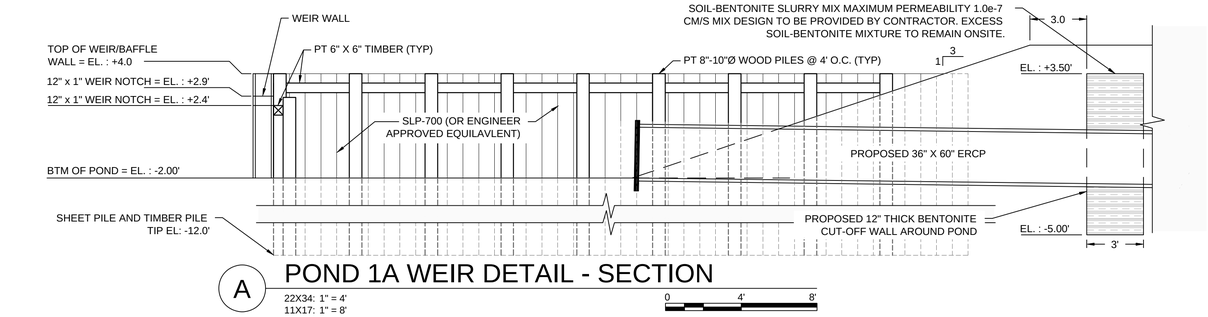
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POND 1A WEIR DETAIL - PLAN

22X34: 1" = 20'
11X17: 1" = 40'

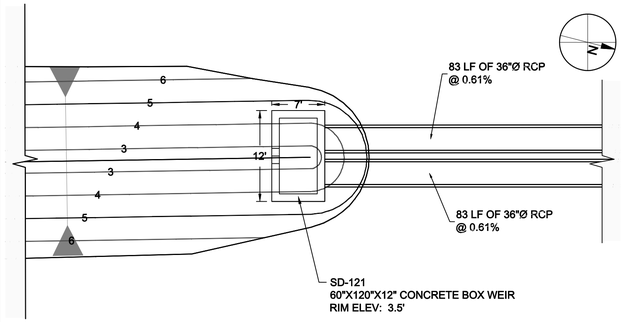
0 20' 40'



A POND 1A WEIR DETAIL - SECTION

22X34: 1" = 4'
11X17: 1" = 8'

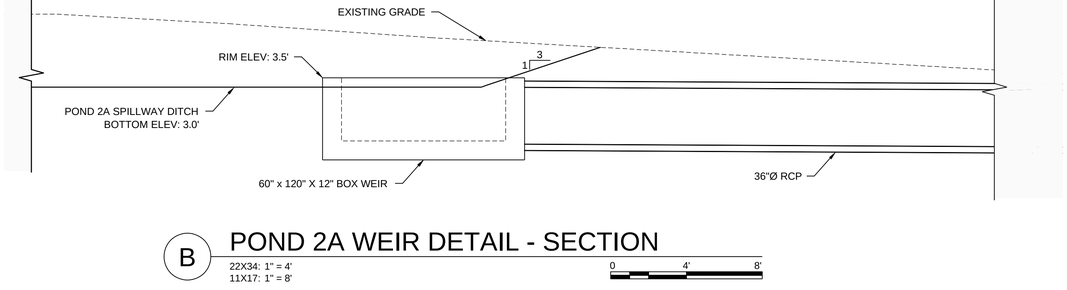
0 4' 8'



POND 2A WEIR DETAIL - PLAN

22X34: 1" = 10'
11X17: 1" = 20'

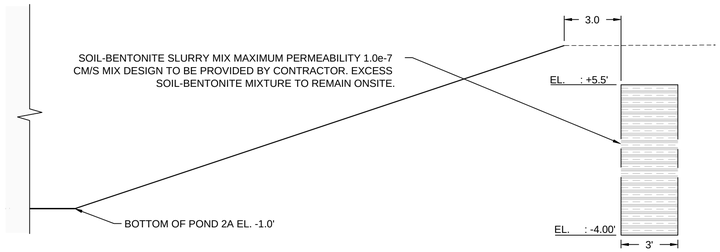
0 10' 20'



B POND 2A WEIR DETAIL - SECTION

22X34: 1" = 4'
11X17: 1" = 8'

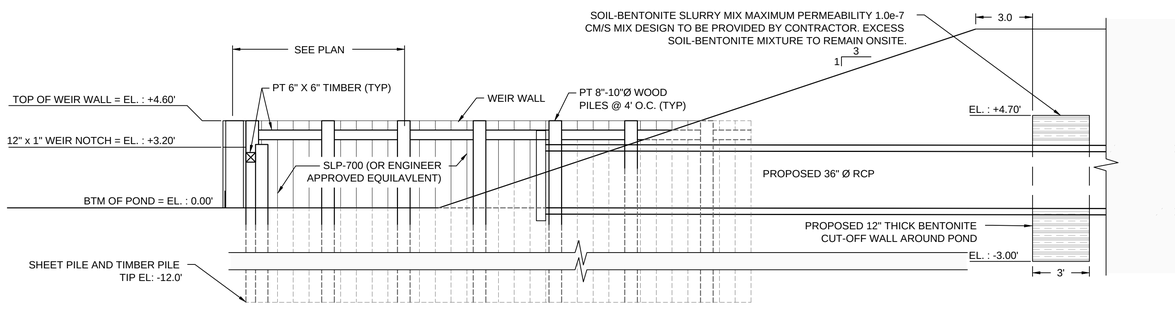
0 4' 8'

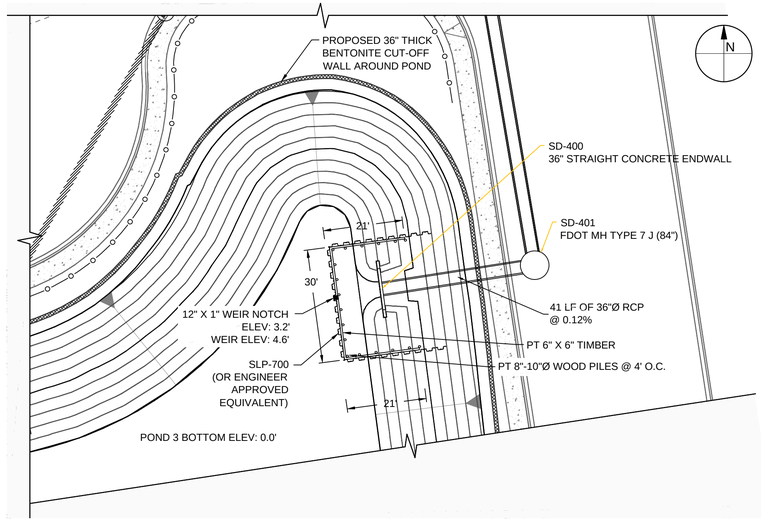


D POND 2A WEIR TYP BENTONITE WALL DETAIL

22X34: 1" = 4'
11X17: 1" = 8'

0 4' 8'





POND 3 WEIR DETAIL - PLAN

22X34: 1" = 20'
11X17: 1" = 40'

0 20' 40'

C POND 3 WEIR DETAIL - SECTION

22X34: 1" = 4'
11X17: 1" = 8'

0 4' 8'

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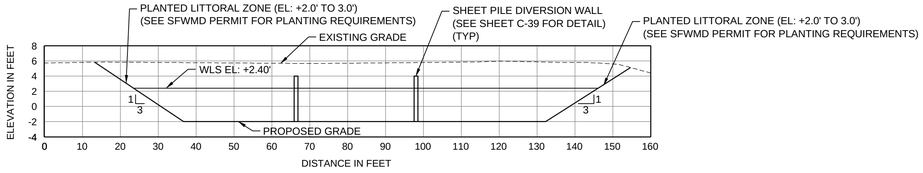
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DETAILS 3

C-39

SHEET 40 OF 49

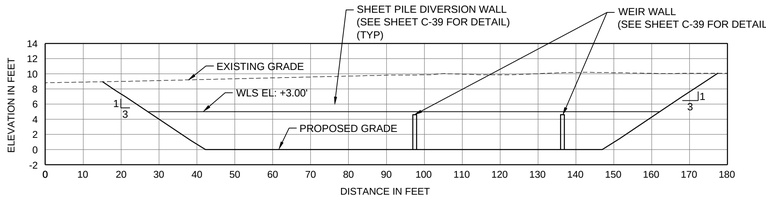
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RETENTION POND 1A CROSS SECTION

22X34: 1" = 20'
11X17: 1" = 40'
VERT. SCALE: 1" = 10' (22x34)
VERT. SCALE: 1" = 20' (11x17)

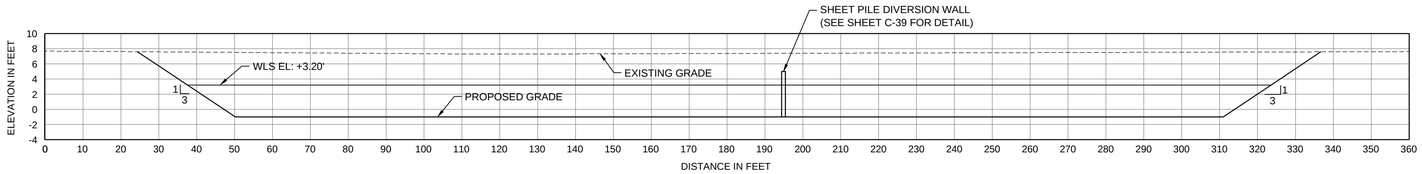
0 20 40'



RETENTION POND 2A CROSS SECTION

22X34: 1" = 20'
11X17: 1" = 40'
VERT. SCALE: 1" = 10' (22x34)
VERT. SCALE: 1" = 20' (11x17)

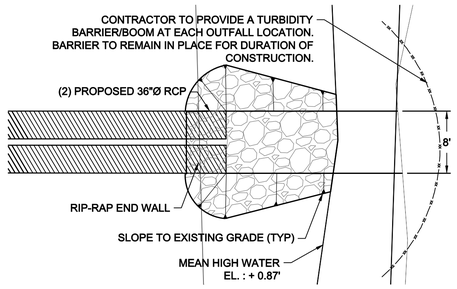
0 20 40'



RETENTION POND 3 CROSS SECTION

22X34: 1" = 20'
11X17: 1" = 40'
VERT. SCALE: 1" = 10' (22x34)
VERT. SCALE: 1" = 20' (11x17)

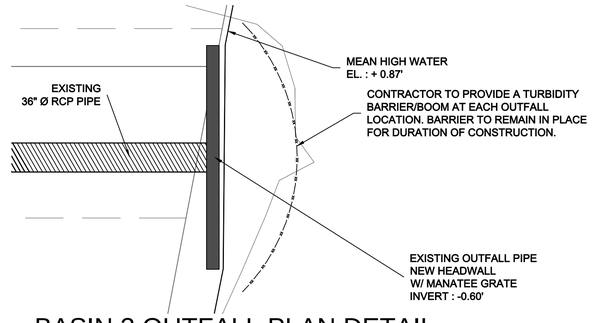
0 20 40'



BASIN 2 OUTFALL PLAN DETAIL

22X34: 1" = 10'
11X17: 1" = 20'

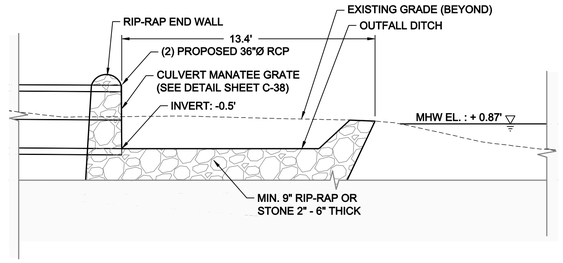
0 10 20'



BASIN 3 OUTFALL PLAN DETAIL

22X34: 1" = 10'
11X17: 1" = 20'

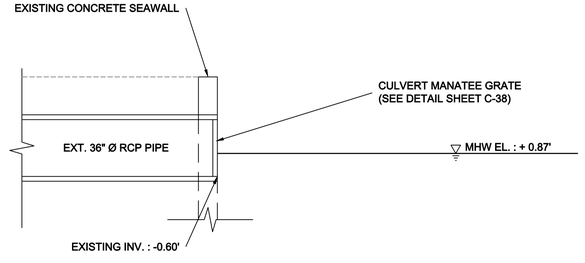
0 10 20'



BASIN 2 OUTFALL SECTION DETAIL

22X34: 1" = 4'
11X17: 1" = 8'

0 4 8'



BASIN 3 OUTFALL SECTION DETAIL

22X34: 1" = 4'
11X17: 1" = 8'

0 4 8'

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CERTIFICATE OF AUTHORIZATION # 4815

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PROJECT TITLE

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CHECKED	AF
REVIEWED	MPW
SCALE	AS SHOWN

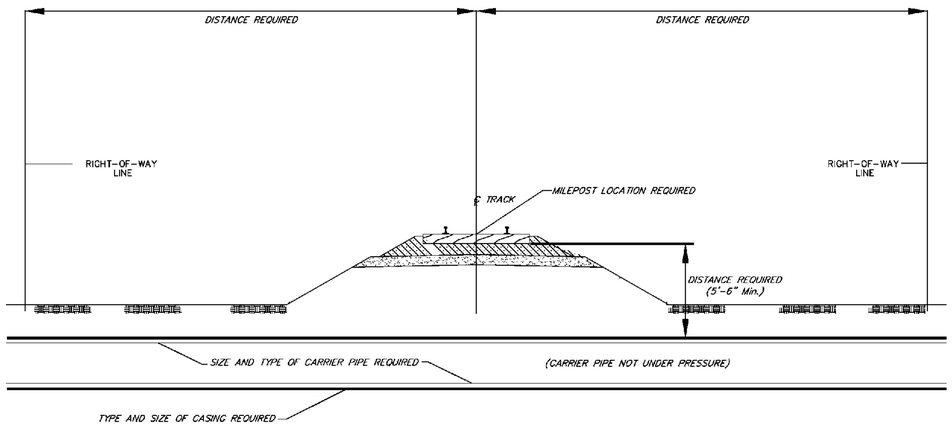
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POND CROSS SECTIONS

C-40

SHEET 41 OF 49

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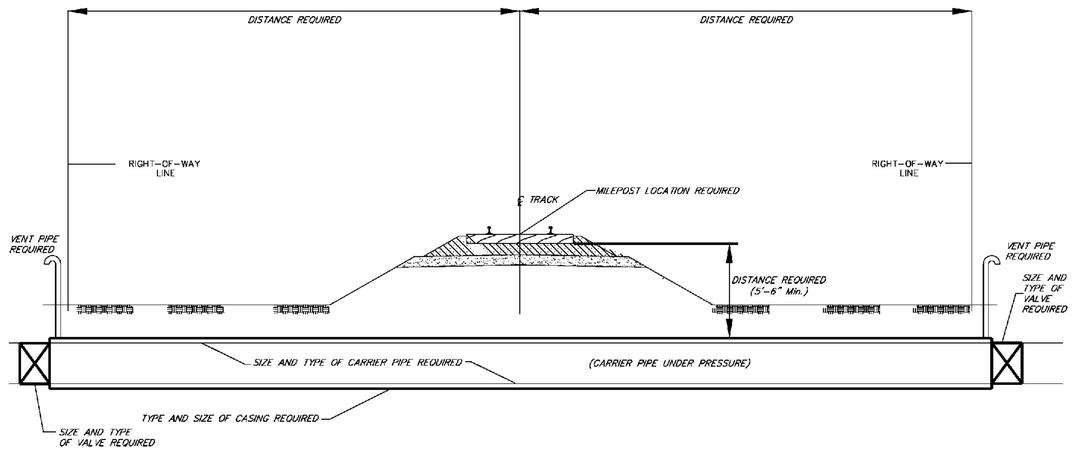


GENERAL NOTES

1. PVC WILL NOT BE PERMITTED AS CASING OR CARRIER PIPE ON RAILROAD RIGHT-OF-WAY
2. CITY, COUNTY,STATE AND RAILROAD MILEPOST LOCATION REQUIRED.
3. IF HDPE PIPE IS USED, IT MUST BE SCHEDULE 40 AND MAY ONLY BE USED FOR DIRECTIONAL BORE. A DISTANCE OF 10' MEASURED FROM BOTTOM OF TIE TO TOP OF PIPE IS REQUIRED.
4. NO WORK WILL BE PERMITTED ON RAILROAD RIGHT-OF-WAY WITHOUT A FLAGMAN.

FLORIDA EAST COAST RAILWAY ENGINEERING SERVICES STANDARDS REFERENCE MANUAL	Issue Date: 06-29-2009	Revised Date: 06-29-2009	The material and equipment shown herein must meet or exceed all quality requirements. Any deviation from these standards must be submitted in writing and approved by the Railroad Director of Engineering Services prior to use.
	Authorized: Director Engineering Services		

MISCELLANEOUS	INFORMATION REQUIRED FOR TYPICAL JACK & BORE (CARRIER PIPE NOT UNDER PRESSURE)	ES8090.5
SERIES 8000		SH. 1 OF 1



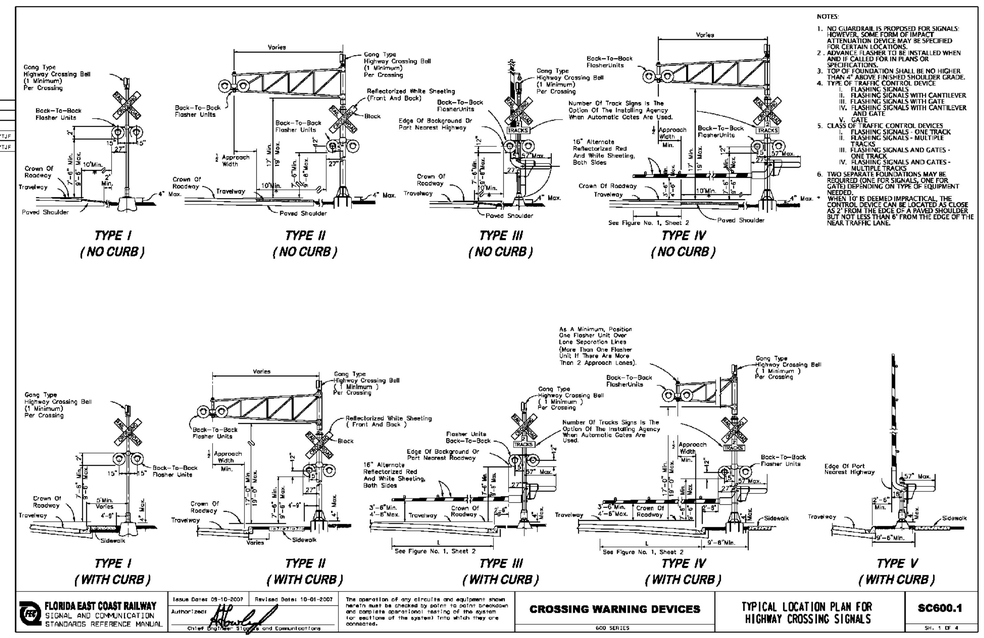
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MISCELLANEOUS	INFORMATION REQUIRED FOR TYPICAL JACK & BORE (CARRIER PIPE UNDER PRESSURE)	ES8090.6
SERIES 8000		SH. 1 OF 1

FILE
SC600.1
REVISIONS
09-10-2007 SME/TJF
10-01-2007 SME/TJF



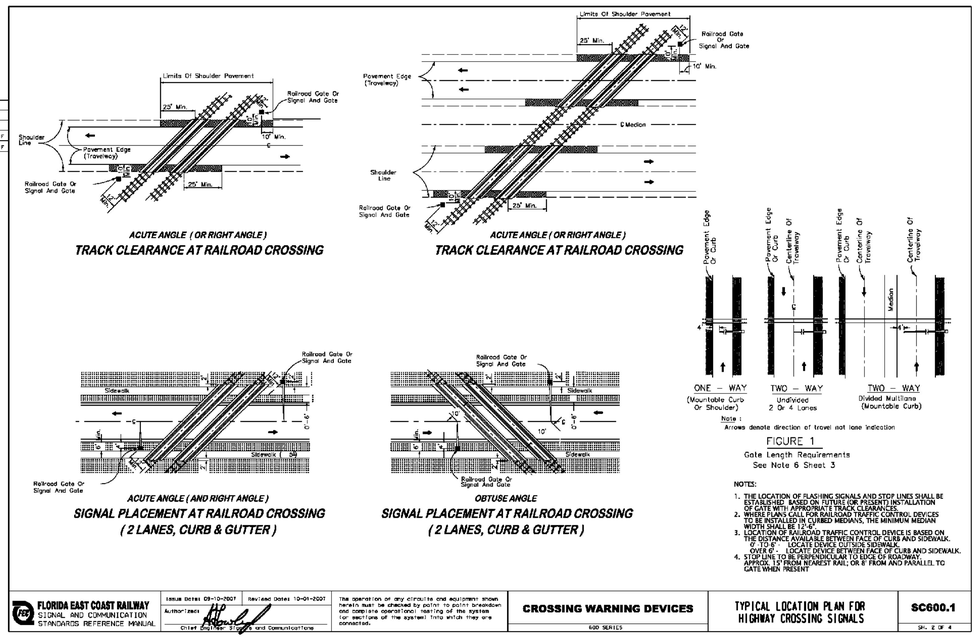
NOTES:

1. NO GUARDRAIL IS PROPOSED FOR SIGNALS; HOWEVER, SOME FORM OF IMPACT ATTENUATION DEVICE MAY BE SPECIFIED FOR CERTAIN LOCATIONS.
2. ADVANCE FLASHER TO BE INSTALLED WHEN AND IF CALLED FOR IN PLANS OR SPECIFICATIONS.
3. TOP OF FOUNDATION SHALL BE NO HIGHER THAN 4" ABOVE FINISHED SHOULDER GRADE.
4. TYPE OF TRAFFIC CONTROL DEVICE
   - I. FLASHING SIGNALS
   - II. FLASHING SIGNALS WITH CANTILEVER
   - III. FLASHING SIGNALS WITH GATE
   - IV. FLASHING SIGNALS WITH CANTILEVER AND GATE
   - V. GATE
5. CLASS OF TRAFFIC CONTROL DEVICES
   - I. FLASHING SIGNALS - ONE TRACK
   - II. FLASHING SIGNALS - MULTIPLE TRACKS
   - III. FLASHING SIGNALS AND GATES - ONE TRACK
   - IV. FLASHING SIGNALS AND GATES - MULTIPLE TRACKS
6. TWO SIGNALS FOUNDATIONS MAY BE REQUIRED ONE FOR SIGNALS, ONE FOR GATES DEPENDING ON TYPE OF EQUIPMENT NEEDED.
7. WHEN IT IS DEEMED IMPRACTICAL THE CANTILEVER SIGNAL MAY BE LOCATED AS CLOSE AS 2' FROM THE EDGE OF A PAVED SHOULDER, BUT NOT LESS THAN 6' FROM THE EDGE OF THE NEAR TRAFFIC LANE.

FLORIDA EAST COAST RAILWAY SIGNAL AND COMMUNICATION STANDARDS REFERENCE MANUAL	Issue Dates: 09-10-2007	Revised Dates: 10-01-2007	The operation of any circuits and equipment shown herein must be checked by point to point breakdown and complete operational testing of the system for sections of the system/ time which they are connected.
	Authorized: Chief Engineer Signals and Communications		

CROSSING WARNING DEVICES	TYPICAL LOCATION PLAN FOR HIGHWAY CROSSING SIGNALS	SC600.1
600 SERIES		SH. 1 OF 4

FILE
SC600.1
REVISIONS
09-10-2007 SME/TJF
10-01-2007 SME/TJF



Note : Arrows denote direction of travel not lane indication

FIGURE 1
Gate Length Requirements
See Note 6 Sheet 3

NOTES:

1. THE LOCATION OF FLASHING SIGNALS AND STOP LINES SHALL BE ESTABLISHED BASED ON FUTURE (OR PRESENT) INSTALLATION OF GATE WITH APPROPRIATE TRACK CLEARANCES.
2. WHERE PLANS CALL FOR RAILROAD TRAFFIC CONTROL DEVICES TO BE INSTALLED IN CURBED MEDIANS, THE MINIMUM MEDIAN WIDTH SHALL BE 6'.
3. MOUNTING OF RAILROAD TRAFFIC CONTROL DEVICE IS BASED ON THE DISTANCE AVAILABLE BETWEEN FACE OF CURB AND SIDEWALK.
   - 0' TO 6' - LOCATE DEVICE OUTSIDE SIDEWALK
   - OVER 6' - LOCATE DEVICE BETWEEN FACE OF CURB AND SIDEWALK.
4. STOP LINE TO BE PERPENDICULAR TO EDGE OF ROADWAY, APPROX. 15' FROM NEAREST RAIL OR 8' FROM AND PARALLEL TO GATE WHEN PRESENT

FLORIDA EAST COAST RAILWAY SIGNAL AND COMMUNICATION STANDARDS REFERENCE MANUAL	Issue Dates: 09-10-2007	Revised Dates: 10-01-2007	The operation of any circuits and equipment shown herein must be checked by point to point breakdown and complete operational testing of the system for sections of the system/ time which they are connected.
	Authorized: Chief Engineer Signals and Communications		

CROSSING WARNING DEVICES	TYPICAL LOCATION PLAN FOR HIGHWAY CROSSING SIGNALS	SC600.1
600 SERIES		SH. 2 OF 4

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CERTIFICATE OF AUTHORIZATION # 4815

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CHECKED	AF
REVIEWED	MPW
SCALE	AS SHOWN

DRAWING TITLE

FEC RAILROAD DETAILS

C-41

SHEET 42 OF 49

FLORIDA EAST COAST GENERAL NOTES

1. THE PROJECT ROADWAY AT GRADE CROSSINGS SHOULD BE IDENTIFIED ON ALL APPLICABLE PLANS (INCLUDING, BUT NOT LIMITED TO GENERAL, SCHEMATIC, SITE, FOUNDATION, PAVEMENT MARKING, SIGNAGE PLANS) AS FOLLOWS:

   NORTH 2ND STREET
   ROADWAY DESIGN STA. 0+60 / 1+75 / 16+07
   FLORIDA EAST COAST RAILWAY (FEC)
   FEC VAL-MAP STA. 12714+84.3
   NORTH 2ND STREET / AVENUE H / AVENUE M
   AAR\DOT# 272233W
   RR MP: 240+4160'

2. ROADWAY STATION 0+60 / 1+75 / 16+07 IS TO BE VERIFIED BY THE ROADWAY AUTHORITY. THE ROADWAY DESIGN STATION IS THE POINT OF INTERSECTION OF THE CENTERLINE OF NORTH 2ND STREET WITH THE CENTERLINE OF THE MAINLINE NORTHBOUND TRACK (TO BE OBTAINED FROM THE FEC TIME TABLE).

3. PRIOR TO ENTERING INTO, OR WORKING ON THE RAILWAY'S RIGHT-OF-WAY, THE ROADWAY CONTRACTOR WILL NEED TO CONTACT FLORIDA SUNSHINE AT 1-800-432-4770 FOR UTILITY LOCATES, AS THE ROADWAY CONTRACTOR(S) WILL BE WORKING AROUND LIVE FIBER-OPTIC CABLES AT THIS LOCATION. THE RAILWAY'S SIGNAL CABLES ARE NOT LISTED WITH SUNSHINE AND REQUIRE A SEPARATE LOCATE. CALL 1-800-342-1131 EXT. 2377 AND SELECT OPTION 1 TO SCHEDULE A SIGNAL CABLE LOCATE. CALL THE SAME NUMBER, 1-800-342-1131 EXT. 2377, AND SELECT OPTION 2 FOR A WATCHMAN. THE WATCHMAN WILL HAVE TO BE SCHEDULED 72 HOURS IN ADVANCE OF THE START DATE FOR THE WORK. TO MAINTAIN A SAFE WORKING ENVIRONMENT, A WATCHMAN WILL HAVE TO BE PRESENT ANYTIME THE ROADWAY CONTRACTOR(S) ARE WORKING WITHIN THE RAILWAY'S RIGHT-OF-WAY. THE ROADWAY CONTRACTOR WILL NEED TO PROVIDE PROOF OF INSURANCE IN THE AMOUNTS REQUIRED BY THE FEC AT THE TIME OF CONSTRUCTION.

4. ALL PERSONS WORKING WITHIN THE RAILWAY'S RIGHT-OF-WAY MUST HAVE VALID ROADWAY WORKER PROTECTION CERTIFICATIONS IN PLACE AND MUST ADHERE TO ALL THE RULES AND REGULATIONS REGARDING THAT CERTIFICATION. THIS INCLUDES THE USE OF PERSONAL PROTECTION EQUIPMENT (PPE). PPE INCLUDES THE FOLLOWING ITEMS:
   A. ORANGE HARD HAT WITH REFLECTIVE BAND.
   B. SAFETY GLASSES WITH SIDE PROTECTION.
   C. ORANGE SAFETY VEST.
   D. STEEL TOED BOOTS WITH MINIMUM 6" CUFF AND NON-SLIP TREAD.
   E. HEARING PROTECTION AS NEEDED.
   F. PLEASE PLACE THESE NOTES ON THE PLANS.

5. DUE TO THE UNKNOWN SCHEDULE OF THE ROADWAY AUTHORITY'S CONTRACTOR, IT IS NOT POSSIBLE TO ESTIMATE THE TIME A WATCHMAN WILL BE REQUIRED. WATCHMAN SERVICES ARE CHARGED ON A "PER DAY" RATE, AND INVOICED DIRECTLY TO THE ROADWAY AUTHORITY AT THE COMPLETION OF THE PROJECT. AS INFORMATION, THE COST FOR A WATCHMAN IS APPROXIMATELY $1000.00 DOLLARS A DAY. THE ROADWAY AUTHORITY MUST ESTIMATE THE NUMBER OF DAYS A WATCHMAN WILL BE REQUIRED AND BUDGET FOR THIS COST.

6. THE RAILWAY RESERVES THE RIGHT TO COMMENT /APPROVE THE ROADWAY AUTHORITY CONSTRUCTION PLANS AFFECTING THE RAILWAY PROPERTY OR FACILITIES ANY TIME PRIOR TO THE START OF CONSTRUCTION REGARDLESS IF PREVIOUS CONSTRUCTION PLAN APPROVAL HAS BEEN GRANTED.

7. THIS RESERVATION WILL BE INVOKED ONLY IF THE RAILWAY HAS EITHER BY INTERNAL POLICY OR MANDATE OF LAW REVISED ITS STANDARDS AS APPLICABLE TO THIS PROJECT. THE RAILWAY SHALL NOTIFY THE ROADWAY AUTHORITY OF CHANGES AS FAR AS POSSIBLE IN ADVANCE OF CONSTRUCTION.

8. THE ROADWAY AUTHORITY SHALL, PRIOR TO THE START OF CONSTRUCTION, VERIFY WITH THE RAILWAY IF ANY REVISIONS TO STANDARDS ARE APPLICABLE TO THIS PROJECT.

9. THE FOLLOWING ITEMS WILL APPLY TO ALL WORK PERFORMED WITHIN RAILWAY PROPERTY:

10. ALL MOVEMENTS OF EQUIPMENT WITHIN RAILWAY PROPERTY MUST BE COORDINATED WITH THE RAILWAY WATCHMAN.

11. DURING TRAIN MOVEMENTS THROUGH THE PROJECT LOCATION, VEHICLES, EQUIPMENT, AND PERSONNEL WILL NOT BE ALLOWED TO OPERATE.

12. ANY DAMAGE CAUSED BY THE ROADWAY WORK TO THE TRACK OR RAILWAY PROPERTY WILL REQUIRE REPAIR IMMEDIATELY UPON NOTIFICATION FROM THE RAILWAY OR THEIR DESIGNATED PERSONNEL OR CONTRACTOR. IF THE DAMAGE AFFECTS THE TRACK, TRACK STRUCTURE, RAILWAY FACILITIES, OR TRAIN OPERATIONS AS DETERMINED BY THE RAILWAY, THE REPAIRS WILL BE PERFORMED BY THE RAILWAY AT THE ROADWAY AUTHORITIES EXPENSE INCLUDING ALL ASSOCIATED COSTS OF DELAYS OF THE RAILWAY.

    JOSEPH (LESLIE) SCHONDER -PUBLIC PROJECTS ENGINEER
    FLORIDA EAST COAST RAILWAY
    7150 PHILIPS HIGHWAY
    JACKSONVILLE, FLORIDA 32256
    904-279-3196
    904-669-1144
    E-MAIL: LESLIE.SCHONDER@FECRWY.COM

13. IF ANY OVERHEAD OR UNDERGROUND UTILITY CROSSINGS ARE INVOLVED AS PART OF THIS ROADWAY PROJECT, THOSE UTILITIES MAY REQUIRE INDIVIDUAL UTILITY LEASE AGREEMENTS BE FILED WITH THE RAILWAY. THEREFORE PLEASE CONTACT THE FOLLOWING PERSONNEL TO COMPLETE NEW UTILITY LEASE AGREEMENT REQUIREMENTS IF UTILITY CROSSINGS ARE PROPOSED:

    BRUCE L. BAKER
    4601 TOUCHTON ROAD EAST
    BUILDING 300, SUITE 3200
    JACKSONVILLE, FL 32246
    904-565-4128
    E-MAIL: BRUCE.BAKER@FLAGLERDEV.COM

14. THE FOLLOWING RESTRICTION OF THE MASONRY CONSTRUCTION MUST BE ADHERED TO:

15. "CURB & GUTTER, SIDEWALK, OR ANY OTHER MASONRY CONSTRUCTION SHALL NOT BE CONSTRUCTED WITHIN 12 FEET OF THE CENTERLINE OF THE NEAREST RAILWAY TRACK AS MEASURED PERPENDICULAR TO THAT TRACK".

16. THE SIDEWALK, CURBS, AND MEDIANS WILL BE REQUIRED TO END AT THE 12 FOOT DISTANCE. ASPHALT PAVEMENT WILL BE UTILIZED BY THE ROADWAY IN THE SPACE BETWEEN THE MASONRY CONSTRUCTION ENDING AND THE CROSSING PANEL SECTIONS. ADDITIONALLY THE MEDIAN TREATMENT MUST BE IN COMPLIANCE WITH STANDARDS.

17. SEE STANDARD DRAWINGS SC600.1, SC620.1, AND SC650.1 FOR DETAILS.

18. PLEASE NOTE THAT ALL PROPOSED CONDUITS UNDERNEATH THE EXISTING RAILROAD TRACKS, IF INSTALLED BY JACK AND BORE METHOD, SHALL PROVIDE A MINIMUM VERTICAL COVER OF 5.5 FEET BELOW THE BOTTOM OF TIE TO TOP OF CASING AND EXTEND TO THE LIMITS OF THE RAILWAY RIGHT-OF-WAY AS SHOWN IN THE STANDARDS REFERENCED BELOW.

19. PLEASE SEE STANDARD DRAWINGS ES8090.5 AND ES8090.6 AND GENERAL SPECIFICATIONS FOR SUB-GRADE AND ABOVE GRADE UTILITY CROSSINGS OF RAILWAY RIGHT-OF-WAY FOR DETAILS.

20. PLEASE NOTE THAT ALL PROPOSED CONDUITS UNDERNEATH THE EXISTING RAILROAD TRACKS, IF INSTALLED BY THE DIRECTIONAL BORE METHOD, SHALL PROVIDE A MINIMUM VERTICAL COVER OF 10 FEET BELOW THE BOTTOM OF TIE TO TOP OF CONDUIT OR CASING AND EXTEND TO 25 FEET HORIZONTALLY BEYOND THE CENTERLINE OF THE TRACK (MEASURED PERPENDICULAR TO TRACK) BEFORE TRANSITIONING TO A 5 FOOT MINIMUM VERTICAL COVER THROUGHOUT THE REMAINDER OF THE RAILWAY RIGHT-OF-WAY AS SHOWN IN THE STANDARDS REFERENCED BELOW.

21. PLEASE SEE STANDARD DRAWINGS ES8090.4 FOR DETAILS.

22. IF DIRECTIONAL BORE CONDUIT INSTALLED FOR USE OF TRAFFIC SIGNAL INTERCONNECTION CABLE:

23. SEE SPECIFICATIONS FOR THE INSTALLATION OF TRAFFIC SIGNAL SYNCHRONIZATION ALONG FLORIDA EAST COAST RAILWAY RIGHT-OF-WAY

24. THE FOLLOWING ITEMS SHOULD BE SHOWN ON ALL APPLICABLE PLANS FOR CLARITY:

25. PLEASE SHOW AND IDENTIFY THE ACTUAL RAILWAY TRACKS THROUGH ALL CROSSINGS FOR A MINIMUM DISTANCE OF 150 FEET (ALONG THE TRACKS) ON EACH SIDE OF THE CENTERLINE OF THE ROADWAY.

26. RAILWAY RIGHT-OF-WAY SHOULD BE SHOWN, LABELED, AND DIMENSIONED FOR CLARITY. PLEASE SHOW THE ACTUAL RAILWAY RIGHT-OF-WAY AND NOT AN APPROXIMATE LOCATION. PLEASE LABEL THE RAILWAY RIGHT-OF-WAY AS "FEC R/W" OR "FEC ROW". IDENTIFY CROSSING LOCATIONS APPROPRIATELY (SEE COMMENT NUMBER 1).

DRAINAGE REQUIREMENTS:

28. NO STORM WATER MAY BE DIRECTED TOWARDS OR ALLOWED TO STAND OR POND WITHIN THE RAILWAY RIGHT-OF-WAY. EARTH SWALES OR CONCRETE OR ASPHALT GUTTERS SHALL BE USED TO CONVEY STORM WATER TO MUNICIPAL OR PRIVATE COLLECTION SYSTEMS OR STORAGE PONDS OUTSIDE THE RAILWAY RIGHT-OF-WAY.

29. IF THE ROADWAY AUTHORITY WORK WILL AFFECT OR REQUIRE MODIFICATION TO ANY EXISTING RAILWAY DRAINAGE FACILITIES THROUGH OR PARALLEL TO THE WORK, IT WILL BE THE ROADWAY AUTHORITY'S RESPONSIBILITY TO PROPERLY DESIGN AND PROVIDE A DRAINAGE SYSTEM TO ACCOMMODATE THE EXISTING DRAINAGE, WHILE NOT PROMOTING OR DIRECTING ANY ADDITIONAL VOLUME OF STORM WATER ONTO OR TOWARDS THE RAILWAY RIGHT-OF-WAY.

30. NO DRAINAGE STRUCTURES (I.E. CATCH BASINS, MANHOLES, JUNCTION BOXES, ETC.) SHALL BE PLACED WITHIN THE RAILWAY RIGHT-OF-WAY.

31. ALL STORM WATER SHALL FLOW AWAY FROM THE RAILWAY CROSSING SURFACE AND TRACKS STRUCTURE. AT NO TIME SHALL ANY STORM WATER BE DIRECTED TOWARDS THE RAILWAY CROSSING SURFACE OR TRACK STRUCTURE.

32. NO TRAFFIC LANE SHIFTS SHALL BE ALLOWED WITHIN THE RAILWAY RIGHT-OF-WAY DURING CONSTRUCTION WITHOUT PRIOR AUTHORIZATION FROM THE RAILWAY'S SIGNAL DEPARTMENT PERSONNEL. THEREFORE THE FOLLOWING NOTE IS TO BE ADDED TO THE PLANS, AND THE MAINTENANCE OF TRAFFIC PLANS SHALL REFLECT THIS REQUIREMENT.

33. THE ROADWAY AUTHORITY, OR DESIGNATED CONTRACTOR, SHALL NOT BE ALLOWED TO PERFORM TEMPORARY LANE CLOSURES, LANE SHIFTS, OR DETOUR ROUTES WITHIN THE RAILWAY RIGHT-OF-WAY WITHOUT PRIOR AUTHORIZATION FROM THE RAILWAY'S SIGNAL DEPARTMENT PERSONNEL. THE ROADWAY AUTHORITY WILL BE REQUIRED TO CONTACT THE FOLLOWING RAILWAY PERSONNEL TO COORDINATE THIS PHASE OF THE PROJECT.

    ANDY FOWLER - CHIEF ENGINEER SIGNALS AND COMMUNICATIONS
    FLORIDA EAST COAST RAILWAY
    7150 PHILIPS HIGHWAY
    JACKSONVILLE, FLORIDA 32256
    904-279-3182
    904-669-1199
    E-MAIL:ANDY.FOWLER@FECRWY.COM

    OR FOR RAILWAY MILEPOST 0+0000' TO 281+4096'

    JAMES POWELL - SIGNAL SUPERVISOR NORTH END
    FLORIDA EAST COAST RAILWAY
    972 DEER CHASE DRIVE
    AUGUSTINE, FLORIDA 32086
    904-669-2888
    E-MAIL:JAMES.POWELL@FECRWY.COM

TAYLOR ENGINEERING INC.
10151 DEERWOOD PARK BLVD.
BLDG. 300, SUITE 300
JACKSONVILLE, FLORIDA 32256
(904)-731-7040
1675 PALM BEACH LAKES, SUITE 210
WEST PALM BEACH, FLORIDA 33401
(561)-640-7310
CERTIFICATE OF AUTHORIZATION # 4815

SEAL

MICHAEL P. WHELAN P.E.# 55496

PROJECT TITLE

NORTH 2ND STREET
ROADWAY IMPROVEMENTS
ST. LUCIE COUNTY, FLORIDA

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NO	ZONE	REVISIONS / SUBMISSIONS	DATE

PROJECT NO	C2013-064
DATE	JULY 2014
DESIGNED	HCV
DRAWN	RLJ
CHECKED	AF
REVIEWED	MPW
SCALE	AS SHOWN

DRAWING TITLE

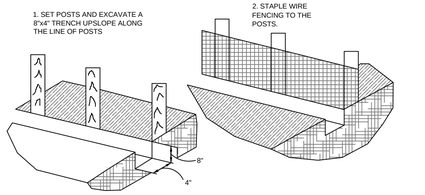
FEC RAILROAD NOTES

C-42

SHEET 43 OF 49

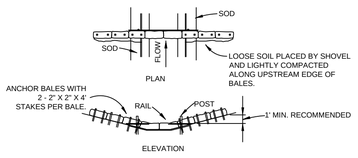
EROSION CONTROL AND GRASSING/SODDING NOTES:

1. THE CONTRACTOR SHALL IMPLEMENT AND MAINTAIN EROSION CONTROL MEASURES AS NECESSARY TO COMPLY WITH ALL FEDERAL, STATE, AND LOCAL REGULATIONS AND COMPLY WITH STATE WATER QUALITY CRITERIA FOR STORMWATER DISCHARGE. EROSION CONTROL MEASURES INCLUDE BUT ARE NOT LIMITED TO TURBIDITY SCREENS, MULCHING, HAY BALES, AND SILT FENCE. IF A WATER QUALITY VIOLATION OCCURS, THE CONTRACTOR SHALL BE WHOLLY RESPONSIBLE FOR ALL DAMAGE AND ALL COSTS WHICH MAY RESULT INCLUDING LEGAL FEES, CONSTRUCTION COSTS, AND FINES.
2. DISTURBED AREAS NOT INCLUDING ROADWAYS AND WETLANDS SHALL BE SEEDED/GRASSED, FERTILIZED, MULCHED, AND MAINTAINED IN ACCORDANCE WITH CITY, COUNTY, STATE, AND FEDERAL REQUIREMENTS UNTIL A PERMANENT VEGETATIVE COVER IS ESTABLISHED.
3. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ESTABLISHING A PERMANENT STAND OF SOD AND/OR GRASS AT ALL DISTURBED AREAS PER CITY STANDARDS AND SPECIFICATIONS AND MEETING THE NPDES FINAL STABILIZATION REQUIREMENTS.
4. EROSION CONTROL MEASURES SHALL BE MAINTAINED FOR THE ENTIRE DURATION OF THE PROJECT OR UNTIL SODDING AND/OR GRASS IS ESTABLISHED.
5. EROSION CONTROL MEASURES SHALL BE PLACED TO CONTAIN ALL POINTS OF DISCHARGE TO SURFACE WATERS OR WETLANDS INCLUDING CURB INLETS, DITCH BOTTOM INLETS, DITCHES, AND DOWNSTREAM PORTIONS OF STREAMS AND TIDAL WATERS ADJACENT TO CONSTRUCTION.
6. 48 HOURS PRIOR TO COMMENCEMENT OF CONSTRUCTION, THE CONTRACTOR WILL SUBMIT A NPDES PERMIT TO FDEP.
7. THE CONTRACTOR SHALL WRAP STORM GRATES IN FILTER FABRIC TO PREVENT SEDIMENTATION OF THE STORM SEWER SYSTEM. CONTRACTOR SHALL MAINTAIN THE FILTER FABRIC UNTIL THE ASPHALT/CONCRETE PAVEMENT IS PLACED.
8. THE SITE CONTRACTOR IS RESPONSIBLE FOR REMOVING THE TEMPORARY EROSION AND SEDIMENT CONTROL DEVICES AFTER COMPLETION OF CONSTRUCTION AND ONLY WHEN AREAS HAVE BEEN STABILIZED.
9. SILT FENCES AND FILTER BARRIERS SHALL BE INSPECTED IMMEDIATELY AFTER EACH RAINFALL AND AT LEAST DAILY DURING PROLONGED RAINFALL. ANY REQUIRED REPAIRS SHALL BE MADE IMMEDIATELY.
10. ALL SLOPES 3:1 OR STEEPER SHALL RECEIVE STAKED SOLID SOD.



CONSTRUCTION DETAILS FOR SILT FENCES

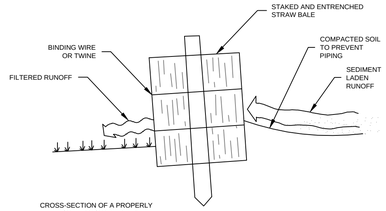
S: A: E: N.T.S.



SPACING: BALE BARRIERS FOR PAVED DITCHES SHOULD BE SPACED IN ACCORDANCE WITH CHART I, SHEET 1 OF 3, INDEX NO. 102 OF F.D.O.T. ROADWAY AND TRAFFIC DESIGN STANDARDS.

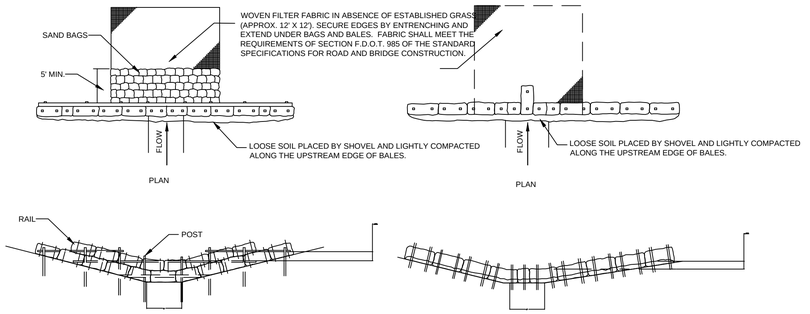
BARRIER FOR PAVED DITCH

S: A: E: N.T.S.



STAKED HAY BALE

S: A: E: N.T.S.



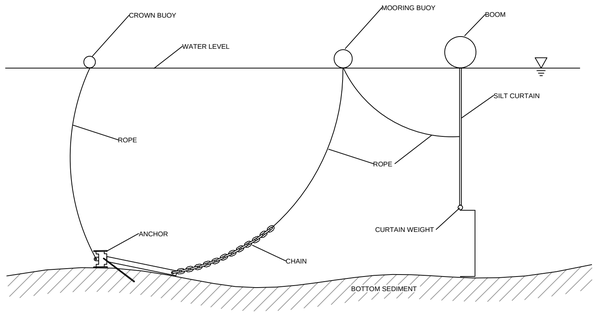
APPLICATION AND SPACING OF TYPES I & II HAY BALE BARRIERS SHELL BE IN ACCORDANCE WITH SHEET 1 OF 3, F.D.O.T. INDEX NO. 102

TYPE II

HAY BARRIERS TYPE I & II

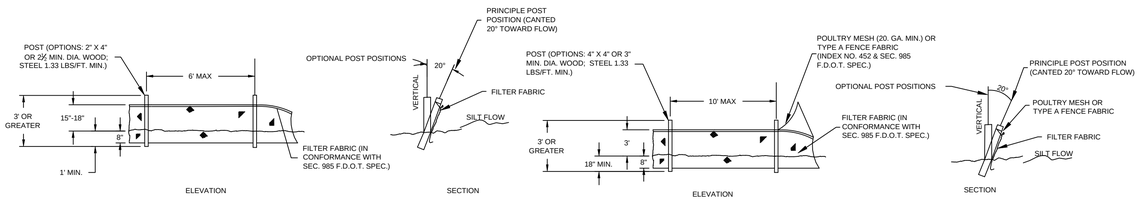
TYPE I

S: A: E: N.T.S.



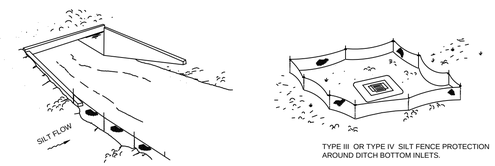
TURBIDITY CURTAIN DETAIL

S: A: E: N.T.S.



TYPE III SILT FENCE

TYPE IV SILT FENCE



TYPE III OR TYPE IV SILT FENCE

DO NOT DEPLOY IN A MANNER THAT SILT FENCES WILL ACT AS A DAM ACROSS PERMANENT FLOWING WATERCOURSES. SILT FENCES ARE TO BE USED AT UPLAND LOCATIONS AND TURBIDITY BARRIERS USED AT PERMANENT BODIES OF WATER.

DITCH INSTALLATION AND SPACING FOR TYPE III & TYPE IV FENCE TO BE IN ACCORDANCE WITH SHEET 1 OF 3, F.D.O.T. INDEX NO. 102.

SILT FENCE TYPE III & IV

S: A: E: N.T.S.

TAYLOR ENGINEERING INC.
10151 DEERWOOD PARK BLVD.
BLDG. 300, SUITE 300
JACKSONVILLE, FLORIDA 32256
(904)-731-7040
1675 PALM BEACH LAKES, SUITE 210
WEST PALM BEACH, FLORIDA 33401
(561)-640-7310
CERTIFICATE OF AUTHORIZATION # 4815

SEAL

MICHAEL P. WHELAN P.E.# 55496

PROJECT TITLE

NORTH 2ND STREET ROADWAY IMPROVEMENTS
CITY OF FORT PIERCE
ST. LUCIE COUNTY, FLORIDA

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1-800-432-4770

NO	ZONE	REVISIONS / SUBMISSIONS	DATE
		REVISED PER SPWMD COMMENTS	7/12/10

PROJECT NO	C2013-064
DATE	JULY 2014
DESIGNED	HCV
DRAWN	RLJ
CHECKED	AF
REVIEWED	MPW
SCALE	AS SHOWN

DRAWING TITLE

SEDIMENT AND EROSION CONTROL

C-43

SHEET 44 OF 49

ANTON, 7/17/2014 10:21:58 AM, x:\sys\Projects\C2008-056 Ft Pierce 2nd Street\Construction\C2008-056-C-Erosion.dwg

Masuen Consulting LLC
Water Resource Consultants
5079 North Dixie Highway, #323
Oakland Park, FL 33334
Telephone (866) 928-1533
Fax (800) 928-1534

lucido & associates
701 E Ocean Blvd., Stuart, Florida 34994 (772) 220-2100, Fax (772) 223-0220
100 Avenue A Suite 2A, Fort Pierce, Florida 34950 (772) 467-1301, Fax (772) 467-1303
827 North Thornton Avenue, Orlando, Florida 32803 (407) 898-9521, Fax (407) 898-9768

SEAL

REG. # 1018
Thomas P. Lucido

PROJECT TITLE

NORTH 2ND STREET
ROADWAY IMPROVEMENTS
CITY OF FORT PIERCE
ST. LUCIE COUNTY, FLORIDA

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PROJECT NO	C2013-064
DATE	APRIL 2014
DESIGNED	JJ
DRAWN	JJ
CHECKED	MAW
REVIEWED	TM
SCALE	AS SHOWN

DRAWING TITLE

IRRIGATION KEY SHEET

IR-1

SHEET 7 OF 52

IR-1
IR-2
IR-3
IR-4
IR-5
IR-6
IR-7
IR-8
IR-9
IR-10

N. 2ND ST.
AVE. H
AVE. M
PORT AVE.
N. INDIAN RIVER DR.
FISHERMAN'S WHARF

0 30' 60' 120'

GRAPHIC SCALE
22X34: 1" = 30'
11X17: 1" = 60'

N

JUDY JENSEN, 7/29/2014 2:15:58 PM, C:\MASUEN DESIGN FILES\LUCIDO FT. PIERCE\North 2nd Street\2014_0108\Landscape_Current_12.18.13 - Standard\2014_01 IR plan.dwg

Masuen Consulting LLC
Water Resource Consultants
5079 North Dixie Highway, #323
Oakland Park, FL 33334
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SEAL

REG. # 1018
Thomas P. Lucido

PROJECT TITLE

NORTH 2ND STREET
ROADWAY IMPROVEMENTS
CITY OF FORT PIERCE
ST. LUCIE COUNTY, FLORIDA

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NO	ZONE	REVISIONS / SUBMISSIONS	DATE

PROJECT NO	C2013-064
DATE	APRIL 2014
DESIGNED	JJ
DRAWN	JJ
CHECKED	MAW
REVIEWED	TM
SCALE	AS SHOWN

DRAWING TITLE

IRRIGATION PLAN

IR-2

SHEET 7 OF 52

SEAWAY DRIVE (SR A1A) - R/W VARIES

CONCRETE TRAFFIC SEPARATOR

0+00

1+00

2+00

3+00

AVENUE G - 25'

MATCHLINE IR-2
MATCHLINE IR-5

NORTH 2nd STREET - 50' R/W

108 "PRIVATE RESIDENCE" 705-0035-0001/4 WARD I. SNYDER 637 N. 2nd STREET

109 "PRIVATE RESIDENCE" 705-0034-0001/4 WARD I. SNYDER 647 N. 2nd STREET

110 "PRIVATE RESIDENCE" 405-0033-0001/7 DENNIS J. HORVATH 651 N. 2ND STREET

111 "PRIVATE RESIDENCE" 705-0022-0001/7 DENNIS J. HORVATH 655 N. 2nd STREET

TRAILER PARK ROAD I

2" SLEEVE
3" SLEEVE
2" SLEEVES
¾"
1"
MAIL BOX
(3) MAIL BOX
12" WOOD POSTS (TYP.)
SIGN POLE
ROAD SIGN
STREET/ STOP SIGN

MAINLINE LOCATION, WHERE SHOWN, IS FOR GRAPHIC CLARITY PURPOSES ONLY. INSTALL AT THE BACK OF CURB, FRONT OF WALK, BACK OF WALK, OR ADJACENT TO OTHER HARDSCAPES TO FACILITATE FUTURE LOCATION AND TO PROTECT FROM DAMAGE. ENSURE MAINLINE IS INSTALLED ACCORDING TO THE IRRIGATION SPECIFICATIONS AND DETAILS.

0 20' 40' 80'

GRAPHIC SCALE
22X34: 1" = 20'
11X17: 1" = 40'

N

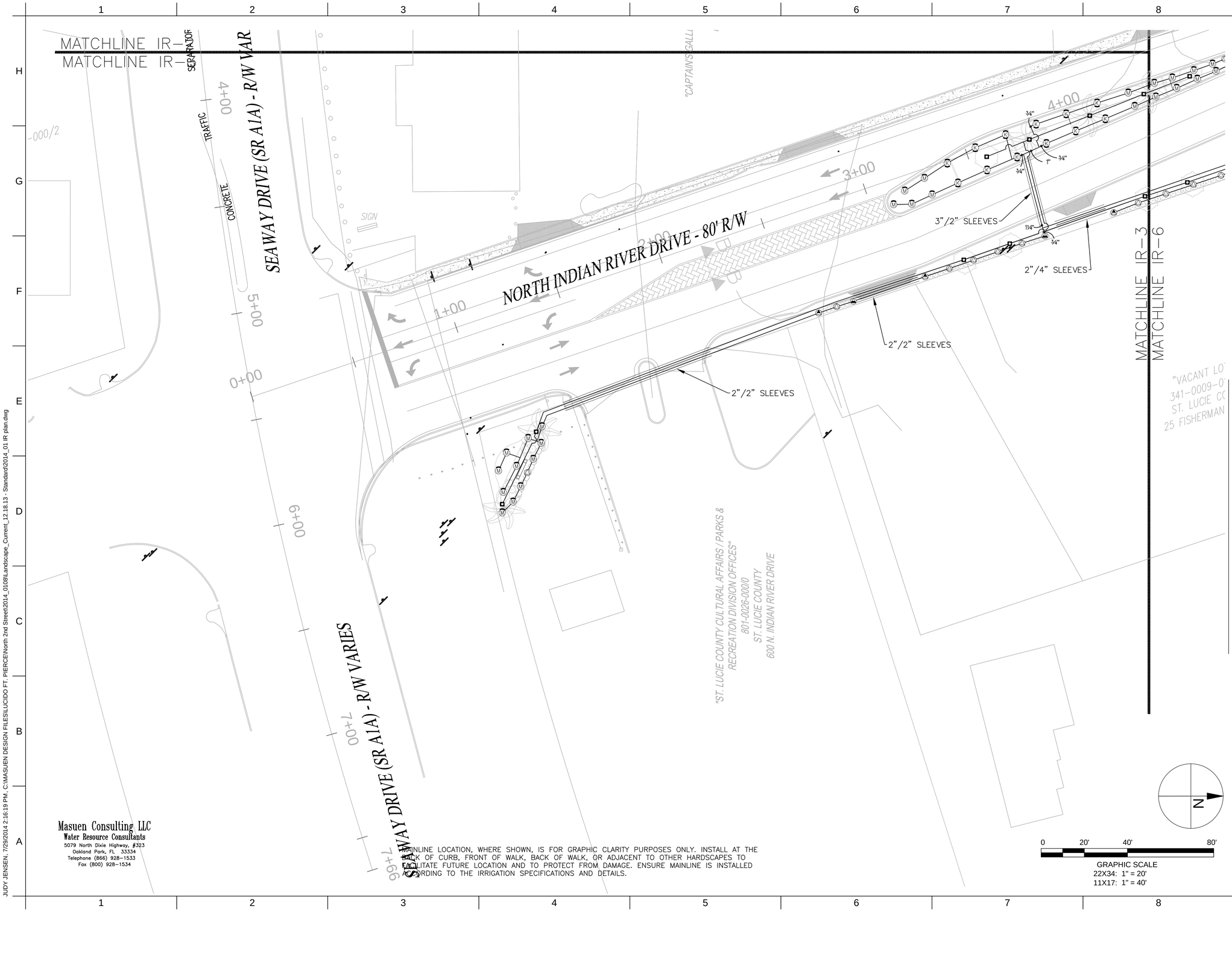
MATCHLINE IR-1
MATCHLINE IR-3

CONCRETE TRAFFIC SEPARATOR

SEAWAY DRIVE (SR A1A) - R/W VARIES

"MAIN STREET GALLEY / RESTAURANT/ THE SHRIMP SPOT" 707 N. 2nd STREET 707-0004 DENNIS J. HORVATH

JUDY JENSEN, 7/29/2014 2:16:10 PM, C:\MASUEN DESIGN FILES\LUCIDO FT. PIERCE\North 2nd Street\2014_0108\Landscape_Current_12.18.13 - Standard\2014_01 IR plan.dwg



GRAPHIC SCALE
22X34: 1" = 20'
11X17: 1" = 40'

MAINLINE LOCATION, WHERE SHOWN, IS FOR GRAPHIC CLARITY PURPOSES ONLY. INSTALL AT THE BACK OF CURB, FRONT OF WALK, BACK OF WALK, OR ADJACENT TO OTHER HARDSCAPES TO FACILITATE FUTURE LOCATION AND TO PROTECT FROM DAMAGE. ENSURE MAINLINE IS INSTALLED ACCORDING TO THE IRRIGATION SPECIFICATIONS AND DETAILS.

Masuen Consulting LLC
Water Resource Consultants
5079 North Dixie Highway, #323
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lucido & associates
701 E Ocean Blvd., Stuart, Florida 34994 (772) 220-2100, Fax (772) 223-0220
100 Avenue A Suite 2A, Fort Pierce, Florida 34950 (772) 467-1301, Fax (772) 467-1303
827 North Thornton Avenue, Orlando, Florida 32803 (407) 898-9521, Fax (407) 898-9768

SEAL

REG. # 1018
Thomas P. Lucido

PROJECT TITLE

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NO	ZONE	REVISIONS / SUBMISSIONS	DATE

PROJECT NO	C2013-064
DATE	APRIL 2014
DESIGNED	JJ
DRAWN	JJ
CHECKED	MAW
REVIEWED	TM
SCALE	AS SHOWN

DRAWING TITLE

IRRIGATION PLAN

IR-3

SHEET 7 OF 52

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US 1 (DIXIE HIGHWAY) - R/W VARIES

1+00

2+00

3+00

3+12

GRAVEL BED
RAILROAD TRACKS
GRAVEL BED

2"/2" SLEEVES

¾"

¾"

1"

"VACANT LOT"
705-0008-00/3
LLOYD BELL
US HIGHWAY 1

114
"SUNRISE CITY BOAT REPAIR"
705-0009-0000
REVOCABLE TRUST OF 2011
CARMEIN BELL
LLOYD BELL JR
9 FISHERMAN'S WHARF

115
"PALMDALE OIL COMPANY"
705-0007-00/6
PALMDALE OIL COMPANY FP, LLC
911 N. 2nd STREET

FEC SPUR LINE

113
"TBOARD MARINE"
019-0003
ES REALTY, LLC
nd STREET

"H" - 66' R/W

MATCHLINE IR-4
MATCHLINE IR-5

N

0 20' 40' 80'

GRAPHIC SCALE
22X34: 1" = 20'
11X17: 1" = 40'

Masuen Consulting LLC
Water Resource Consultants
5079 North Dixie Highway, #323
Oakland Park, FL 33334
Telephone (866) 928-1533
Fax (800) 928-1534

lucido & associates
701 E Ocean Blvd., Stuart, Florida 34994 (772) 220-2100, Fax (772) 223-0220
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827 North Thornton Avenue, Orlando, Florida 32803 (407) 898-9521, Fax (407) 898-9768

SEAL

REG. # 1018
Thomas P. Lucido

PROJECT TITLE

NORTH 2ND STREET
ROADWAY IMPROVEMENTS
CITY OF FORT PIERCE
ST. LUCIE COUNTY, FLORIDA

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Sunshine State
One Call of Florida, Inc.
1-800-432-4770

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IRRIGATION PLAN

IR-4

SHEET 7 OF 52

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MATCHLINE IR-4
MATCHLINE IR-5

MATCHLINE IR-2
MATCHLINE IR-5

MATCHLINE IR-5
MATCHLINE IR-6

"ST. LUCIE COUNTY BOARD MA... 13
BANCSHARES REALTY, 119-0003
65... 2nd STREET

AVENUE "H"

TRAILER PARK ROAD 2

NORTH 2nd STREET - 50' R/W

FISHERMAN'S WHARF - 66' R/W

FEC SPUR LINE

FEC SPUR

RAILROAD TRACKS

GATE

END OF TRACKS

2" SLEEVE
4" SLEEVE
6" SLEEVE
2"/2" SLEEVES
3"/2" SLEEVES
1" CONDUIT

1" POTABLE WATER METER
1-1/4" BACKFLOW PREVENTER (PROVIDED BY FPUA)

RAIN BIRD ESP-LXME 8 STATION CONTROLLER
POLE MOUNTED RAIN SENSOR
SOIL MOISTURE SENSOR INTERFACE
GROUNDING GRID

SOIL MOISTURE SENSOR, INSTALL PER MFG DIRECTION. RUN SENSOR WIRI

A-5	1" 13.5
A-6	1½" 28.9
A-7	1" 16.5
A-8	1" 15.2

"DEBROOKS FISHING CORNER"
341-0003-000/2
DWIGHT DEBOLT, LYLE DEBOLT
107 FISHERMAN'S WHARF

"VACANT LOT"
341-0002-000/5/2
DESTIN BEACH INC.
TERMINAL DRIVE

106
"VACANT LOT"
341000500006
ST. LUCIE COUNTY
TBD

30' UTILITY EASEMENT
(AS PER MASTELLER & MOLER, INC. PLANS)

105
"BUCKSHOT BAYS
ROCKIN CAFE"
341-0004-0009
JOSEPH G. MILLER
109 FISHERMAN'S WHARF

0 20' 40' 80'
GRAPHIC SCALE
22X34: 1" = 20'
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N

W

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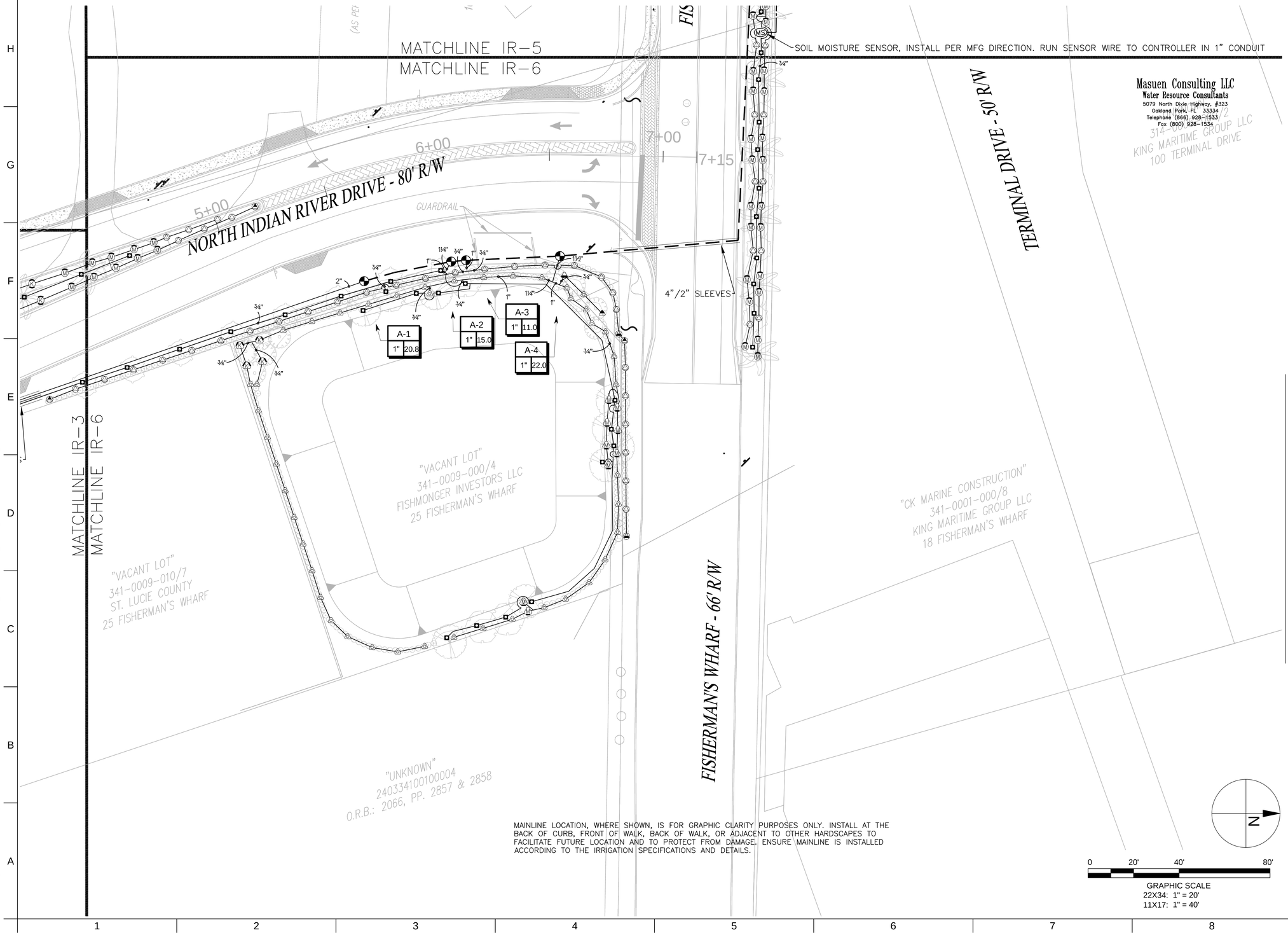
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IRRIGATION PLAN

IR-5

SHEET 7 OF 52

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IRRIGATION PLAN

IR-6

SHEET 7 OF 52

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FEC SPUR LINE

RAILROAD TRACKS

"Rinker Materials Corp
243-0000-00/0
Rinker Materials Corp
1301 N 2nd Street

AVENUE "M" - 50' R/W

N. 2nd STREET

RAILROAD SIGN POLE

GATE

MAIL BOX

STOP SIGN

25 MPH SIGN

0+00

0+50

99+00

B-1
1" 18.9

1¼"
¾"
1"

MATCHLINE IR-7

MATCHLINE IR-8

MATCHLINE SHT. C-12

MATCHLINE SHT. C-11

"VACANT LOT"
213-0001-010/7
DESTIN BEACH INC.
N. 2nd STREET

N

0 20' 40' 80'

GRAPHIC SCALE
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11X17: 1" = 40'

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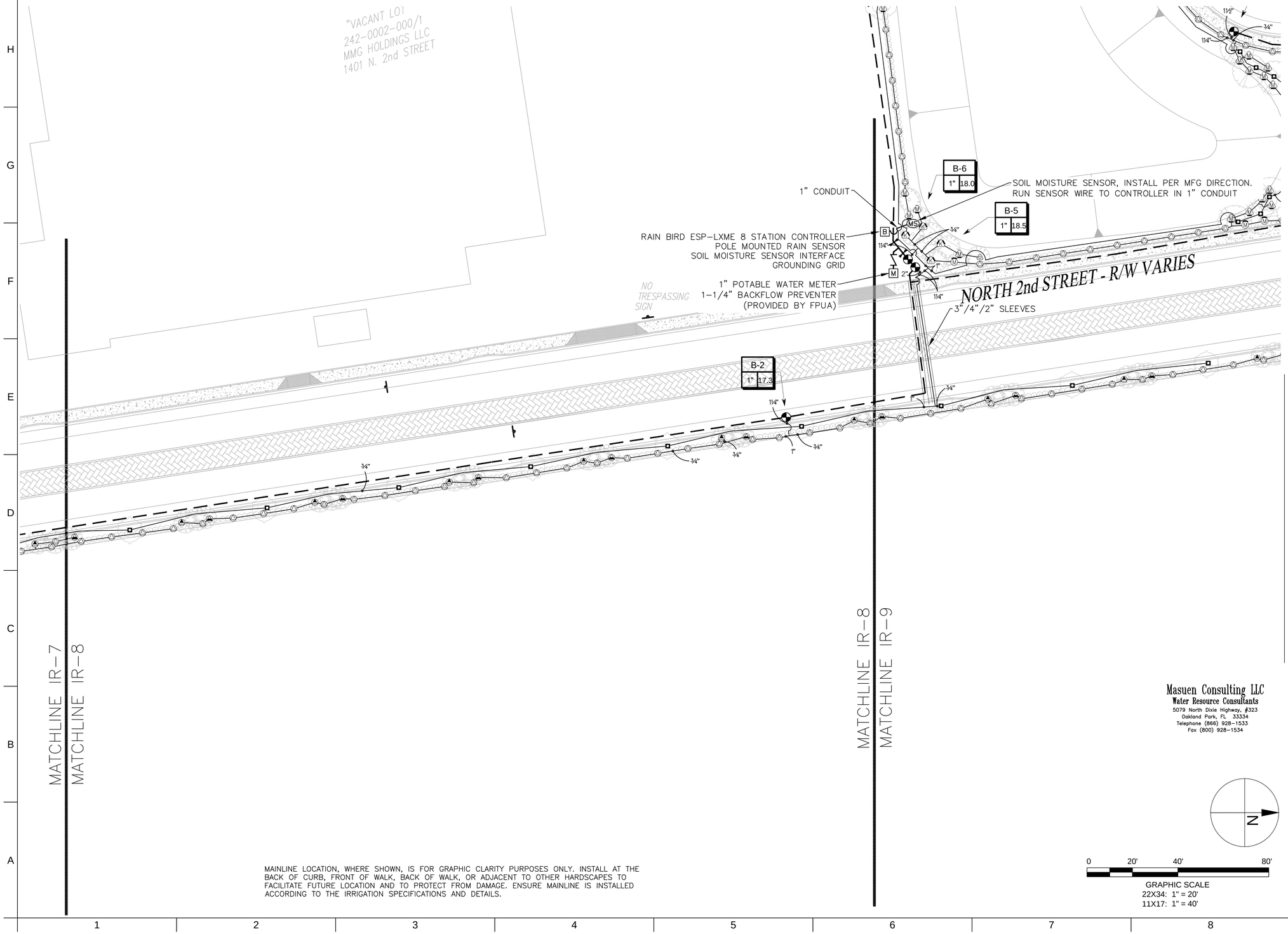
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IRRIGATION PLAN

IR-7

SHEET 7 OF 52

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SEAL
REG. # 1018
Thomas P. Lucido

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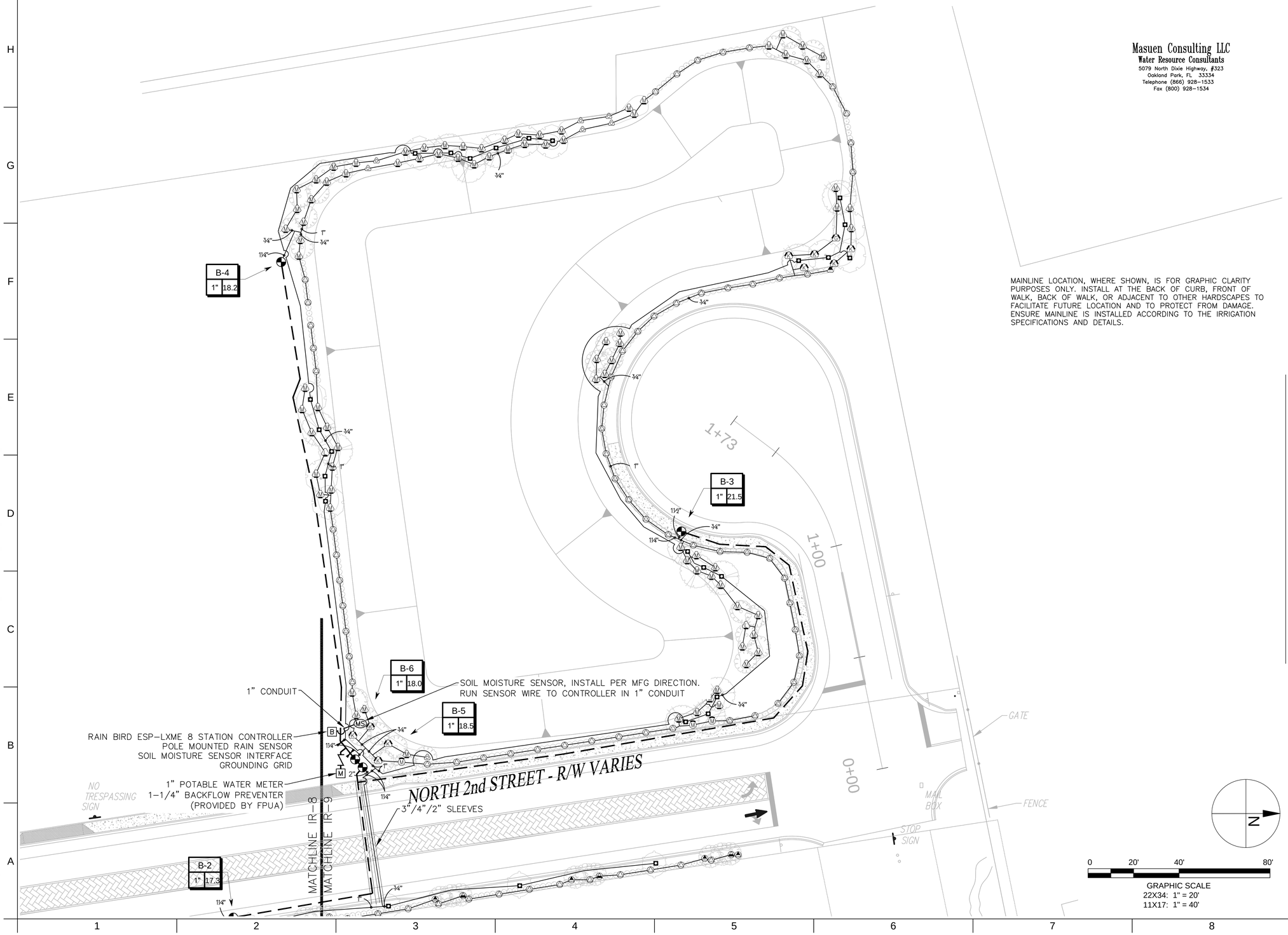
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IRRIGATION PLAN

IR-8

SHEET 7 OF 52

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IRRIGATION PLAN

IR-9

SHEET 7 OF 52

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CONTRACTOR TO HAND WATER LANDSCAPING AROUND POND VIA WATER TRUCK (OR OTHER METHOD) FOR ONE YEAR OR UNTIL ESTABLISHMENT. NO PERMANENT IRRIGATION SHALL BE INSTALLED. COUNTY WILL MAINTAIN AFTER ONE YEAR.

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IRRIGATION LEGEND

QTY	SYM	DESCRIPTION	DET.
	18.9 / 1" B-1	CONTROLLER LETTER–STATION NUMBER; GALLONS PER MINUTE–CATALOG FLOW; VALVE SIZE	
2	M	LINE SIZE BY 2" TAP, MAXIMUM 10' OF 2" POLYETHYLENE SERVICE LINE AND A PROPOSED 1" POTABLE WATER METER (SEE FORT PIERCE UTILITY AUTHORITY INSTALLATION DETAIL)	W–8
2		1–1/4" BACKFLOW PREVENTER APPROVED AND PROVIDED BY FPUA	
17		RAIN BIRD PEB SERIES RCV (SIZED PER PLAN) WITH A NIBCO T–113 GATE VALVE IN A CARSON 1220 JUMBO VALVE BOX WITH BOLT DOWN LID.	B1
1	A	RAIN BIRD ESPLXME PEDESTAL 8 STATION CONTROLLER, GROUNDING GRID, MINI CLIK RAIN SENSOR #502 AND BASELINE WATERTEC S100 SOIL MOISTURE SENSOR INTERFACE MOUNTED ADJACENT TO CONTROLLER	C1
1	B	RAIN BIRD ESPLXME PEDESTAL 8 STATION CONTROLLER, GROUNDING GRID, MINI CLIK RAIN SENSOR #502 AND BASELINE WATERTEC S100 SOIL MOISTURE SENSOR INTERFACE MOUNTED ADJACENT TO CONTROLLER	C1
2	MS	BASELINE WATERTEC S100 SOIL MOISTURE SENSOR bISENSOR INSTALLED ON SITE PER MANUFACTURER'S RECOMMENDATIONS. COMMUNICATION WIRE TO BE CONNECTED TO SMS INTERFACE AT CONTROLLER VIA 1" CONDUIT	C2
3		NIBCO T–113 BRASS MAINLINE ISOLATION VALVE (LINE SIZE) IN A CARSON 1419 VALVE BOX.	D
		CLASS 200 PVC LATERAL LINE W/ SCH 40 SOLVENT WELD PVC FITTINGS (SIZE PER PLAN, MINIMUM PIPE SIZE SHALL BE 3/4", NO 1/2" PIPES PERMITTED)	L
		2" SCHEDULE 40 SOLVENT–WELD PVC MAINLINE W/SCH 40 SOLVENT–WELD PVC FITTINGS	L
		SCH 40 GRAY PVC CONDUIT W/SCH 40 SOLVENT–WELD PVC FITTINGS, SHOWN WHERE NOT WITH MAINLINE (SIZE PER PLAN)	
		CLASS 200 PVC SLEEVES W/SCH 40 SOLVENT–WELD PVC FITTINGS (SIZE PER PLAN)	O

QUANTITIES GIVEN ARE FOR CONTRACTOR CONVENIENCE ONLY. THE ACCURACY IS NOT GUARANTEED. ALL QUANTITIES SHALL BE VERIFIED.

*DET (ON THE LEGEND) – THE LETTER IN THIS COLUMN DENOTES THE CORRESPONDING DETAIL SHOWN ON THE DETAIL SHEET.

IRRIGATION HEAD LEGEND

SYMBOL QUANTITY	SYMBOL	DESCRIPTION	DETAIL	DESIGN (P.S.I.)	DESIGN (G.P.M.) PER SYMBOL
100		EACH SYMBOL DENOTES TWO (2) RAIN BIRD 1804–SAM–1401 FLOOD BUBBLERS	Q	30	0.50
8		EACH SYMBOL DENOTES TWO (2) RAIN BIRD 1804–SAM–1404 FLOOD BUBBLERS	Q	30	2.00
10	T	RAIN BIRD 1812–SAM–PRS W/ HUNTER MPCORNERHT NOZZLE ADJ ARC 0–90	S	30	VAR
8	T	RAIN BIRD 1812–SAM–PRS W/ HUNTER MPCORNERHT NOZZLE ADJ ARC 0–90 ON SCH 40 RISER	T	30	VAR
63	M	RAIN BIRD 1812–SAM–PRS W/ HUNTER MP1000 NOZZLE MAROON ADJ ARC 90–210	S	30	VAR
95	M	RAIN BIRD 1812–SAM–PRS W/ HUNTER MP1000 NOZZLE MAROON ADJ ARC 90–210 ON SCH 40 RISER	T	30	VAR
3	LB	RAIN BIRD 1812–SAM–PRS W/ HUNTER MP1000 NOZZLE LT. BLUE ADJ ARC 210–270 ON SCH 40 RISER	T	30	VAR
12	K	RAIN BIRD 1812–SAM–PRS W/ HUNTER MP2000 NOZZLE BLACK ADJ ARC 90–210	S	30	VAR
13	K	RAIN BIRD 1812–SAM–PRS W/ HUNTER MP2000 NOZZLE BLACK ADJ ARC 90–210 ON SCH 40 RISER	T	30	VAR
1	G	RAIN BIRD 1812–SAM–PRS W/ HUNTER MP2000 NOZZLE GREEN ADJ ARC 210–270 ON SCH 40 RISER	T	30	VAR
5	B	RAIN BIRD 1812–SAM–PRS W/ HUNTER MP3000 NOZZLE BLUE ADJ ARC 90–210 ON SCH 40 RISER	T	30	VAR
46		RAIN BIRD 1812–SAM–PRS W/ HUNTER MPCORNER NOZZLE RST	S	30	VAR
43		RAIN BIRD 1812–SAM–PRS W/ HUNTER MPCORNER NOZZLE LST	S	30	VAR
266		RAIN BIRD 1812–SAM–PRS W/ HUNTER MPSTRIP NOZZLE SST	S	30	VAR
1		RAIN BIRD 1812–SAM–PRS W/ HUNTER MPCORNER NOZZLE LST ON SCH 40 RISER	T	30	VAR
2		RAIN BIRD 1812–SAM–PRS W/ HUNTER MPCORNER NOZZLE RST ON SCH 40 RISER	T	30	VAR
56		RAIN BIRD 1812–SAM–PRS W/ HUNTER MPSTRIP NOZZLE SST ON SCH 40 RISER	T	30	VAR

SUMMARY OF PAY ITEMS

PAY ITEM	UNIT	DESCRIPTION
590–70	LS	COMPLETE IRRIGATION SYSTEM

PAY ITEM NOTES:
590–70 IRRIGATION SYSTEM, COMPLETE– THIS PAY ITEM INCLUDES THE COST OF FURNISHING AND INSTALLING ALL PIPE, PIPE FITTINGS, GLUE, PRIMER, TEFLON TAPE, PIPE DOPE, EQUIPMENT, BACKFILL, GRAVEL, BRICKS, WIRE AND WIRE CONNECTORS, VALVES, CONTROLLER, RAIN SENSOR, SPRINKLER HEADS AND FITTINGS, LABOR, PEDESTAL, ELECTRICAL CONNECTIONS, CONDUITS, WIRING, PUMP(S), REPAIR OF CURB & GUTTER & CONCRETE TRAFFIC SEPARATOR, REMOVAL AND REPLACEMENT OF EXISTING SIDEWALK AT ALL AREAS AFFECTED AND ANY OTHER ITEMS NECESSARY FOR THE COMPLETE INSTALLATION OF A FULLY FUNCTIONAL IRRIGATION SYSTEM AS DESCRIBED IN THE IRRIGATION PLANS, NOTES AND DETAILS.
590–7 METHOD OF MEASUREMENT
THE QUANTITIES WILL BE PAID FOR THE ITEMS SHOWN IN THE PLAN, COMPLETE & ACCEPTED.
590–8 BASIS OF PAYMENT
THE QUANTITY, DETERMINED AS PROVIDED ABOVE, IS PAID FOR AT THE CONTRACT PRICE PER LUMP SUM AT THE CONTRACT UNIT PRICE PER ONE IRRIGATION SYSTEM, WHICH PRICE AND PAYMENT INCLUDES FULL COMPENSATION FOR ALL THE WORK SPECIFIED IN THIS SECTION.

N

0 20' 40' 80'

GRAPHIC SCALE
22X34: 1" = 20'
11X17: 1" = 40'

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SEAL

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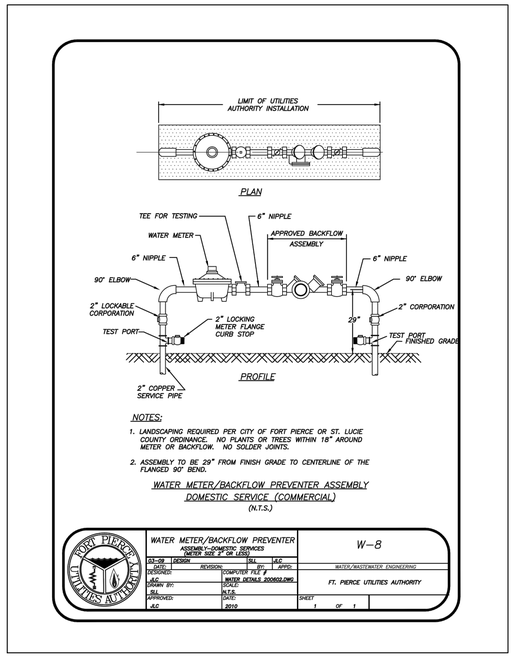
IRRIGATION PLAN

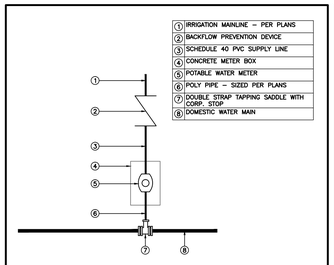
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SHEET 7 OF 52

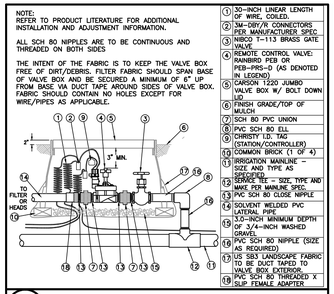
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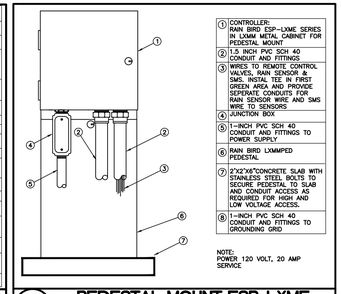




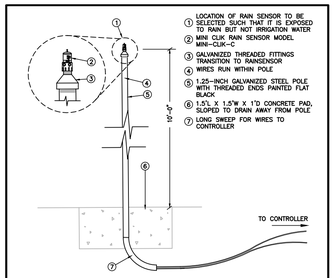
A METER W/BF DIAGRAMATIC



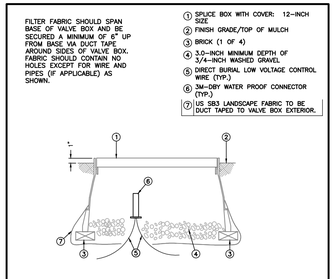
B RAIN BIRD RCV W/GATE VALVE



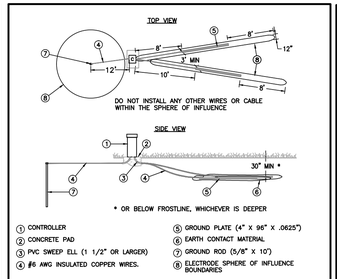
C PEDESTAL MOUNT ESP-LXME CONTROLLER



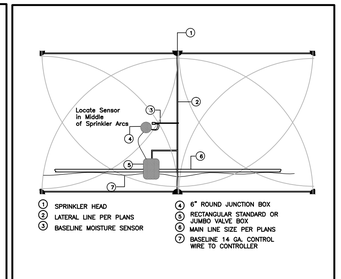
C POLE MOUNTED RAIN SENSOR



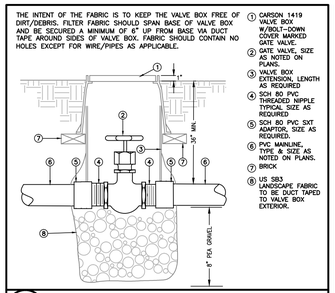
C WIRE SPLICE



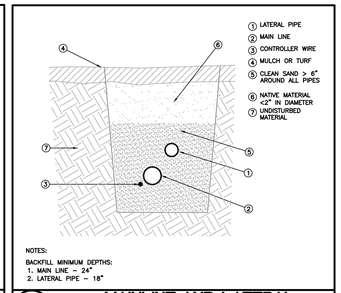
C GROUNDING DETAIL



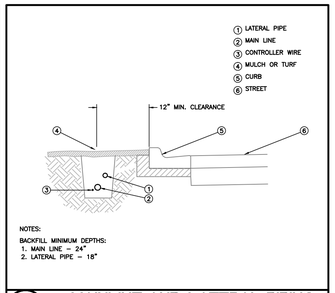
C2 SOIL MOISTURE SENSOR



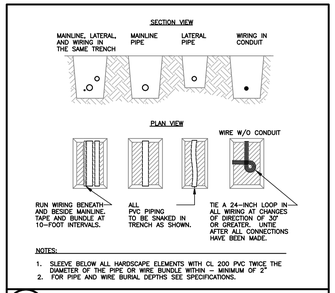
D T-113 GATE VALVE



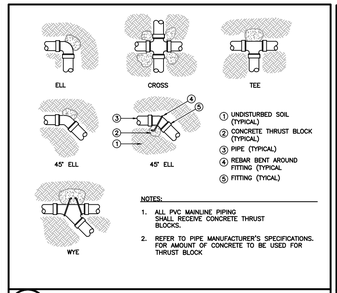
L MAINLINE AND LATERAL BACKFILL DETAIL



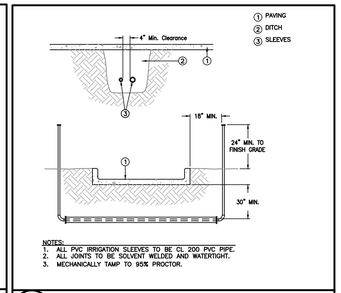
L MAINLINE AND LATERAL PIPING DETAIL



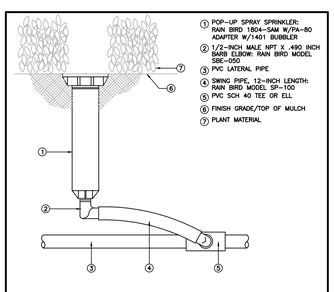
L PIPE AND WIRE TRENCHING



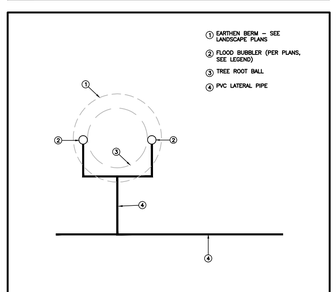
L THRUST BLOCK



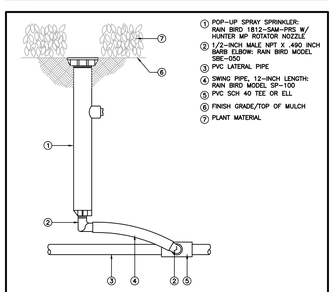
O SLEEVING



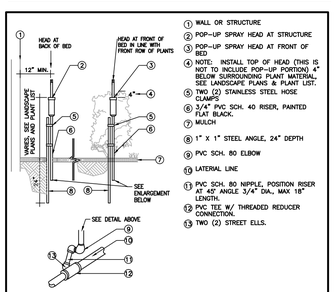
Q RAIN BIRD 1804-SAM POP-UP WITH 1401 BUBBLER



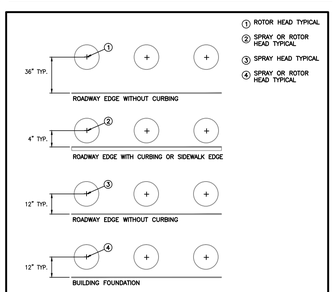
Q BUBBLER PLACEMENT



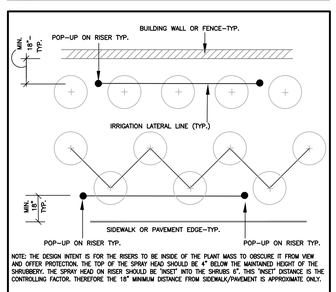
S RAIN BIRD 1812 SAM-PRS SPRAY



T POP-UP HEAD ON RISER



T POP-UP HEAD TO HARDSCAPE LOCATION DETAIL-A



T POP-UP HEAD ON RISER LOCATION DETAIL-B

lucido & associates
701 E Ocean Blvd., Stuart, Florida 34994 (772) 220-2100, Fax (772) 223-0220
100 Avenue A Suite 2A, Fort Pierce, Florida 34950 (772) 467-1301, Fax (772) 467-1303
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SEAL

REG. # 1018
Thomas P. Lucido

PROJECT TITLE

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ROADWAY IMPROVEMENTS
CITY OF FORT PIERCE
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REVISIONS / SUBMISSIONS	DATE	ZONE

PROJECT NO	C2013-064
DATE	APRIL 2014
DESIGNED	JJ
DRAWN	JJ
CHECKED	MAW
REVIEWED	TM
SCALE	AS SHOWN

DRAWING TITLE

IRRIGATION DETAILS

IR-11

SHEET 7 OF 52

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IRRIGATION NOTES & SPECIFICATIONS

Irrigation design based on the Lucido & Associates Landscape Plan dated 12/18/13. Contractor shall refer to these plans to coordinate sprinkler and pipe locations.

The system has been designed to conform with the requirements of all applicable codes, laws, ordinances, rules, regulations and conventions. Should any conflict exist, the requirements of the codes shall prevail. It is the responsibility of the owner/installation contractor to ensure the entire system is installed as designed. Irrigation contractor responsible for obtaining all required permits according to federal, state and local laws.

The scope of work is shown on the plans, notes and details. The Irrigation Contractor shall be certified as a CERTIFIED IRRIGATION CONTRACTOR by the Irrigation Association. The certification shall be current and in good standing.

THE WORK

The work specified in this section consists of furnishing all components necessary for the installation, testing, and delivery of a complete, fully functional automatic landscape irrigation system that complies with the irrigation plans, specifications, notes, and details. This work shall include, but not be limited to, the providing of all required material if applicable (pump(s), backflows, pipes, valves, fittings, controllers, wire, primer, glue, etc.), layout, protection to the public, excavation, assembly, installation, back filling, compacting, repair of road surfaces, controller and low voltage feeds to valves, cleanup, maintenance, guarantee and as–built plans.

All irrigated areas shall provide 100% head–to–head coverage from a fully automatic irrigation system with a rain (and freeze as appropriate) shut off device. If the rain shut off device is a rain sensor, it shall be installed to prevent activation by adjacent heads. Zones are prioritized first by public safety and then by hydraulic concerns. This sequencing will be a mandatory punch list item.

These plans have been designed to satisfy/exceed the Florida Building Code (FBC) Appendix F and the Florida Irrigation Society Standards and Specifications for Turf and Landscape Irrigation Systems, fourth edition. All products should be installed per manufacturer's recommendation. Contractor shall verify all underground utilities 72 hours prior to commencement of work.

It is the responsibility of the irrigation contractor to familiarize themselves with all grade differences, location of walls, retaining walls, structures and utilities. Do not willfully install the sprinkler system as shown on the drawings when it is obvious in the field that unknown obstruction, grade differences or differences in the area dimensions exist that might not have been considered in the engineering. Such obstructions, or differences, should be brought to the attention of the owner's authorized representative. In the event this notification is not performed, the irrigation contractor shall assume full responsibility for any revisions necessary.

Irrigation contractor shall repair or replace all items damaged by their work. Irrigation contractor shall coordinate their work with other contractors for the location and installation of pipe sleeves and laterals through walls, under roadways and paving, etc.

The contractor shall take immediate steps to repair, replace, or restore all services to any utilities which are disrupted due to their operations. All costs involved in disruption of service and repairs due to negligence on the part of the contractor shall be their responsibility.

POINT OF CONNECTION (P.O.C.)

There are two P.O.C.s on this project: Both P.O.C.s are new line size X 2" tap, maximum of 10' of 2" polyethylene service line, new 1" potable meters and 1–1/4" backflow preventers (provided by FPUA). The P.O.C.s must be capable of delivering a minimum of 30 GPM at 45 PSI downstream of the backflow preventers.

Contractor to verify these minimum conditions can be met prior to ordering of materials and the beginning of installation. If the conditions can not be met, the contractor must notify the designer prior to proceeding with the work. If the contractor does not do so, the contractor proceeds at their own risk and becomes responsible for any future work required to make the system perform as required.

THE PIPE

Pipe locations shown on the plan are schematic and shall be adjusted in the field. When laying out mainlines place a maximum of 18" away from either the back of curb, front of walk, back of walk, or other hardscape to allow for ease in locating and protection from physical damage. Install all lateral pipe near edges of pavement or against buildings whenever possible to allow space for plant root balls. Always install piping inside project property's boundary.

All pipes are to be placed in planting beds. If it is necessary to have piping under hardscapes, such as roads, walks, and patios, the pipes must be sleeved using Class 200 PVC with the sleeve diameter being twice the size of the pipe it is carrying with a minimum sleeve size of 2".

Pipe sizes shall conform to those shown on the drawings. No substitutions of smaller pipe sizes shall be permitted, but substitutions of larger sizes may be approved. All damaged and rejected pipe shall be removed from the site at the time of said rejection.

Mainline shall be Sch 40 solvent–weld 2" PVC with Sch 40 PVC solvent–weld fittings.

Contractor to ensure all mainline piping is properly restrained using mechanical joint fittings, restraining collars, threaded rods, thrust blocks, etc.., as and where required. Contractor shall refer to pipe manufacturers recommended installation practices for further direction.

PVC pipe joint compound and primer: The PVC cement shall be Weld–On 711 (grey, slow–drying, heavy duty) and the primer shall be Weld–On P70 (purple tinted, compatible with cement), or approved equals.

ELECTRICAL POWER SUPPLY

Electrical supply for irrigation controllers & sensors to be provided by irrigation contractor. Contractor to coordinate with local utilities for the installation of, and connection to, site available power supplies for required electrical components as set forth in the irrigation plans.

All electrical work is to comply with the National Electrical Code and any, and all, other applicable electrical codes, laws and regulations. A licensed electrician shall perform all electrical hook–ups. Power for each controller shall be a dedicated 120 volt, 20 amp circuit unless otherwise specified in the plans. Power for each pump to be according to pump specifications indicated in these plans.

WIRING

Irrigation control wire shall be thermoplastic solid copper, single conductor, low voltage irrigation controller wire; suitable for direct burial and continuous operation at rated voltages.

Tape and bundle control wires every 10' and run alongside the mainline. At all turns in direction make a 2' coil of wire. At all valve boxes coil wire around a 3/4" piece of PVC pipe to make a coil using 30 linear inches of wire. Make electrical connections with 3MDBY/R connectors.

Number all wires, using an electrical book of numbers, according to the plans. Number wires in all valve boxes, junction boxes and at the controller.

Wire sized, numbered and colored as follows:
#14 white for common
#14 spare black common
#14 individual color coded hot wire
#14 spare yellow hot wire

Spare wires
Leaving each controller, run four spare wires in both directions (eight spare wires total), Install as 2 common spares (4 total) and 2 hot wires (4 total). Loop these wires into each RCV along their path and terminate in the last valve box controlled by the wires respective controller. The loop into each valve box shall extend up into the valve box a minimum of 8" and be readily accessible by opening the valve box lid. These wires must be all numbered and color coded as required in these plans.

Controller and Pump station Control Panel grounding – Contractor to utilize 4"X8'X5/8" copper grounding plates, 5/8"X10' copper clad grounding rods, 'One Strike' CAD wells at all connection points, #6 insulated copper wire, and earth contact material. Install these and other required components as outlined in the detail. Contractor to verify that the earth to ground resistance does not exceed 10 ohms. Contractor shall provide a written certification, on a licensed electrical contractors letter head, showing the date of the test, controller/pump location, and test results. Each controller/pump shall be so grounded and tested. Each component must have its own separate grounding grid, unless they are sitting side by side, in which case up to two controllers can share a common grounding grid.

LAYOUT

Lay out irrigation system mainlines and lateral lines. Make the necessary adjustments as required to take into account all site obstructions and limitations prior to excavating trenches.

Stake all sprinkler head locations. Adjust location and make the necessary modifications to nozzle types, etc. required to ensure 100% head to head coverage. Refer to the Edge of Pavement Detail on the Irrigation Detail Sheet.

Spray heads shall be installed 4" from sidewalks or curbed roadways and 12" from uncurbed roadways and building foundations. Rotors shall be installed 4" from sidewalks or curbed roadways, 12" from building foundations, and 36" from uncurbed roadways.

Shrub heads shall be installed on 3/4" Sch 40 PVC risers. The risers shall be set at a minimum of 18" off sidewalks, roadway curbing, building foundations, and/or any other hardscaped areas. Shrub heads shall be installed to a standard height of 4" below maintained height of plants and shall be installed a minimum of 6" within planted masses to be less visible and offer protection. Paint all shrub risers with flat black or forest green paint, unless irrigation system will utilize reuse water; in this case the risers shall be purple PVC and shall not be painted.

Locate valves prior to excavation. Ensure that their location provides for easy access and that there is no interference with physical structures, plants, trees, poles, etc. Valve boxes must be placed a minimum of 12" and a maximum of 15" from the edge of pavement, curbs, etc. and the top of the box must be 2" above finish grade. No valve boxes shall be installed in turf areas without approval by the irrigation designer – only in shrub beds. Never install in sport field areas.

VALVES

Sequence all valves so that the farthest valve from the P.O.C. operates first and the closest to the P.O.C. operates last. The closest valve to the P.O.C. should be the last valve in the programmed sequence.

Adjust the flow control on each RCV to ensure shut off in 10 seconds after deactivation by the irrigation controller.

Using an electric branding iron, brand the valve I.D. letter/number on the lid of each valve box. This brand must be 2"–3" tall and easily legible.

EQUIPMENT

All pop–up heads and shrub risers shall be pressure compensating. All pop–up heads shall be mounted on flex–type swing joints. All rotors shall be installed with PVC triple swing joints unless otherwise detailed.

All sprinkler equipment, not otherwise detailed or specified on these plans, shall be installed as per manufacturer's recommendations and specifications, and according to local and state laws.

TRENCHING

Excavate straight and vertical trenches with smooth, flat or sloping bottoms. Trench width and depth should be sufficient to allow for the proper vertical and horizontal separation between piping as shown in the pipe installation detail on the detail sheet.

Protect existing landscaped areas. Remove and replant any damaged plant material upon job completion. The replacement material shall be of the same genus and species, and of the same size as the material it is replacing. The final determination as to what needs to be replaced and the acceptability of the replacement material shall be solely up to the owner or owner's representative.

INSTALLATION

Solvent Weld Pipe: Cut all pipe square and deburr. Clean pipe and fittings of foreign material; then apply a small amount of primer while ensuring that any excess is wiped off immediately. Primer should not puddle or drip from pipe or fittings. Next apply a thin coat of PVC cement; first apply a thin layer to the pipe, next a thin layer inside the fitting, and finally another very thin layer on the pipe. Insert the pipe into the fitting. Insure that the pipe is inserted to the bottom of the fitting, then turn the pipe a 1/4 turn and hold for 10 seconds. Make sure that the pipe doesn't recede from the fitting. If the pipe isn't at the bottom of the fitting upon completion, the glue joint is unacceptable and must be discarded.

Pipes must cure a minimum of 30 minutes prior to handling and placing into trenches. A longer curing time may be required; refer to the manufacturer's specifications. The pipe must cure a minimum of 24 hours prior to filling with water.

BACK FILL

The Back fill 6" below, 6" above, and around all piping shall be of clean sand and anything beyond that in the trench can be of native material but nothing larger than 2" in diameter.

Main line pipe depth measured to the top of pipe shall be:
24" minimum for 3/4"–2 1/2" PVC with a 30" minimum at vehicular crossings.

Lateral line depths measured to top of pipe shall be:
18" minimum for 3/4"–3" PVC with a 30" minimum at vehicular crossings;

Contractor shall backfill all piping, both mainline and laterals, prior to performing any pressure tests. The pipe shall be backfilled with the exception of 2' on each side of every joint (bell fittings, 90's, tees, 45's, etc.) These joints shall not be backfilled until all piping has satisfactorily passed its appropriate pressure test as outlined below.

FLUSHING

Prior to the placement of valves, flush all mainlines for a minimum of 10 minutes or until lines are completely clean of debris, whichever is longer.

Prior to the placement of heads, flush all lateral lines for a minimum of 10 minutes or until lines are completely clean of debris, whichever is longer.

Use screens in heads and adjust heads for proper coverage avoiding excess water on walls, walks and paving.

TESTING

Soil: At a minimum of 2 locations on the site, soil tests for infiltration and texture shall be performed according to the USDA Soil Quality Test Kit Guide. The tests shall be documented in a USDA Soil Worksheet. (All of the above is available at http://soils.usda.gov/sqi/assessment/ test_kit.html) The completed worksheet shall be submitted to the owners representative for review/approval. Do not proceed without written direction from the owner/owner's representative.

Schedule testing with Owner's Representative a minimum of three (3) days in advance of testing.

Mainline: Remove all remote control valves and cap using a threaded cap on SCH 80 nipple. Hose bibs and gate valves shall not be tested against during a pressure test unless authorized by written permission from the owner. Fill mainline with water and pressurize the system to 125 PSI. Monitor the system pressure at two gauge locations; the gauge locations must be at opposite ends of the mainline. With the same respective pressures, monitor the gauges for two hours. There can be no loss in pressure at either gauge for solvent–welded pipe.

If these parameters are exceeded, locate the problem; repair it; wait 24 hours and retry the test. This procedure must be followed until the mainline passes the test.

Lateral Lines: The lateral lines must be fully filled to operational pressure and visually checked for leaks. Any leaks detected must be repaired.

Operational Testing –Once the mainline and lateral lines have passed their respective tests, and the system is completely operational, a coverage test and demonstration of the system is required. The irrigation contractor must demonstrate to the owner, or his/her representative, that proper coverage is obtained and the system works automatically from the controller. This demonstration requires each zone to be turned on, in the proper sequence as shown on the plans, from the controller. Each zone will be inspected for proper coverage and function. The determination of proper coverage and function is at the sole discretion of the owner or owner's representative.

Upon completion of the operational test, run each zone until water begins to puddle or run off. This will allow you to determine the number of irrigation start times necessary to meet the weekly evapotranspiration requirements of the planting material in each zone. In fine sandy soils, it is possible no puddling will occur. If this is experienced, then theoretical calculations for run times will be required for controller programming.

SUBMITTALS

Pre–Construction: Deliver five (5) copies of submittals to Owner's Representative within ten (10) working days from date of Notice to Proceed. Furnish information in 3–ring binder with table of contents and index sheet. Index sections for different components and label with specification section number and name of component. Furnish submittals for components on material list. Indicate which items are being supplied on catalog cut sheets when multiple items are shown on one sheet. Incomplete submittals will be returned without review.

After project completion:
As a condition of final acceptance, the irrigation contractor shall provide the owner with:

1. Irrigations As–builts – shall be provided utilizing a sub–foot Global Navigation Satellite System (GNSS) to accurately locate all mainlines, sleeves, remote control valves, gate valves, independent wire runs, wire splice boxes, controllers, high voltage supply sources/conduit path, control mechanisms, sensors, wells and water source connections in Florida East State Plane, NAD 83, and CORS 96 format. The data collected shall be in POINT format and include an ID for each data point with Manufacturer, Type, Size, and Depth. All mainline and independent runs of wire shall be located every 30' for straight runs and at every change of direction. Sleeves will be located at end points and every 20' of length. All underground items shall include depth in inch format. These POINTS once collected shall be imported into an AutoCAD DWG geo–referenced base file to be labeled accordingly. The completed AS–Built shall be a Geo–Referenced DWF file and delivered to the owner on a compact disk (CD).
2. Controller charts – Upon completion of "as–built" prepare controller charts; one per controller. Indicate on each chart the area controlled by a remote control valve (using a different color for each zone). This chart shall be reduced to a size that will fit inside of the controller door. The reduction shall be hermetically sealed inside two 2ml pieces of clear plastic.
3. Grounding Certification – Provide ground certification results for each controller and pump panel grounding grid installed. This must be on a licensed electrician letter head indicating location tested (using IR plan symbols), date, time, test method, and testing results.

INSPECTIONS AND COORDINATION MEETINGS REQUIRED – Contractor is required to schedule, perform, and attend the following, and demonstrate to the owner and/or owners representative to their satisfaction, as follows:

1. Pre–construction meeting – Designer and contractor to review entire install process and schedule with owner/general contractor.
2. Mainline installation inspection(s) – all mainline must be inspected for proper pipe, fittings, depth of coverage, backfill. and installation method
3. Mainline pressure test – All mainline shall be pressure tested according to this design's requirements
4. USDA Soil Quality Tests for infiltration/texture
5. Coverage and operational test
6. Final inspection
7. Punch list inspection

FINAL ACCEPTANCE

Final acceptance of the irrigation system will be given after the following documents and conditions have been completed and approved. Final payment will not be released until these conditions are satisfied.

1. All above inspections are completed, documented, and approved by owner.
2. Completion and acceptance of 'as–built' drawings.
3. Acceptance of required controller charts and placement inside of controllers.
4. All other submittals have be made to the satisfaction of the owner.

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

MINIMUM RECOMMENDED
IRRIGATION MAINTENANCE PROCEDURES

1. Every irrigation zone should be checked monthly and written reports generated describing the date(s) each zone was inspected, problems identified, date problems repaired, and a list of materials used in the repair. At minimum, these inspections should include the following tasks:

A. Turn on each zone from the controller to verify automatic operation.

B. Check schedules to ensure they are appropriate for the season, plant and soil type, and irrigation method. Consult an I.A. certified auditor for methods used in determining proper irrigation scheduling requirements.

C. Check remote control valve to ensure proper operation.

D. Check setting on pressure regulator to verify proper setting, if present.

E. Check flow control and adjust as needed; ensure valve closure within 10–15 seconds after deactivation by controller.

F. Check for leaks – mainline, lateral lines, valves, heads, etc.

G. Check all heads as follows:

1. Proper set height (top of sprinkler is 1" below mow height)
2. Verify head pop–up height – 6" in turf, 12" in ground cover, and pop–up on riser in shrub beds.
3. Check wiper seal for leaks – if leaking, clean head and re–inspect.
4. If still leaking, replace head with the appropriate head with pressure regulator and built–in check valve.
5. All nozzles checked for proper pattern, clogging, leaks, correct make & model, etc. – replace as needed
6. Check for proper alignment – perfectly vertical; coverage area is correct; minimize over spray onto hardscapes.
7. Riser height raised/lowered to accommodate plant growth patterns and ensure proper coverage.
8. Verify the pop–up riser retracts after operation. If not, repair/replace as needed.

H. Check controller/C.C.U. grounds for resistance (10 ohms or less) once per year. Submit written reports.

I. Check rain shut–off device monthly to ensure it functions properly.

J. Inspect all filters monthly and clean/repair/replace as needed.

K. Inspect backflow devices by utilizing a properly licensed backflow inspector. This should be done annually, at minimum.

L. Inspect all valve boxes to ensure they are in good condition, lids are in place and locked.

M. Check pump stations for proper operation, pressures, filtration, settings, etc. – refer to pump station operations manual.

N. Check and clean intake screens on all suction lines quarterly, at minimum. Clean and/or repair, as needed.

O. Winterize, if applicable, as weather in your area dictates. Follow manufacturer recommendations and blow out all lines and equipment using compressed air. Perform seasonal startup of system as per manufacturer recommendations.

P. Conduct additional inspections, maintenance tasks, etc. that are particular for your site.

Soil Moisture Sensor

1. Place all soil moisture sensor wiring in 1" SCH 40 PVC conduit
2. Soil moisture sensor should be placed in the middle of a spray or drip area as per manufacturer's recommendations.

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827 North Thornton Avenue, Orlando, Florida 32803 (407) 898-9521, Fax (407) 898-9768

SEAL

REG. # 1018
Thomas P. Lucido

PROJECT TITLE

NORTH 2ND STREET
ROADWAY IMPROVEMENTS
CITY OF FORT PIERCE
ST. LUCIE COUNTY, FLORIDA

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PROJECT NO	C2013-064
DATE	APRIL 2014
DESIGNED	JJ
DRAWN	JJ
CHECKED	MAW
REVIEWED	MAW
SCALE	AS SHOWN

DRAWING TITLE

IRRIGATION NOTES

IR-11

SHEET 7 OF 52

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MATCHLINE LS-4
MATCHLINE LS-5

MATCHLINE LS-2
MATCHLINE LS-5

STAMPED TINTED CONCRETE
CROSSWALKS
(SEE DETAILS ON SHEET HS-2)

PROPOSED LOCATION OF IRRIGATION CONTROLLER
CONFIRM WITH AUTHORITY HAVING JURISDICTION.
CONTROLLER TO BE "RAIN BIRD MODEL ESP-LXME"
CONFIRM FINAL SPECIFICATION WITH IRRIGATION SYSTEM DESIGNER

MATCHLINE LS-5
MATCHLINE LS-6

0+00
1+00
2+00
3+00
4+00
5+00
6+00
7+00
7+66

NORTH 2nd STREET - 50' R/W
A AVENUE "H"
FISHERMAN'S WHARF - 66' R/W
FEC SPUR LINE
FEC SPUR
TRAILER PARK ROAD 2

113
"ST. LUCIE OUTBOARD MA
705-0019-0003
BANCSHARES REALTY, .
657 N. 2nd STREET

106
"VACANT LOT"
3410005000/6
ST. LUCIE COUNTY
TBD

105
"BUCKSHOT BAYS
ROCKIN CAFE"
341-0004-0009
JOSEPH G. MILLER
109 FISHERMAN'S WHARF

"VACANT LOT"
341-0002-000/5/2
DESTIN BEACH INC.
TERMINAL DRIVE

341-L0003-000/2
DWIGHT DEBOLT, LYLE DEBOLT
107 FISHERMAN'S WHARF

ISSUED FOR REVIEW
-
-

KAMM CONSULTING PROJECT #: 2013-0845
PROJECT MANAGER: JOHN MAYR

KAMM Consulting
PRINCIPAL
Bradly L Brown Florida License #58232

1408 Orange Avenue
Fort Pierce, Florida 34950
Phone 772.595.1744 Fax 772.595.1745
engineering@kammconsulting.com
Certification of Authorization #8189

- date
signed

0 20' 40' 80'
GRAPHIC SCALE
22X34: 1" = 20'
11X17: 1" = 40'

N

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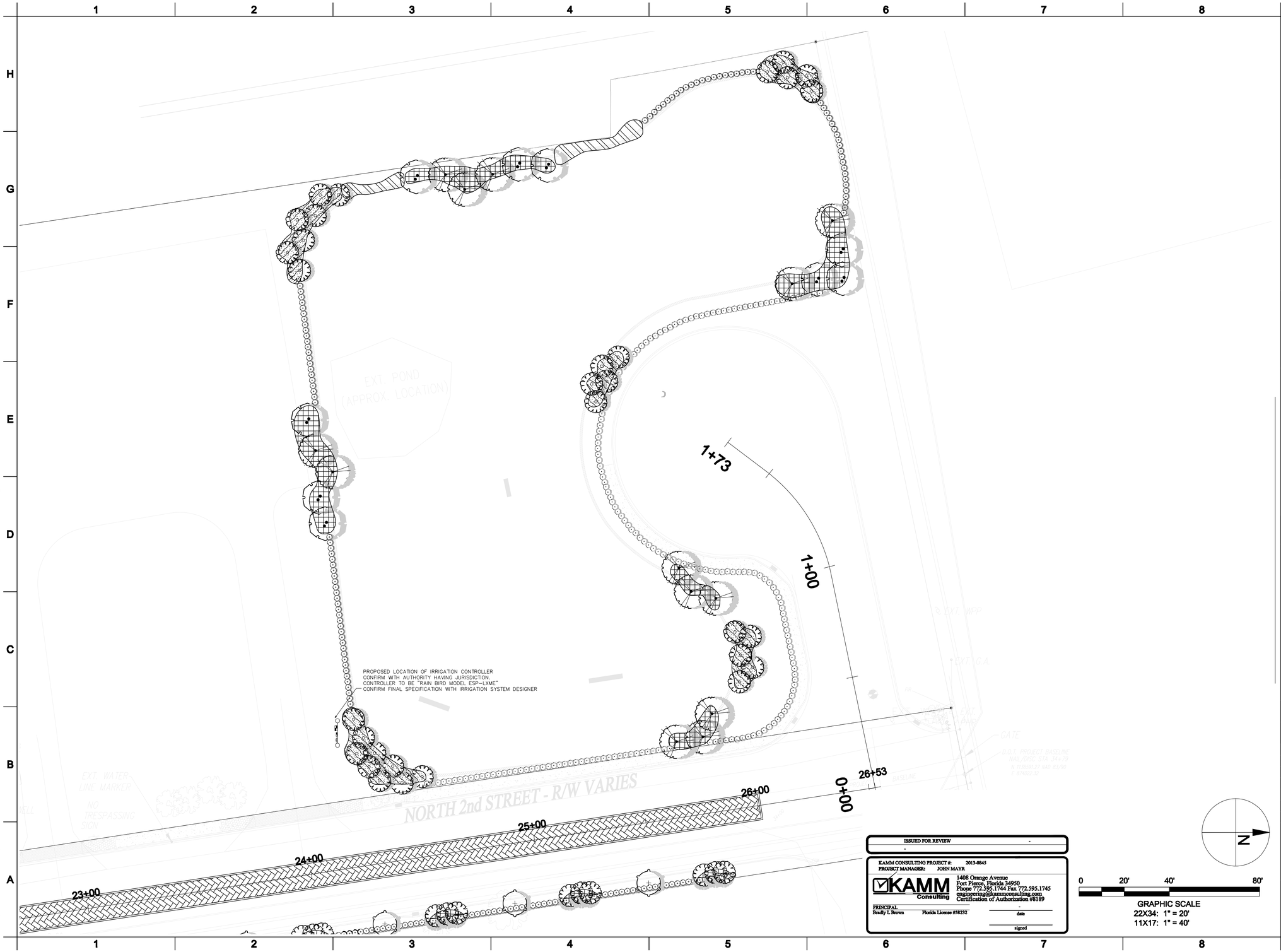
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CHECKED	BN
REVIEWED	TL
SCALE	AS SHOWN

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IRRIGATION CONTROLLER
POWER PLAN

E-1

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IRRIGATION CONTROLLER
POWER PLAN

E-2

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-

KAMM CONSULTING PROJECT #: 2013-0845
PROJECT MANAGER: JOHN MAYR

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Phone 772.595.1744 Fax 772.595.1745
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Certification of Authorization #8189

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date

signed

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0 20' 40' 80'

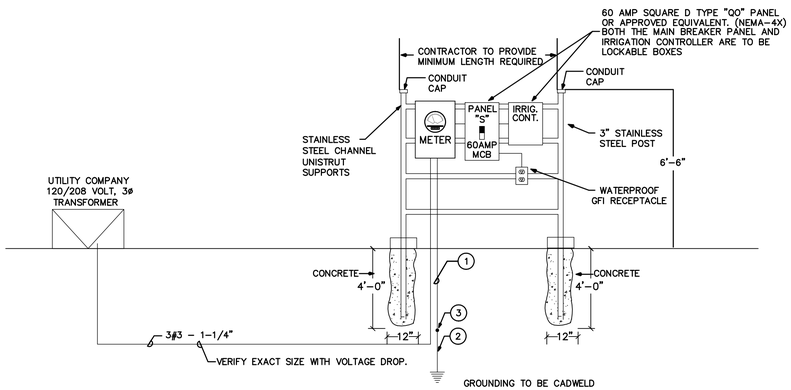
GRAPHIC SCALE
22X34: 1" = 20'
11X17: 1" = 40'

KEY NOTES

1. 1-1/0 GROUNDING ELECTRODE CONDUCTOR IN 1" SCHEDULE 40 PVC CONDUIT.
2. 10 FT. LONG x 3/4" DIAMETER COPPER DRIVEN GROUND ELECTRODE.
3. EXOTHERMIC CONNECTION. (TYPICAL)

GENERAL NOTES

1. GROUNDING SHALL BE CADWELD.
2. ALL CONNECTORS / HARDWARE FOR RISER, RACK, AND EQUIPMENT SHALL BE STAINLESS STEEL. NEMA 4X.



ELECTRICAL RISER DIAGRAM

ELECTRICAL SPECIFICATIONS

PART 1 – GENERAL

A. THE CONTRACTOR SHALL SUPPLY AND INSTALL ALL NEW ELECTRICAL WORK INDICATED. CONSTRUCTION SHALL BE IN ACCORDANCE WITH DRAWINGS AND APPLICABLE SPECIFICATIONS. IF A PROBLEM IS ENCOUNTERED IN COMPLYING WITH THIS REQUIREMENT, CONTRACTOR SHALL NOTIFY THE ARCHITECT/ENGINEER AS SOON AS POSSIBLE AFTER DISCOVERY OF THE PROBLEM AND SHALL NOT PROCEED WITH THAT PORTION OF THE WORK UNTIL ARCHITECT/ENGINEER HAS DIRECTED CORRECTIVE ACTION TO BE TAKEN.
B. THE CONTRACTOR SHALL VISIT THE JOB SITE PRIOR TO BID AND FAMILIARIZE HIMSELF WITH ALL CONDITIONS AFFECTING ELECTRICAL AND COMMUNICATIONS INSTALLATION AND MAKE PROVISIONS AS TO THE COST THEREOF.
C. ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE LATEST EDITION OF THE NATIONAL ELECTRIC CODE (AS ADOPTED BY THE AUTHORITY HAVING JURISDICTION) AND ALL CODES AND ORDINANCES OF THE AUTHORITY HAVING JURISDICTION. THE SPECIFICATION, CODES AND STANDARDS LISTED BELOW ARE UTILIZED IN THIS PROJECT.
   1. NATIONAL ELECTRICAL CODE (NFPA-70)
   2. CODE FOR SAFETY TO LIFE (NFPA_101)
   3. STANDARD FOR THE INSTALLATION, MAINTENANCE AND USE OF LOCAL PROTECTIVE SIGNALING SYSTEMS (NFPA-72)
   4. UNDERWRITERS' LABORATORIES (UL)
   5. NATIONAL ELECTRICAL MANUFACTURERS ASSOCIATION (NEMA)
   6. AMERICAN NATIONAL STANDARDS INSTITUTE (ANSI)
   7. FEDERAL SPECIFICATION (FED. SPEC.)
   8. INSULATED POWER CABLE ENGINEERS ASSOCIATION (IPCEA)
   9. FLORIDA BUILDING CODE. 2010 EDITION
   10. INSTITUTE OF ELECTRICAL AND ELECTRONIC ENGINEERS (IEEE)
   11. CITY OF JUPITER BUILDING CODE. (AMMENDMENTS TO FLORIDA BUILDING CODE 2010)
   12. ADDITIONALLY, DESIGNS, WORK PRACTICES AND CONDITIONS MUST CONFORM WITH THE OCCUPATIONAL SAFETY AND HEALTH ACT OF 1970 (OSHA)
D. DO NOT SCALE THE ELECTRICAL DRAWINGS. REFER TO ARCHITECTURAL PLANS AND ELEVATIONS FOR EXACT LOCATION OF ALL EQUIPMENT. CONFIRM WITH OWNER'S REPRESENTATIVE.
E. IT IS NOT THE INTENT OF THESE PLANS TO SHOW EVERY MINOR DETAIL OF CONSTRUCTION. THE CONTRACTOR IS EXPECTED TO FURNISH AND INSTALL ALL ITEMS FOR A COMPLETE ELECTRICAL SYSTEM AND PROVIDE ALL REQUIREMENTS NECESSARY FOR EQUIPMENT TO BE PLACED IN PROPER WORKING ORDER.
F. CONTRACTOR SHALL GUARANTEE ALL MATERIALS AND WORKMANSHIP FREE FROM DEFECTS FROM A PERIOD OF NOT LESS THAN ONE YEAR FROM DATE OF ACCEPTANCE.
G. CORRECTION OF ANY DEFECTS SHALL BE COMPLETED WITHOUT ADDITIONAL CHARGE AND SHALL INCLUDE REPLACEMENT OR REPAIR OF ANY OTHER PHASE OF THE INSTALLATION WHICH MAY HAVE BEEN DAMAGED THERE BY.
H. ALL REQUIRED INSURANCE SHALL BE PROVIDED FOR PROTECTION AGAINST PUBLIC LIABILITY AND PROPERTY DAMAGE FOR THE DURATION OF THE WORK.
I. CONTRACTOR SHALL PAY FOR ALL PERMITS, FEES, INSPECTIONS AND TESTING. CONTRACTOR TO OBTAIN PERMIT AND APPROVED SUBMITTALS PRIOR TO BEGINNING WORK OR ORDERING EQUIPMENT.
J. THE TERM "PROVIDE" USED IN THE CONSTRUCTION DOCUMENTS AND SPECIFICATIONS SHALL MEAN THAT THE CONTRACTOR IS TO FURNISH, INSTALL AND CONNECT COMPLETE.

PART 2 – PRODUCTS

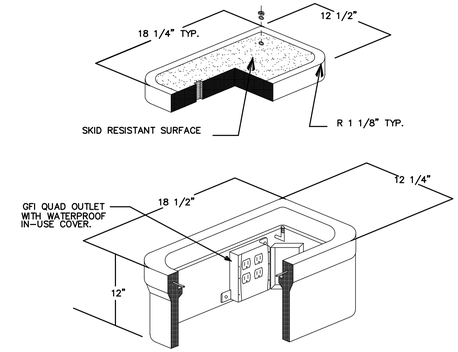
A. MINIMUM WIRE SIZE SHALL BE #12 A.W.G. (EXCEPT AS NOTED OTHERWISE FOR CONTROL WIRING). ALL CONDUCTORS SHALL BE 98% CONDUCTIVITY, COPPER WITH "THHN-THWN" INSULATION UNLESS OTHERWISE NOTED.
B. ELECTRICAL METALLIC TUBING (EMT) SHALL BE OF BEST QUALITY STEEL, SMOOTH INSIDE AND OUT AND SHALL BE HOT-DIPPED GALVANIZED.
C. OUTLET BOXES SHALL BE PRESSED STEEL IN DRY LOCATIONS, CAST ALLOY WITH THREADED HUBS IN WET OR DAMP LOCATIONS AND SPECIAL ENCLOSURES FOR OTHER CLASSIFIED AREAS.
D. RIGID NONMETALIC CONDUIT SHALL BE SCHEDULE 40 PVC.
E. ALL MATERIALS SHALL BE NEW AND BEAR UNDERWRITERS' LABELS WHERE APPLICABLE.
F. PANELBOARDS:
   1. CURRENT CARRYING BUSES SHALL BE COPPER. GROUND BUS BARS SHALL BE COPPER.
   2. ALL CIRCUIT BREAKERS SHALL BE BOLT ON. PLUG-IN BREAKERS ARE NOT ACCEPTABLE.
   3. CIRCUIT BREAKERS USED AS SWITCHES IN FLUORESCENT OR HID LIGHTING CIRCUITS SHALL BE LISTED AND MARKED "SWD"
   4. ALL CIRCUIT BREAKERS FEEDING MECHANICAL EQUIPMENT SHALL BE HACR TYPE.
   5. A.I.C. RATINGS SHALL BE AS INDICATED ON PANELBOARD SCHEDULES.
   6. ALL PANELBOARDS SHALL BE FURNISHED WITH PLASTIC LAMINATE NAMEPLATES WITH 1/4" ENGRAVED LETTERING FOR PANEL IDENTIFICATION.
   7. ALL PANELBOARDS SHALL BE PROVIDED WITH TYPE-WRITTEN DIRECTORY OF BRANCH CIRCUIT DESIGNATIONS.
G. DISCONNECT SWITCHES SHALL BE H.P. RATED, HEAVY DUTY, QUICK-MAKE, QUICK-BREAK. ENCLOSURES SHALL BE NEMA 4X FOR OUTDOOR LOCATIONS.
H. MOTOR STARTERS SHALL BE MANUAL OR MAGNETIC AS INDICATED ON THE ELECTRICAL DRAWINGS, WITH OVERLOAD RELAYS IN EACH PHASE.
I. WIRING DEVICES (GENERAL PURPOSE RECEPTACLES AND WALL SWITCHES) COLOR SHALL BE COORDINATED WITH CLIENT.

PART 3 – EXECUTION

A. COLOR CODING OF CONDUCTORS SHALL BE AS FOLLOWS:
   1. 208/120 VOLTS, 3 PHASE, 4-WIRE SYSTEM: UNGROUNDED CONDUCTORS: 1 BLACK, 1 RED AND 1 BLUE. GROUNDED (NEUTRAL) CONDUCTOR; WHITE. GROUNDING CONDUCTORS SHALL BE GREEN.
   2. 480/277 VOLT, 3-PHASE, 4-WIRE SYSTEM: UNGROUNDED CONDUCTORS: 1 BROWN, 1 YELLOW, AND 1 PURPLE. GROUNDED (NEUTRAL) CONDUCTORS; GREY. GROUNDING CONDUCTORS SHALL BE GREEN.
   3. BRANCH CIRCUIT WIRING (#6 AND SMALLER) SHALL BE COLOR CODED BY CONTINUOUS INSULATION COLOR AND FEEDERS AND SERVICES (#4 AND LARGER) SHALL BE CODED AT ALL JUNCTION OR PULL POINTS (EXCEPT LB'S OR LBD'S) USING COLOR MARKERS OR PLASTIC TAPE MANUFACTURED FOR THE PURPOSE.
B. WIRING METHODS
   1. ALL CONDUCTORS SHALL BE INSTALLED IN ELECTRICAL METALLIC TUBING (EMT) UNLESS OTHERWISE NOTED, SPECIFIED OR AS SPECIFICALLY PROHIBITED BY THE AUTHORITY HAVING JURISDICTION. ALL FITTINGS AND COUPLINGS FOR EMT CONDUIT SHALL BE ALL STEEL RAIN TIGHT COMPRESSION TYPE OR ALL STEEL CONCRETE TIGHT SET SCREW TYPE.
   2. SCHEDULE 40 PVC CONDUIT, WITH FITTINGS AND COUPLINGS APPROPRIATE FOR THE USE, SHALL BE INSTALLED UNDERGROUND OR BELOW SLABS ON GRADE.
   3. TYPE MC CABLE WITH ALUMINUM ARMOR AND INTERNAL GROUND IS ACCEPTABLE FOR USE AS GENERAL BRANCH CIRCUIT WIRING FOR CIRCUITS 20 AMPERES OR LESS AND CONCEALED IN WALLS OR ABOVE SUSPENDED CEILING AND AS APPROVED BY THE AUTHORITY HAVING JURISDICTION.
C. ELECTRICAL SYSTEM SHALL BE COMPLETE AND EFFECTIVELY GROUNDED AS REQUIRED BY THE LATEST EDITION OF THE N.E.C. AND LOCAL CODES.
D. ALL WORK SHALL BE PERFORMED BY A LICENSED ELECTRICAL CONTRACTOR IN A FIRST CLASS WORKMANLIKE MANNER. THE COMPLETED SYSTEM SHALL BE FULLY OPERATIVE AND ACCEPTED BY ENGINEER/ARCHITECT.
E. ALL WORK SHALL BE COORDINATED WITH OTHER TRADES TO AVOID INTERFERENCE WITH THE PROGRESS OF CONSTRUCTION.
F. THE ELECTRICAL INSTALLATION SHALL MEET ALL STANDARD REQUIREMENTS OF POWER AND TELEPHONE COMPANIES, AND SHALL BE FULLY COORDINATED WITH THEM PRIOR TO COMMENCEMENT OF WORK.
G. PROVIDE AND INSTALL CONDUIT, CONDUCTORS, PULL WIRES, BOXES, COVER PLATES, AND WIRING DEVICES, FOR ALL OUTLETS AS INDICATED.
H. MATERIALS, PRODUCTS, AND EQUIPMENT, INCLUDING ALL COMPONENTS THEREOF, SHALL BE NEW AND SUCH AS APPEAR ON THE UL LIST OF APPROVED ITEMS AND SHALL MEET OR EXCEED THE REQUIREMENTS OF NEC, NEMA, AND IECE.
I. CONTRACTOR SHALL SUBMIT AT LEAST FIVE (5) SETS OF SHOP DRAWINGS OR CUT SHEETS OF LIGHTING FIXTURES, SWITCHES, AND OTHER ELECTRICAL ITEMS FOR APPROVAL BY ENGINEER/ARCHITECT.
J. CONTRACTOR SHALL BE RESPONSIBLE FOR ALL CUTTING AND PATCHING REQUIRED OF HIS WORK.
K. ALL LAY-IN LIGHTING FIXTURES SHALL BE SECURED TO THE SUSPENDED CEILING GRID AT EACH CORNER.
L. CONTRACTOR SHALL COORDINATE WITH MECHANICAL DRAWINGS AND PROVIDE ALL NECESSARY CONTROL WIRING.
M. ALL ELECTRICAL POWER WIRING FOR THE HVAC SYSTEM INCLUDING WIRING THRU LINE VOLTAGE CONTROL DEVICES SHALL BE THE RESPONSIBILITY OF THE ELECTRICAL CONTRACTOR.
N. CONDUCTORS FOR BRANCH CIRCUITS SHALL BE INCREASED FROM SIZES INDICATED ON PANEL SCHEDULES TO PREVENT VOLTAGE DROP EXCEEDING 3% AT THE FARTHEST DEVICE. LOADS FOR DETERMINING CONDUCTOR SIZE SHALL BE BASED ON ACTUAL CONNECTED LOAD OR 80% OF BREAKER SIZE, WHICHEVER IS GREATER. CONTACT ENGINEER OF RECORD FOR ALL RUNS IN EXCESS OF 100 FT. FOR DETERMINATION OF WIRE SIZE. FOR BID PURPOSES, INCREASE WIRE BY ONE (1) WIRE SIZE FOR RUNS 100 FT. TO 200 FT. AND TWO (2) WIRE SIZES FOR RUNS OVER 200 FT.
O. FEEDER CONDUCTORS SHALL BE INCREASED FROM SIZES INDICATED ON RISER DIAGRAM TO PREVENT VOLTAGE DROP EXCEEDING 2% LOADS FOR DETERMINING CONDUCTOR SIZE SHALL BE BASED ON ACTUAL CONNECTED LOAD OR 80% OF BREAKER SIZE, WHICHEVER IS GREATER.
P. THE CONTRACTOR SHALL CONFIRM WITH THE ELECTRICAL UTILITY COMPANY ANY AND ALL REQUIREMENTS SUCH AS: METERING EQUIPMENT REQUIREMENTS AND METERING EQUIPMENT LOCATION, TRANSFORMER SIZE AND LOCATION OR SERVICE POINT, CONDUIT ENTRY AND LUG SIZE RESTRICTIONS. THE CONTRACTOR SHALL SCHEDULE ALL REQUIRED DOWN TIME FOR THE OWNERS CONFIRMATION.
Q. ANY CONFLICTS AND DESCREPANCIES SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER BEFORE PROCEEDING WITH ANY WORK.

ELECTRICAL SHEET INDEX

E-1	IRRIGATION CONTROLLER POWER PLAN
E-2	IRRIGATION CONTROLLER POWER PLAN
E-3	IRRIGATION CONTROLLER NOTES, DETAILS, RISER



BROOKS BOX DETAIL

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IRRIGATION CONTROLLER NOTES, DETAILS, RISER

E-3

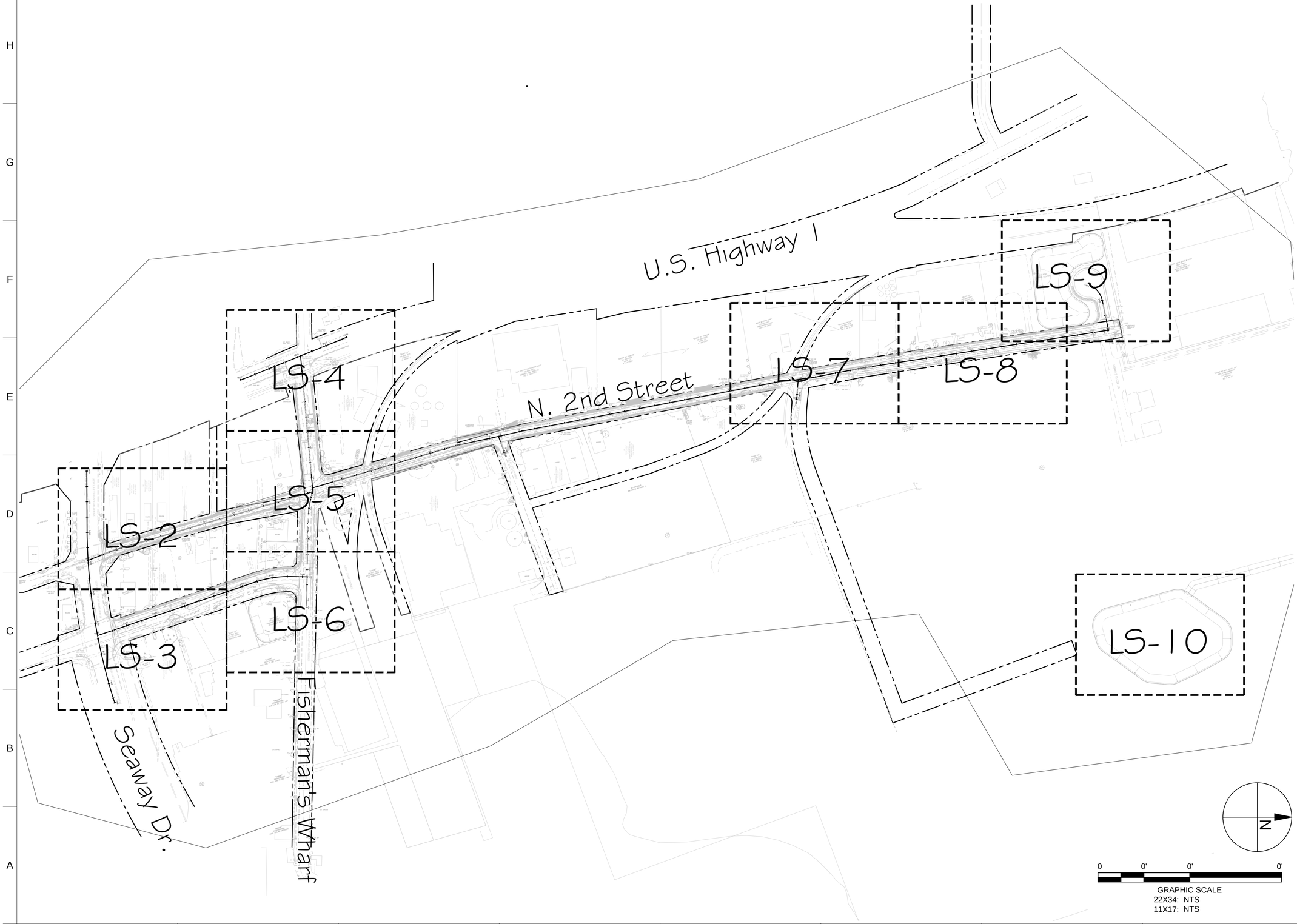
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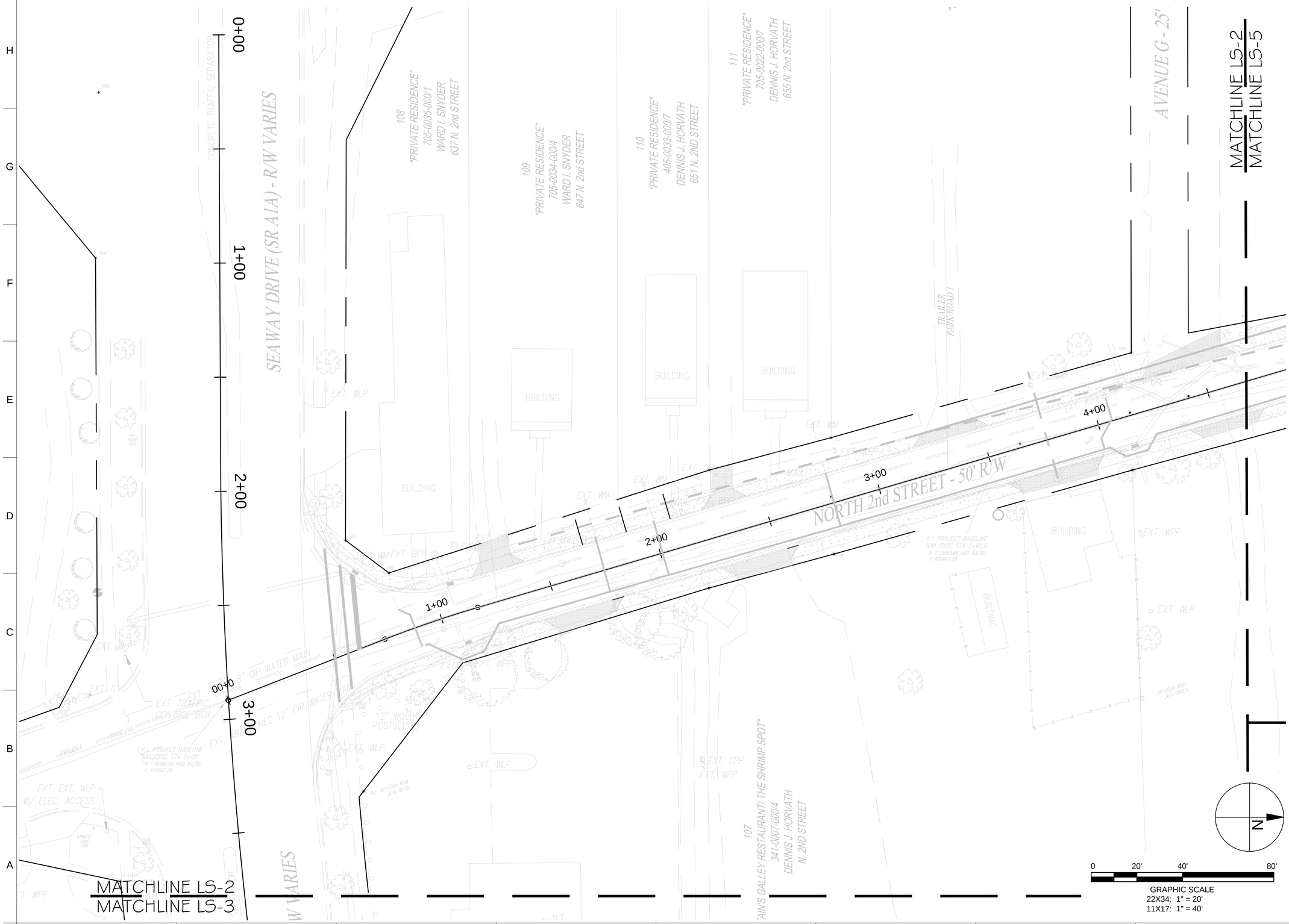
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LANDSCAPE KEY SHEET

LS-1

SHEET 1 OF 12

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LANDSCAPE PLAN

LS-2

SHEET 2 OF 12

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MATCHLINE LS-2
MATCHLINE LS-3

MATCHLINE LS-3
MATCHLINE LS-6

SEAWAY DRIVE (SR A1A) - R/W VAR

NORTH INDIAN RIVER DRIVE - 80' R/W

0+00
1+00
2+00
3+00
4+00
5+00
6+00
7+00
7+69

WOOD BOLLARDS
TO BE REMOVED

STAMPED TINTED CONCRETE
SEPARATOR
(SEE DETAILS ON SHEET HS-2)

MONUMENT SIGN
(SEE DETAILS ON
SHEET HS-1)

RO 1
TRD 11
JUP 35
FIG 15
COS 11
CRI 3
CRI 3
TRD 11
RO 1

TRD 109
RO 3
FIG 123
CS 1
ARA 189
CS 1
CS 2

"ST. LUCIE COUNTY CULTURAL AFFAIRS / PARKS & RECREATION DIVISION OFFICES"
801-0026-0010
ST. LUCIE COUNTY
600 N. INDIAN RIVER DRIVE

ONE STORY BUILDING

0 20' 40' 80'
GRAPHIC SCALE
22X34: 1" = 20'
11X17: 1" = 40'

N

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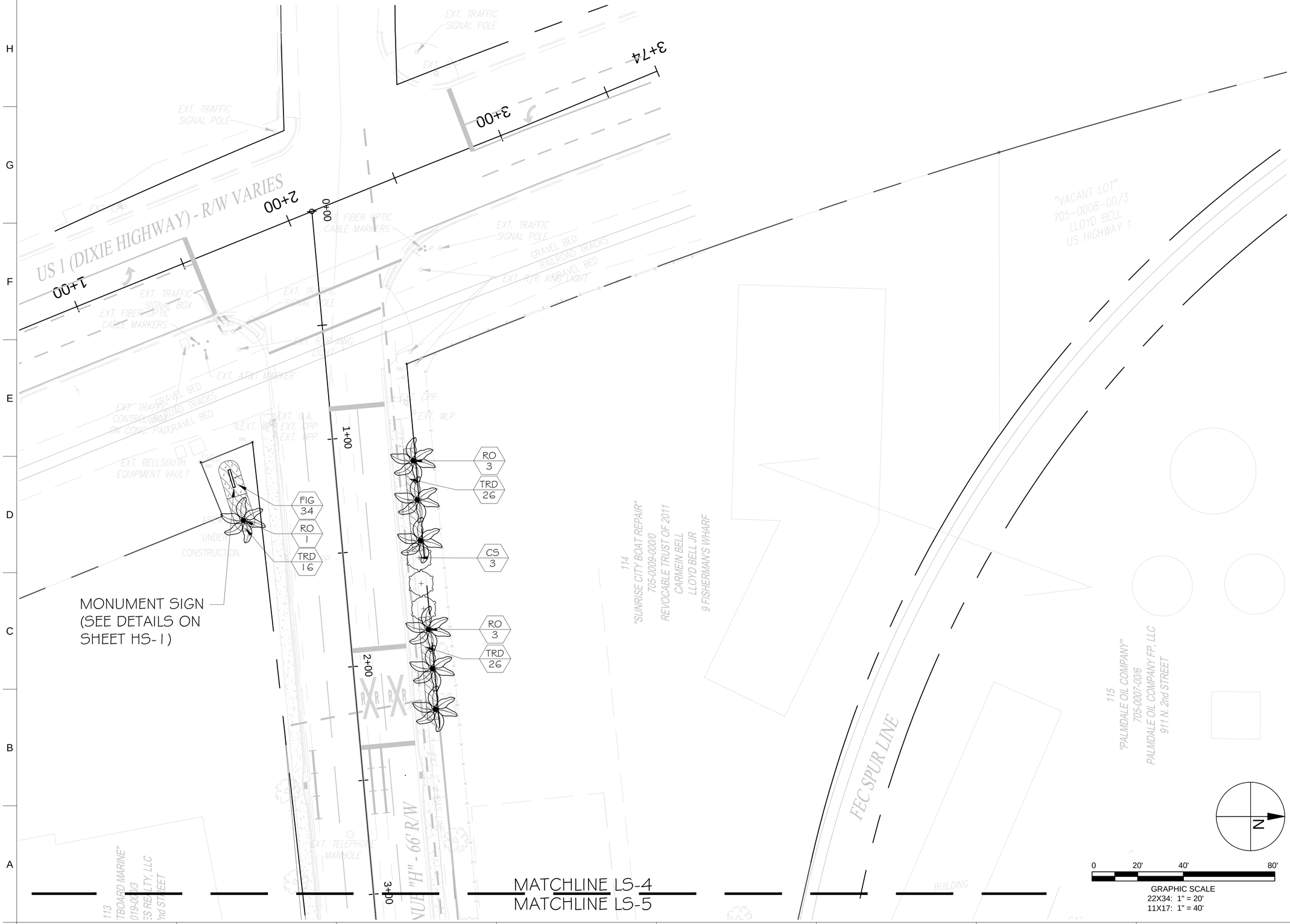
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LANDSCAPE PLAN

LS-3

SHEET 3 OF 12

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NORTH 2ND STREET
ROADWAY IMPROVEMENTS
CITY OF FORT PIERCE
ST. LUCIE COUNTY, FLORIDA

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Sunshine State
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NO	ZONE	REVISIONS / SUBMISSIONS	DATE
1		Revisions per County meeting on 7.28.14	8.19.14

PROJECT NO	C2013-064
DATE	NOV 2013
DESIGNED	BN
DRAWN	BN
CHECKED	BN
REVIEWED	TL
SCALE	AS SHOWN

DRAWING TITLE

LANDSCAPE PLAN

LS-4

SHEET 4 OF 12

BNOLAN, 8/19/2014 2:57:16 PM, J:\Projects Active\13-465 N 2nd Street - Port of Fort Pierce\Landscape\Landscape_Current_4.2.14.dwg

MATCHLINE LS-4
MATCHLINE LS-5

MATCHLINE LS-2
MATCHLINE LS-5

STAMPED TINTED CONCRETE CROSSWALKS
(SEE DETAILS ON SHEET HS-2)

EXISTING HEDGE ALONG FENCE LINE TO REMAIN

EXISTING HEDGE ALONG FENCE LINE TO REMAIN

MATCHLINE LS-5
MATCHLINE LS-6

NORTH 2nd STREET - 50' R/W

FISHERMAN'S WHARF - 66' R/W

FEC SPUR LINE

FEC SPUR

TRAILER PARK ROAD 2

AVENUE "H"

"ST. LUCIE OUTBOARD MA
705-0019-0003
BANCSHARES REALTY,
657 N. 2nd STREET

"DEBROOKS FISHING CORNER"
341-0003-000/2
DWIGHT DEBOLT, LYLE DEBOLT
107 FISHERMAN'S WHARF

"VACANT LOT"
3410005000/6
ST. LUCIE COUNTY
TBD

"BUCKSHOT BAY'S ROCKIN CAFE"
341-0004-000/9
JOSEPH G. MILLER
109 FISHERMAN'S WHARF

"VACANT LOT"
341-0003-000/5/2
DEBROOKS BEACH INC.
TERMINAL DRIVE

30' UTILITY EASEMENT
(AS PER MASTELLER & MOLER, INC. PLANS)

P.I. PROJECT BASELINE
NAIL/DISC STA. 7+44
N 1135936.62 NAD 83/90
E 874588.17

P.I. PROJECT BASELINE
DISC. STA. 84+00
N 1135965.95 NAD 83/90
E 874541.18

EXT. BELLSOUTH EQUIPMENT VAULT

EXT. ABANDONED 12" CIP WATER MAIN

EXT. 16" ø FORCE MAIN

EXT. WLP

EXT. GAS LINE

EXT. WPP

GAS VALVE

GATE

END OF TRACKS

BUILDING

CS 1
CS 2
SP 3
SPB 14
COU 1
RO 1
FIG 2

0+00
1+00
2+00
3+00
4+00
5+00
6+00
7+00
7+66

0 20' 40' 80'

GRAPHIC SCALE
22X34: 1" = 20'
11X17: 1" = 40'

N

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SEAL

REG. # 1018
Thomas P. Lucido

PROJECT TITLE

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LANDSCAPE PLAN

LS-5

SHEET 5 OF 12

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MATCHLINE LS-5
MATCHLINE LS-6

STAMPED TINTED CONCRETE
CROSSWALKS
(SEE DETAILS ON SHEET HS-2)

STAMPED TINTED CONCRETE
SEPARATOR
(SEE DETAILS ON SHEET HS-2)

NORTH INDIAN RIVER DRIVE - 80' R/W

5+00
6+00
7+00
7+15
8+00
8+24

POND 1A

ARA 95
CS 3
FIG 63
CS 1
TRD 109
RO 3
CS 1
SPB 72
SP 5
CHR 68
TRD 23
CHR 1
CHR 1
AR 3
TD 2
TRD 30
AR 2
TD 2
CHR 33
SPB 55
SP 5
CHR 12
TD 4
TRD 25
FIG 214
JUP 90
RO 1
CS 1
RO 1
CS 1
RO 1
CS 1
RO 1
CS 1
RO 1
CS 1
RO 1
CS 1
RO 1

EXISTING HEDGE ALONG
FENCE LINE TO REMAIN

TERMINAL DRIVE - 50' R/W

"UNKNOWN"
314-0005-000/2
KING MARITIME GROUP, LLC
100 TERMINAL DRIVE

"VACANT LOT"
341-0009-000/4
FISHMONGER INVESTORS LLC
25 FISHERMAN'S WHARF

"VACANT LOT"
341-0009-010/7
ST. LUCIE COUNTY
25 FISHERMAN'S WHARF

"CK MARINE CONSTRUCTION"
341-0001-000/8
KING MARITIME GROUP LLC
18 FISHERMAN'S WHARF

"UNKNOWN"
240334100100004
O.R.B.: 2066, PP. 2857 & 2858

FISHERMAN'S WHARF - 66' R/W

EXT. WPP
EXT. CONCRETE
EXT. BFP

0 20' 40' 80'
GRAPHIC SCALE
22X34: 1" = 20'
11X17: 1" = 40'

N

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LANDSCAPE PLAN

LS-6

SHEET 6 OF 12

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STAMPED TINTED CONCRETE SEPARATOR
(SEE DETAILS ON SHEET HS-2)

FEC SPUR LINE

AVENUE "W" - 50' R/W

0+00 16+00 17+00 18+00 19+00 20+00 0+50 0+66

SP 3 | SPB 100 | CS 1 | SP 3 | SPB 14 | CS 1 | SP 3 | SPB 9 | CS 1 | SP 3 | SPB 9 | CS 1 | SP 3 | SPB 11

MATCHLINE LS-7
MATCHLINE LS-8

"VACANT LOT"
213-0001-010/7
DESTIN BEACH INC.
N. 2nd STREET

N

0 20' 40' 80'
GRAPHIC SCALE
22X34: 1" = 20'
11X17: 1" = 40'

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LANDSCAPE PLAN

LS-7

SHEET 7 OF 12

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POND 3

STAMPED TINTED CONCRETE SEPARATOR (SEE DETAILS ON SHEET HS-2)

STAMPED TINTED CONCRETE SEPARATOR (SEE DETAILS ON SHEET HS-2)

MATCHLINE LS-8
MATCHLINE LS-9

MATCHLINE LS-7
MATCHLINE LS-8

NORTH 2nd STREET - R/W VARIES

"VACANT LOT
242-0002-000/1
MMG HOLDINGS LLC
1401 N. 2nd STREET

EXT. WATER LINE MARKER
NO TRESPASSING SIGN
EXT. MONITOR WELL
BUILDING
BUILDING
EXT. WELL
EXT. WELL
EXT. WELL
25 MPH
16" FORCE MAIN
16" FORCE MAIN

21+00
22+00
23+00
24+00
25+00

CHR 31
SPB 43
TD 3
TRD 30
SP 5
TRD 56
MYF 45
SP 9
TD 3
SPB 54
MYF 45
SP 3
CS 1
SPB 9
SP 3
CS 1
SPB 9
SP 3
CS 1
SPB 9
SP 3
CS 1
SPB 9
SP 3
CS 1
SPB 9
SP 3
CS 1
SPB 9
SP 3
CS 1
SPB 9
SP 3
CS 1
SPB 11
CS 1

N

0 20' 40' 80'

GRAPHIC SCALE
22X34: 1" = 20'
11X17: 1" = 40'

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LANDSCAPE PLAN

LS-8

SHEET 8 OF 12

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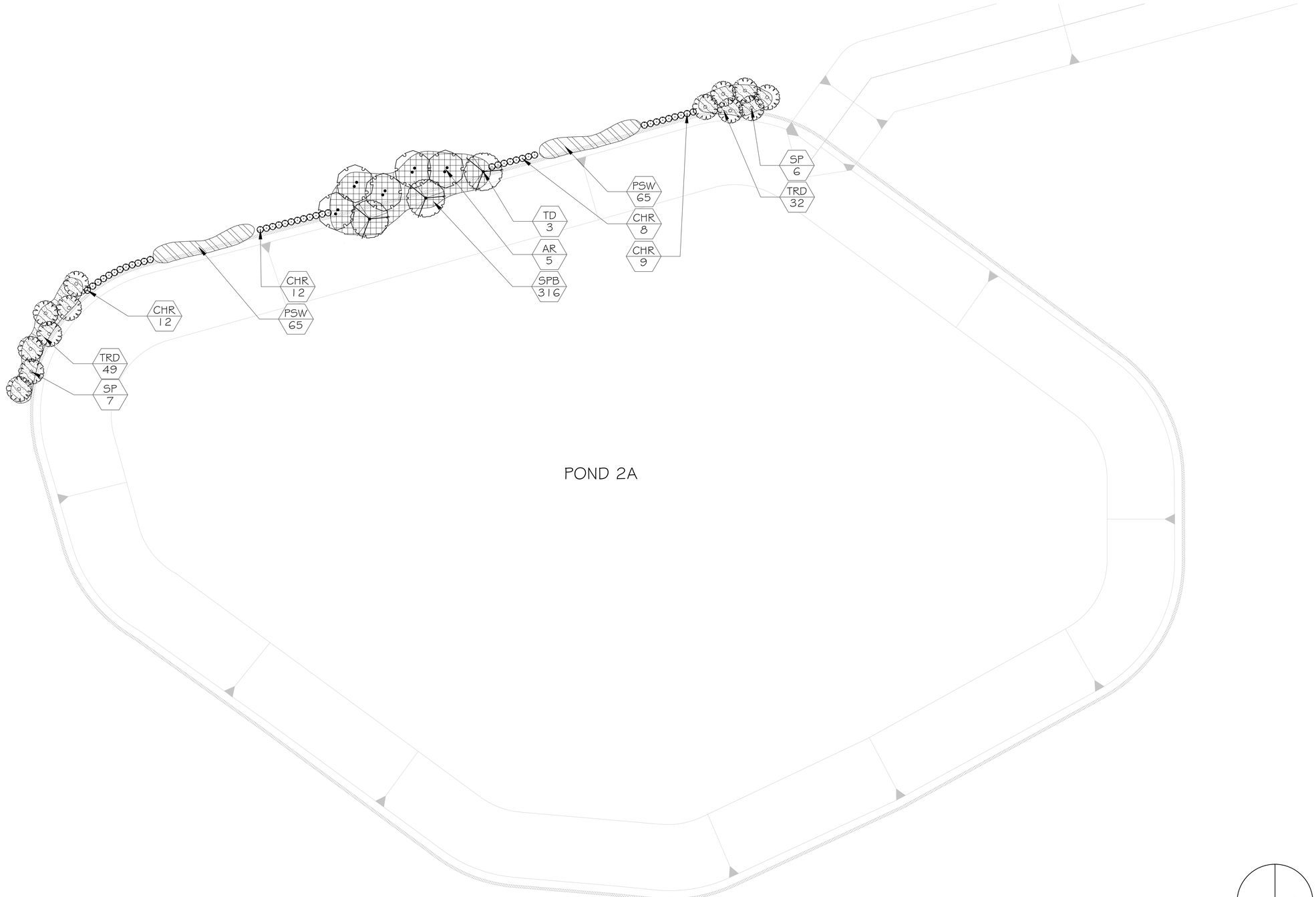
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LANDSCAPE PLAN

LS-9

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LANDSCAPE PLAN

N

0 20' 40' 80'

GRAPHIC SCALE
22X34: 1" = 20'
11X17: 1" = 40'

LS-10

SHEET 10 OF 12

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PLANT_SCHEDULE

TREES	QTY	BOTANICAL NAME	COMMON NAME	SPECS	REMARKS
AR	19	Acer rubrum	Red Maple	FG, 12` HT x 5` SPR, 2.5", HO, AS	FDOT Pay Item: 580-1-2
CS	38	Conocarpus erectus sericeus	Silver Buttonwood	FG, 10`HT X 6` SPD, STD, F	FDOT Pay Item: 580-1-2
TD	24	Taxodium distichum	Bald Cypress	FG, 12` HT x 6` SPR, 3.5"C, F, SP,	FDOT Pay Item: 580-1-2

PALM TREES	QTY	BOTANICAL NAME	COMMON NAME	SPECS	REMARKS
RO	18	Roystonea regia	Florida/Cuban Royal Palm	FG, 12` GW, SP, No Scars, Straight	FDOT Pay Item: 580-1-2; Specimen
SP	126	Sabal palmetto	Sabal Palm	FG, 8`-18` CT HT, HV CAL, SP	FDOT Pay Item: 580-1-2

SHRUBS	QTY	BOTANICAL NAME	COMMON NAME	SPECS	REMARKS
CHR	~~1,343~~ 279	Chrysobalanus icaco `Redtip`	Red Tip Cocoplum	3G, 24" HT x 18" SPR, F, 30" OC	FDOT Pay Item: 580-1-1
COU	9	Coccoloba uvifera	Sea Grape	25G, 8` OA, FTB	FDOT Pay Item: 580-1-2
COS	11	Conocarpus erectus sericeus	Silver Buttonwood	3G, 30" HT x 24" SPR, FTB, 36" OC	FDOT Pay Item: 580-1-1
MYF	183	Myrcianthes fragrans	Simpson`s Stopper	3G, 30" HT x 24" SPR, FTB, 36" OC	FDOT Pay Item: 580-1-1

ACCENTS	QTY	BOTANICAL NAME	COMMON NAME	SPECS	REMARKS
CRI	6	Crinum augustum `Queen Emma`	`Queen Emma` Crinum	7G, 36" OA, FTB, 4` OC	FDOT Pay Item: 580-1-2

GRASSES	QTY	BOTANICAL NAME	COMMON NAME	SPECS	SPACING	REMARKS
PSW	234	Pennisetum setaceum `White`	White Foutain Grass	3G, 24" OA, F	24" o.c.	FDOT Pay Item: 580-1-1
SPB	1,316	Spartina bakeri	Sand Cordgrass	1G, 18" HT x 12" SPR, F	24" o.c.	FDOT Pay Item: 580-1-1
TRD	551	Tripsacum dactyloides	Fakahatchee Grass	3G, 24"X18",F	36" o.c.	FDOT Pay Item: 580-1-1

GROUND COVERS	QTY	BOTANICAL NAME	COMMON NAME	SPECS	SPACING	REMARKS
ARA	284	Arachis glabrata `Ecoturf`	Perennial Peanut	1G, Full Pot,	18" o.c.	FDOT Pay Item: 580-1-1
FIG	449	Ficus microcarpa `Fuyuensis`	Green Island Ficus	3G, 12" HT x 15" SPR, F,	24" o.c.	FDOT Pay Item: 580-1-1
JUP	125	Juniperus chinensis `Parsonii`	Parson`s Juniper	3G, 10" HT x 18" SPR, F	24" o.c.	FDOT Pay Item: 580-1-1

N

0 0' 0' 0'

GRAPHIC SCALE
22X34: NTS
11X17: NTS

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PLANT SCHEDULE

LS-11

SHEET 11 OF 12

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PLANTING NOTES:

FERTILIZER

FERTILIZERS SHALL BE SLOW RELEASE, UNIFROM IN COMPOSITION, DRY AND FREE FLOWING. THE FERTILIZER SHALL BE DELIVERED TO THE SITE IN THE ORIGINAL UNOPENED BAGS, EACH BEARING THE MANUFACTURERS STATEMENT OF ANALYSIS,AND SHALL MEET THE FOLLOWING REQUIREMENTS: SIX (6) PERCENT NITROGEN,SIX (6) PERCENT PHOSPHORUS,AND SIX (6) PERCENT POTASSIUM. FERTILIZER SHALL BE APPLIED TO ALL SHRUBS (1/3 LB PER 3 GAL POT, 1/4 LB PER 1 GAL POT) AND GROUNDCOVER. THE SOD STARTER FERTILIZER MIXTURE SHALL BE A 5-10-10 ANALYSIS. A 14-14-14 FERTILIZER ANALYSIS IS REQUIRED ON ALL TREES AND SHRUBS OVER 5' IN HEIGHT (1/2 LB PER 5' OF SPREAD). AGRIFORM TABLETS WITH TWENTY (20) PERCENT NITROGEN, TEN (10) PERCENT PHOSPHOROUS,FIVE (5) PERCENT POTASSIUM IN 21 GRAM SIZES SHALL BE APPLIED ALONG WITH THE FERTILIZER PROCESS (1 WITH 1 GAL PLANTS. 2 WITH 3 GAL PLANTS AND 2 TABLETS PER 1" OF TREE TRUNK CALIPER). MAGNESIUM SULFATE SHALL BE APPLIED TO ALL PALMS AT INSTALLATION AT A RATE OF 1/2 LB PER INCH OF TRUNK CALIPER. MANGANESE SHALL BE APPLIED AT THE SAME RATE.

MULCH

MULCH MATERIAL SHALL BE COLORED 'A' GRADE CERTIFIED RE-CYCLED MULCH AND MOISTENED AT THE TIME OF APPLICATION TO PREVENT WIND DISPLACEMENT. MULCH SHALL BE APPLIED TO A MINIMUM OF 3" DEPTH IN PLANTING BEDS. MULCH SHALL NOT BE PLACED WITHIN 6" OF TREE OR PALM TRUNKS.

SOD

THE SOD SHALL BE CERTIFIED TO MEET FLORIDA STATE PLANT BOARD SPECIFICATIONS,ABSOLUTELY TRUE TO VARIETAL TYPE,AND FREE FROM WEEDS,FUNGUS,INSECTS AND DISEASE OF ANY KIND.

SUBSTITUTIONS

NO SUBSTITUTION OF PLANT MATERIAL TYPES OR SIZES WILL BE ALLOWED WITHOUT WRITTEN AUTHORIZATION FROM THE LANDSCAPE ARCHITECT OF RECORD. CONTAINER GROWN MATERIAL WILL NOT BE ACCEPTED AS A SUBSTITUTE FOR B & B MATERIAL UNLESS PREVIOUSLY APPROVED. INTENDED SUBSTITUTIONS SHALL BE SPELLED OUT IN BID.

MEASUREMENTS

SHADE TREES: HEIGHT SHALL BE MEASURED FROM GROUND TO THE AVERAGE BRANCH HEIGHT OF CANOPY. SPREAD SHALL BE MEASURED TO THE END OF BRANCHING EQUALLY AROUND THE CROWN FROM THE CENTER OF THE TRUNK. MEASUREMENTS ARE NOT TO INCLUDE ANY TERMINAL GROWTH. SINGLE TRUNK TREES SHALL BE FREE OF "V" CROTCHES THAT COULD BE POINTS OF WEAK LIMB STRUCTURE OR DISEASE INFESTATION.

SHRUBS: HEIGHT SHALL BE MEASURED FROM THE GROUND TO THE AVERAGE POINT WHERE MATURE PLANT GROWTH STOPS. SPREAD SHALL BE MEASURED TO THE END OF BRANCHING EQUALLY AROUND THE SHRUB MASS. MEASUREMENT AREA NOT TO INCLUDE ANY TERMINAL GROWTH.

PALMS: CLEAR TRUNK SHALL BE MEASURED FROM THE GROUND AT THE TIME OF INSTALLATION TO THE POINT WHERE THE MATURE AGED TRUNK JOINS THE IMMATURE OR GREEN PORTION OF THE TRUNK OR HEAD.

GREY WOOD (G.W.) – SHALL BE MEASURED FROM THE GROUND AT THE TIME OF INSTALLATION TO TOP OF THE HARDENED TRUNK.

OVERALL HEIGHT (O.A.) – SHALL BE MEASURED FROM THE GROUND AT THE TIME OF INSTALLATION TO THE AVERAGE FROND HEIGHT.

PALMS WITH MARRED OR BURNED TRUNKS WILL NOT BE ACCEPTED.

PLANTING SOIL AND BACKFILL – GENERAL

PLANTING SOIL SHALL BE RECYCLED TOPSOIL.
RECYCLED TOPSOIL SHALL CONSIST OF A STABILIZED MIXTURE OF GROUND YARD TRIMMINGS AND POSSIBLY BIOSOLIDS PROCESSED ACCORDING TO STATE OF FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION GUIDELINES FOR THE PROCESSING AND DISTRIBUTION OF SEWAGE SLUDGE COMPOST. RECYCLED TOPSOIL SHALL ONLY BE OBTAINED FROM A STATE PERMITTED RECYCLING FACILITY WHICH IS ALSO D.O.T. CERTIFIED AND STORES PRODUCT ON A PAD WITH A CURRENT NEMATODE CERTIFICATION FROM FLORIDA DEPARTMENT OF AGRICULTURE. RECYCLED TOPSOIL SHALL HAVE THE FOLLOWING CHARACTERISTICS:

- WEED FREE
- MOISTURE CONTENT 50% BY WEIGHT MAXIMUM
- WATER HOLDING CAPACITY 200% BY WEIGHT MINIMUM
- CARBON TO NITROGEN RATIO LESS THAN 25 TO 1
- ORGANIC MATTER CONTENT 40% BY DRY WEIGHT MINIMUM
- SOLUBLE SALTS LESS THAN 3 MMHOS/CM
- PH RANGE 7.0 – 7.9
- MINIMUM NUTRIENT LEVELS AS FOLLOWS:

MACRO NUTRIENTS: NITROGEN (N) – 1% MINIMUM, WATER INSOLUBLE NITROGEN 90% MINIMUM, PHOSPHORUS (P) – 0.5% MINIMUM, POTASSIUM (K) – 0.2% MINIMUM AND OTHER MACRO AND MICRO NUTRIENTS. THE RECYCLED TOPSOIL SHALL CONTAIN LEVELS OF THOSE MICRO NUTRIENTS NECESSARY FOR PLANT GROWTH. THESE INCLUDE CALCIUM, MAGNESIUM, SULFUR, BORON, COPPER, IRON, MANGANESE AND MOLYBDENUM. RECYCLED TOPSOIL NOT MEETING THESE REQUIREMENTS WILL NOT BE ACCEPTED.

BACKFILL:
ALL NEW AND TRANSPLANTED PLANT MATERIAL (INCLUDING NEW SOD) SHALL BE PLANTED ONLY AFTER PREPARATION OF EXISTING SOIL AS FOLLOWS:
SPREAD A LAYER OF 3" DEPTH OF RECYCLED TOPSOIL (AS DEFINED ABOVE) OVER THE ENTIRE PLANTING AREA. THE TOPSOIL SHALL THEN BE UNIFORMLY DISKED, TILLED OR AERIFIED INTO THE EXISTING SOIL TO A DEPTH OF 12" UNDERNEATH SHRUBS AND GROUNDCOVERS, 6" UNDERNEATH SOD AND TO A DEPTH OF 36" FOR THE TREE PITS, WITH THE FOLLOWING EXCEPTION: NO ROTOTILLING OR DISKING SHALL OCCUR CLOSER TO THE TRUNKS OF ESTABLISHED PLANTS THAN ONE HALF (1/2) THE DISTANCE OF THE CANOPY FURTHER OUT FROM THE DRIP LINE OF THE EXISTING PLANT CANOPY. ALL PLANTS, INCLUDING HEDGES AND GROUND COVER SHALL BE PLANTED IN INDIVIDUALLY DUG HOLES AND THE MATERIAL DUG FROM THE HOLES SHALL THEN BE FURTHER MIXED WITH THE PREPARED SITE SOIL PRIOR TO BACKFILLING OF THE PLANTING HOLES AROUND THE ROOT BALLS. NO ADDITIONAL BACKFILL SOIL SHALL BE USED.

AN EXCEPTION ARE PLANTING PITS FOR CABBAGE PALMS, WHICH SHALL BE BACKFILLED WITH CLEAN NATIVE SAND ONLY.

REMOVE EXCESS MATERIAL TO PROVIDE PROPER FINISHED GRADE.

ALL PLANTING PITS AND PLANTING AREAS SHALL BE AMENDED WITH AGRODIAMONDS ® PER MANUFACTURERS SPECIFICATIONS.

PLANTING SOIL AND BACKFILL – MEDIANS

ALL PLANTED MEDIANS SHALL BE FREE OF ANY EXISTING ROADWAY MATERIAL INCLUDING ASPHALT BASE & SUB-BASE MATERIAL TO A MINIMUM DEPTH OF 24" (36" AT TREE LOCATIONS). MEDIANS SHALL BE BACKFILLED WITH CLEAN NATIVE SOIL FREE OF DEBRIS AND ANY SUBSTANCES THAT MAY BE A HINDRANCE TO PLANT GROWTH WITH A TOP LAYER OF RECYCLED TOPSOIL (SEE SPECIFICATIONS ABOVE). PLANTING MIX SHALL BE THOROUGHLY MIXED IN WITH NATIVE SOIL TO A DEPTH OF 12" MINIMUM. THE TOP OF THE PLANTING MIX SHALL BE 4"-6" BELOW THE CURB TO PROVIDE ADDITIONAL ROOM FOR MATERIAL EXCAVATED DURING THE PLANTING. FOLLOWING LANDSCAPE INSTALLATION, ALL MEDIANS SHALL BE GRADED TO DRAIN OVER THE TOP OF THE CURB & AWAY FROM MEDIANS.

GENERAL NOTES:

1. THE CONTRACTOR SHALL PERSONALLY ACQUAINT HIM/HER SELF WITH THE EXISTING SITE CONDITIONS AND THE EXTENT AND SCOPE OF WORK REQUIRED.
2. THE PLANT LIST INDICATES THE NAMES, SIZES AND SPACING OF SPECIFIC PLANT MATERIALS. QUANTITIES HAVE BEEN PROVIDED TO THE CONTRACTOR AS A CONVENIENCE, THE CONTRACTOR IS RESPONSIBLE FOR HIS/HER OWN QUANTITY COUNT. IN CASE OF DISCREPANCIES BETWEEN THE DRAWINGS AND PLANT LIST, THE QUANTITIES ON THE DRAWINGS SHALL PREVAIL.
3. NO SUBSTITUTES ON VARIETIES LISTED WILL BE ALLOWED WITHOUT WRITTEN APPROVAL FROM LANDSCAPE ARCHITECT.
4. PLANTS SHALL BE WATERED AS NECESSARY OR WITHIN 24 HOURS AFTER NOTIFICATION BY THE LANDSCAPE ARCHITECT.
5. THE LOCATIONS OF PLANTS, AS SHOWN IN THESE PLANS, ARE APPROXIMATE. THE FINAL LOCATIONS MAY BE ADJUSTED TO ACCOMMODATE UNFORESEEN FIELD CONDITIONS. MAJOR ADJUSTMENTS TO THE LAYOUT ARE TO BE APPROVED BY THE LANDSCAPE ARCHITECT OF RECORD.
6. ALL PLASTIC FABRIC SHALL BE REMOVED FROM PLANT MATERIAL AT TIME OF INSTALLATION.
7. ALL TREES MUST BE STAKED AS SHOWN ON THE LANDSCAPE DETAIL SHEET WITHIN 24 HRS OF PLANTING. STAKES TO REMAIN FOR A MINIMUM OF 12 MONTH BUT NO LONGER THAN 18 MONTH. CONTRACTOR RESPONSIBLE FOR MAINTENANCE AND REMOVAL OF THE STAKES.
8. ALL TREES MUST BE PRUNED AS PER LANDSCAPE ARCHITECT DIRECTION.
9. ALL SOD EDGES SHALL BE TRIMMED AS PER THE LANDSCAPE ARCHITECTS DIRECTION.
10. ALL SHRUBS, TREES, GROUNDCOVERS, SOD AND WILDFLOWER AREAS SHALL HAVE IMPROVED SOIL AS PER PLANTING SOIL NOTES.
11. DO NOT ALLOW AIR POCKETS TO FROM WHEN BACKFILLING.
12. SOAK PLANTS IMMEDIATELY WITH WATER FOLLOWING PLANTING.
13. MAINTAIN THE ORIGINAL GRADE OF THE TREE BASE.
14. DO NOT BREAK ROOTBALL.
15. ALL PLANT SHALL BE HARDY UNDER CLIMATIC CONDITIONS SIMILAR TO THOSE ON LOCALITY OF THE PROJECT.
16. THE LANDSCAPE CONTRACTOR SHALL WATER, MULCH, WEED, PRUNE, AND OTHERWISE MAINTAIN ALL PLANTS, INCLUDING SOD, THROUGH THE PLANT GUARANTEE PERIOD. SETTLED PLANTS SHALL BE RESET TO PROPER GRADE, PLANTING SAUCERS RESTORED, AND DEFECTIVE WORK CORRECTED.
17. THE LANDSCAPE CONTRACTOR SHALL AT ALL TIMES KEEP THE PREMISES FREE FROM ACCUMULATION OF WASTE MATERIALS OR DEBRIS CAUSED BY THE CREWS DURING THE PERFORMANCE OF THE WORK. UPON COMPLETION OF THE WORK, THE CONTRACTOR SHALL PROMPTLY REMOVE ALL WASTE MATERIALS, DEBRIS, UNUSED PLANT MATERIAL, EMPTY PLANT CONTAINERS AND ALL EQUIPMENT FROM THE PROJECT SITE.
18. UPON COMPLETION OF THE WORK, THE LANDSCAPE CONTRACTOR SHALL NOTIFY THE LANDSCAPE ARCHITECT AND REQUEST A FINAL INSPECTION. ANY ITEMS THAT ARE JUDGED INCOMPLETE OR UNACCEPTABLE BY THE LANDSCAPE ARCHITECT OR REPRESENTATIVE SHALL BE PROMPTLY CORRECTED BY THE LANDSCAPE CONTRACTOR.
19. THE LANDSCAPE CONTRACTOR SHALL GUARANTEE ALL PLANT MATERIAL FOR A PERIOD OF ONE (1) YEAR FROM THE DATE OF FINAL ACCEPTANCE IN WRITING FROM THE LANDSCAPE ARCHITECT. AT THE TIME OF FINAL ACCEPTANCE THE ONE (1) YEAR PERIOD SHALL COMMENCE. ANY MATERIALS WHICH HAVE DIED DURING THIS PERIOD SHALL BE PROMPTLY REPLACED WITH SPECIMENS THAT MEET THE MINIMUM REQUIREMENTS CALLED FOR IN THE DRAWINGS. THE LANDSCAPE CONTRACTOR SHALL NOT BE HELD RESPONSIBLE FOR THE DEATH OR DAMAGE RESULTING FROM LIGHTNING, VANDALISM, AUTOMOBILES OR FROM NEGLIGENCE BY THE OWNER. CONTRACTOR SHALL BE RESPONSIBLE FOR WATERING, MULCHING, WEDDING, PRUNING, AND OTHERWISE MAINTAINING PLANTS DURING THE GUARANTEE PERIOD UNLESS A WRITTEN AGREEMENT WITH THE LANDSCAPE ARCHITECT PROVIDES FOR A DIFFERENT ARRANGEMENT.
20. ALL LABOR AND MATERIAL FOR SOIL AMENDMENTS AND FERTILIZER THAT IS REQUIRED TO INSURE THE SUCCESSFUL ESTABLISHMENT AND SURVIVAL OF THE PROPOSED VEGETATION AS WELL AS ALL COST FOR THE REMOVAL OF UNSUITABLE OR EXCESS BACKFILL MATERIAL SHALL BE INCLUDED IN THE CONTRACTORS BID TO PERFORM THE WORK PRESENTED IN THIS PLAN SET.
21. NO LANDSCAPING ADDED UNDER THIS PROJECT SHALL BE LOCATED SUCH THAT SAID LANDSCAPING OBSCURES MOTORIST'S VISIBILITY OF ANY EXISTING SIGN(S).

WATERING SCHEDULE

APPLICATION SCHEDULE	
PALM TREES	20 GAL/APPLICATION/PLANT
LARGE TREES	30 GAL/APPLICATION/PLANT
SMALL TREES	20 GAL/APPLICATION/PLANT
LARGE SHRUBS	10 GAL/APPLICATION/PLANT
SMALL SHRUBS	5 GAL/APPLICATION/PLANT
GROUNDCOVER	5 GAL/APPLICATION/PLANT
APPLICATION AMOUNT	
MONTH 1	12 APPLICATIONS
MONTH 2	12 APPLICATIONS
MONTH 3	8 APPLICATIONS
MONTH 4	8 APPLICATIONS
MONTH 5	5 APPLICATIONS
TOTAL:	45 APPLICATIONS

ABBREVIATIONS:

CT- CLEAR TRUNK
F- FULL
FTB- FULL TO BOTTOM
HO- HARDENED OFF
HT- HEIGHT
HV Cal- HEAVEY CALIPER
ML- MULT-LEADER
OA- OVERALL
OC- ON CENTER
SP- SPECIMEN
SPR- SPREAD
STD- STANDARD
TP- TRIPLE

PLANT MATERIALS

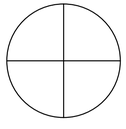
TREES, PALMS, SHRUBS,GROUND COVERS:

PLANT SPECIES AND SIZES SHALL CONFORM TO THOSE INDICATED IN THE DRAWINGS. NOMENCLATURE SHALL CONFORM TO STANDARDIZED PLANT NAMES, 1942 EDITION. ALL NURSERY STOCK SHALL BE IN ACCORDANCE WITH GRADES AND STANDARDS FOR NURSERY PLANTS, PARTS I & II, LATEST EDITION PUBLISHED BY THE FLORIDA DEPARTMENT OF AGRICULTURE AND CONSUMER SERVICES, UNLESS SPECIFIED OTHERWISE. ALL PLANTS SHALL BE NORMAL FOR THE VARIETY AND FLORIDA GRADE NUMBER 1 OR BETTER AS DETERMINED BY THE FLORIDA DIVISION OF PLANT INDUSTRY.

SPECIMEN MEANS AN EXCEPTIONALLY HEAVY, SYMMETRICAL. TIGHTLY KNIT PLANT, SO TRAINED OR FAVORED IN ITS DEVELOPMENT THAT FIRST APPEARANCE IS UNQUESTIONABLE AND IT IS OUTSTANDINGLY SUPERIOR IN FORM, NUMBER OF BRANCHES, COMPACTNESS AND SYMMETRY.

ALL PLANTS SHALL BE FRESHLY DUG, SOUND, HEALTHY, VIGOROUS, WELL BRANCHED AND FREE OF DISEASE AND INSECT EGGS AND LARVAE AND SHALL HAVE ADEQUATE ROOT SYSTEMS. TREES FOR PLANTING ROWS SHALL BE UNIFORM IN SIZE AND SHAPE. ALL MATERIALS SHALL BE SUBJECT TO APPROVAL BY THE LANDSCAPE ARCHITECT, WHERE REQUIREMENTS ARE OMITTED FROM THE PLANT LIST. PLANTS SHALL BE PRUNED PRIOR TO DELIVERY ONLY UPON THE APPROVAL OF THE LANDSCAPE ARCHITECT.

ALL CONTAINER GROWN MATERIAL SHALL BE HEALTHY, VIGOROUS, WELL ROOTED PLANTS AND ESTABLISHED IN THE CONTAINER IN WHICH THEY ARE SOLD. THE PLANTS SHALL HAVE TOPS OF GOOD QUALITY AND BE IN HEALTHY GROWING CONDITION. AN ESTABLISHED CONTAINER GROWN PLANT SHALL BE TRANSPLANTED INTO A CONTAINER AND GROWN IN THAT CONTAINER SUFFICIENTLY LONG ENOUGH FOR THE NEW FIBROUS ROOTS TO HAVE DEVELOPED SO THAT THE ROOT MASS WILL RETAIN ITS SHAPE AND HOLD TOGETHER WHEN REMOVED FROM THE CONTAINER.



0 0' 0' 0'

GRAPHIC SCALE
22X34: NTS
11X17: NTS

lucido & associates

701 E Ocean Blvd., Stuart, Florida 34994 (772) 220-2100. Fax (772) 223-0220
100 Avenue A Suite 2A, Fort Pierce, Florida 34950 (772) 467-1301. Fax (772) 467-1303
827 North Thornton Avenue, Orlando, Florida 32803 (407) 898-9521. Fax (407) 898-9768

SEAL

REG. # 1018
Thomas P. Lucido

PROJECT TITLE

NORTH 2ND STREET
ROADWAY IMPROVEMENTS
CITY OF FORT PIERCE
ST. LUCIE COUNTY, FLORIDA

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1		Revisions per County meeting on 7.28.14	8.19.14
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PROJECT NO	C2013-064
DATE	NOV 2013
DESIGNED	BN
DRAWN	BN
CHECKED	BN
REVIEWED	TL
SCALE	AS SHOWN

DRAWING TITLE

LANDSCAPE NOTES AND DETAILS

LS-12

SHEET 12 OF 12

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NORTH 2ND STREET

WATER/WASTEWATER IMPROVEMENT

LOCATION MAP

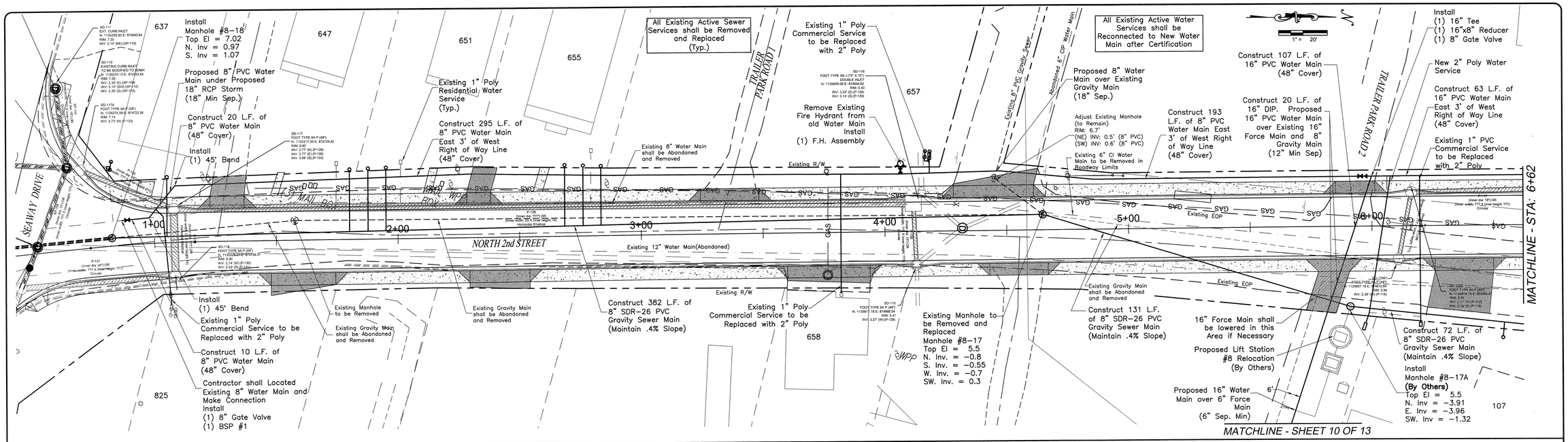


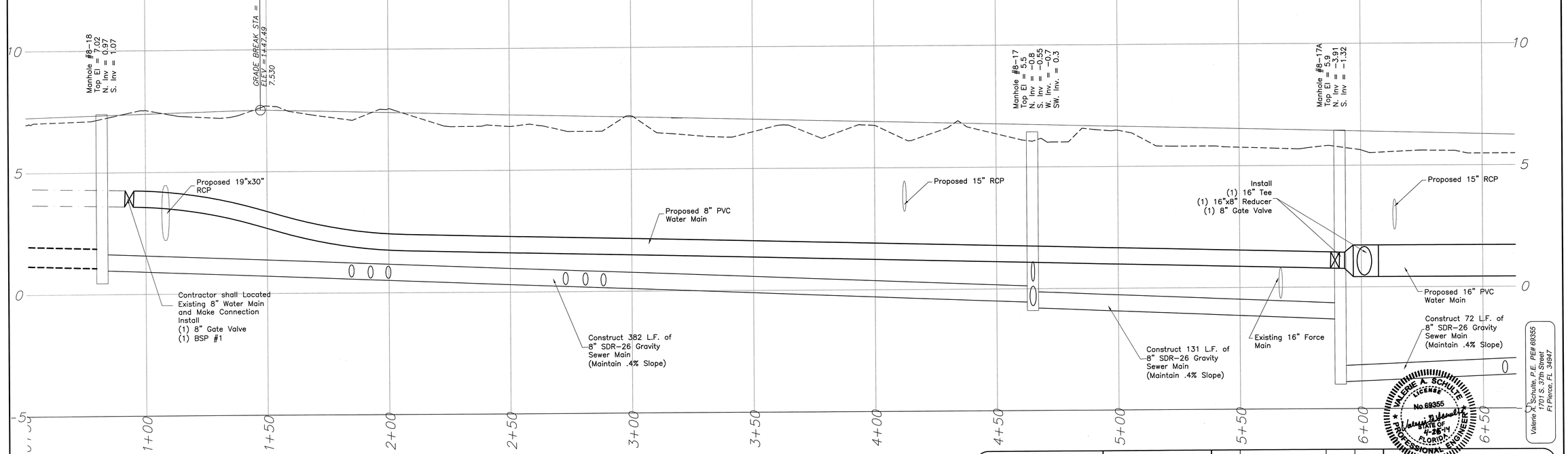
INDEX OF SHEETS

SHEET NO.	DESCRIPTION
1	COVER SHEET
2-10	PLANS
11-13	DETAILS

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WATER/WASTEWATER/GAS ENG.
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772-466-1600

NORTH 2ND STREET WATER/WASTEWATER IMPROVEMENTS





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NORTH 2ND STREET
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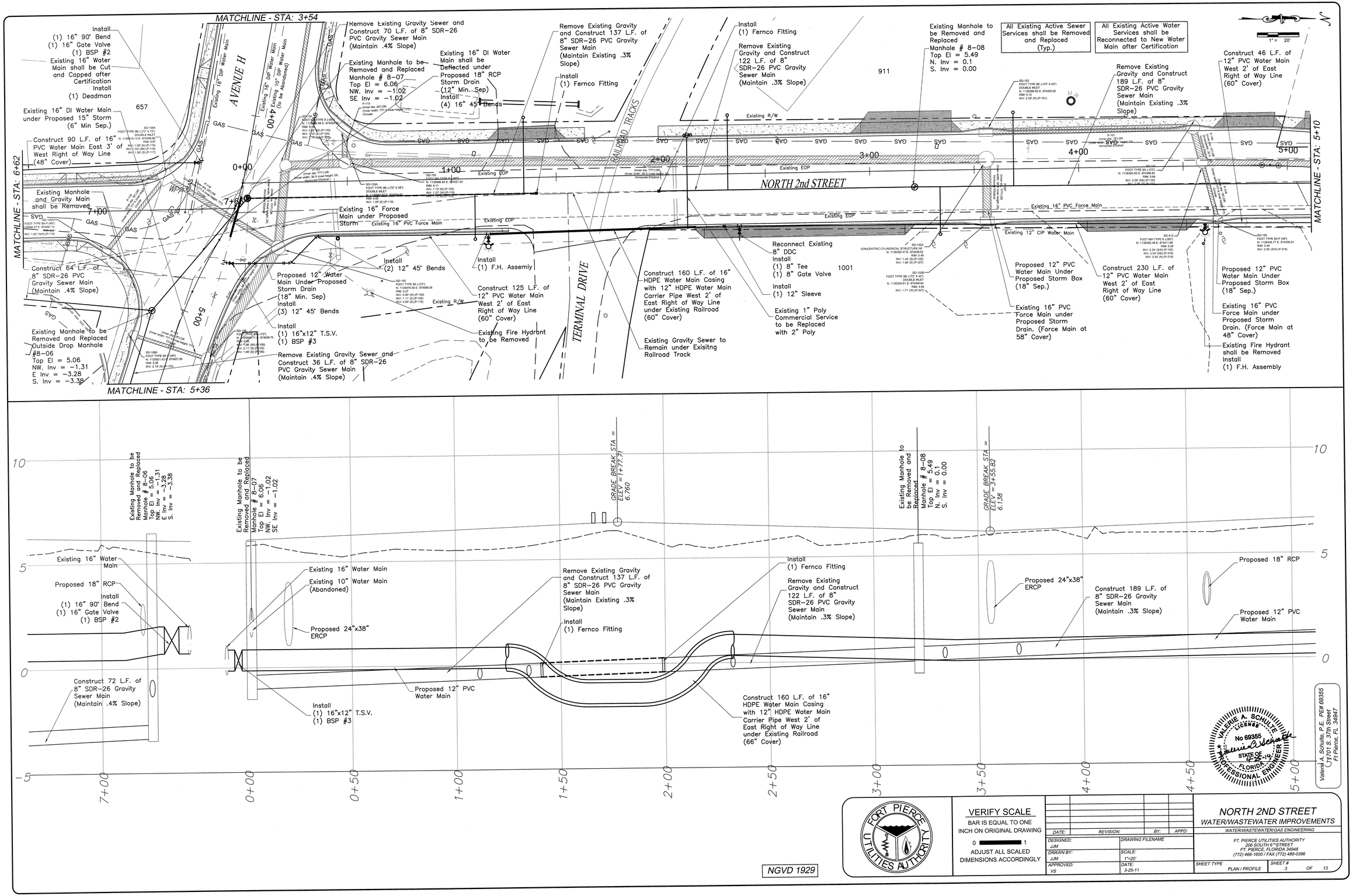
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SHEET TYPE: PLAN / PROFILE
SHEET # 2 OF 13

VALERIE A. SCHULTE LICENSE No 69355 STATE OF FLORIDA PROFESSIONAL ENGINEER
4-26-11

Valerie A. Schulte, P.E. PE# 69355
1701 S. 37th Street
Ft Pierce, FL 34947



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NORTH 2nd STREET
WATER/WASTEWATER IMPROVEMENTS

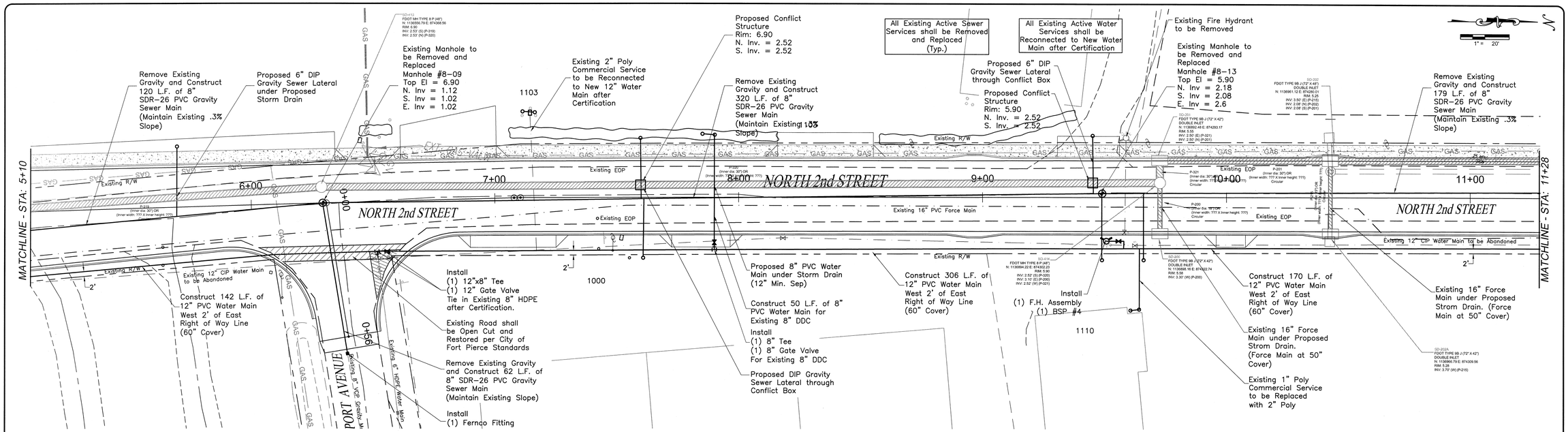
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SHEET TYPE: PLAN / PROFILE
SHEET # 3 OF 13

VALERIE A. SCHULTZ — LICENSE No 69355 — STATE OF FLORIDA — PROFESSIONAL ENGINEER — 3-25-14

Valerie A. Schultz, P.E. PE# 69355
1701 S. 37th Street
Ft Pierce, FL 34947



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NORTH 2ND STREET
WATER/WASTEWATER IMPROVEMENTS

WATER/WASTEWATER/GAS ENGINEERING

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SHEET TYPE: PLAN / PROFILE
SHEET # 4 OF 13

VALERIE A. SCHULTE LICENSE No 69355 STATE OF FLORIDA PROFESSIONAL ENGINEER

Valerie A. Schulte, P.E. PE# 69355
1701 S. 37th Street
Ft Pierce, FL 34947

1" = 20'

Removed Existing Gravity and Construct 131 L.F. of 8" SDR–26 PVC Gravity Sewer Main (Maintain Existing .3% Slope)

Existing Manhole to be Removed and Replaced
Manhole #8–14
Top El = 5.55
N. Inv = 3.21
S. Inv = 3.11

All Existing Active Sewer Services shall be Removed and Replaced (Typ.)

All Existing Active Water Services shall be Reconnected to New Water Main after Certification

Proposed Conflict Structure
Rim: 5.5
N. Inv. = 1.52
S. Inv. = 1.52

Remove Existing Gravity and Construct 158 L.F. of 8" SDR–26 PVC Gravity Sewer Main (Maintain Existing .3% Slope)

Existing 2" Poly Commercial Service to be Reconnected to New 12" Water Main after Certification

Existing 2" Poly Commercial Service to be Reconnected to New 12" Water Main after Certification

Existing Terminal Cleanout to be Removed and Replaced
Terminal Cleanout #8–15
Top El = 6.70
S. Inv = 4.12

Proposed 6" DIP Gravity Sewer Lateral over Proposed Storm Drain with Min. Cover

FEC RAILROAD

Install
(1) 12" Gate Valve
(1) 12"x8" Tee
(1) 12" 45° Bend
(1) 8" Tee
(1) 8" Gate Valve
(1) 8" Cap
(1) 8"x6" Reducer

Construct 90 L.F. of 12" PVC Water Main West 2' of East Right of Way Line (60" Cover)

MATCHLINE - STA: 11+28

MATCHLINE - STA: 17+48

Existing R/W

Existing EOP

Existing 16" PVC Force Main

Existing 12" CIP Water Main to be Abandoned

NORTH 2nd STREET

AVENUE M

Existing 16" PVC Force Main under Proposed Strom Drain. (Force Main at 60" Cover)

Construct 20 L.F. of 8" DIP Gravity Sewer Main with Casing Through Conflict Structure (Maintain Existing .3% Slope)

Proposed 6" DIP Gravity Sewer Lateral through Conflict Box

Construct 416 L.F. of 12" PVC Water Main West 2' of East Right of Way Line (60" Cover)

Existing 16" PVC Force Main under Proposed Strom Drain. (Force Main at 68" Cover)

Construct 20 L.F. of 8" DIP Gravity Sewer Main with Casing Through Conflict Structure (Maintain Existing .3% Slope)

Install (1) 12" Sleeve

Remove Existing Gravity and Construct 103 L.F. of 8" SDR–26 PVC Gravity Sewer Main (Maintain Existing .3% Slope)

Existing 6" DIP Force Main shall be Abandoned and Grouted

Existing Road shall be Open Cut and Restored per City of Fort Pierce Standards

Existing 16" PVC Force Main under Proposed Storm Drain. (Force Main at 96" Cover)

Existing 6" CIP Water Main to be Removed under Road

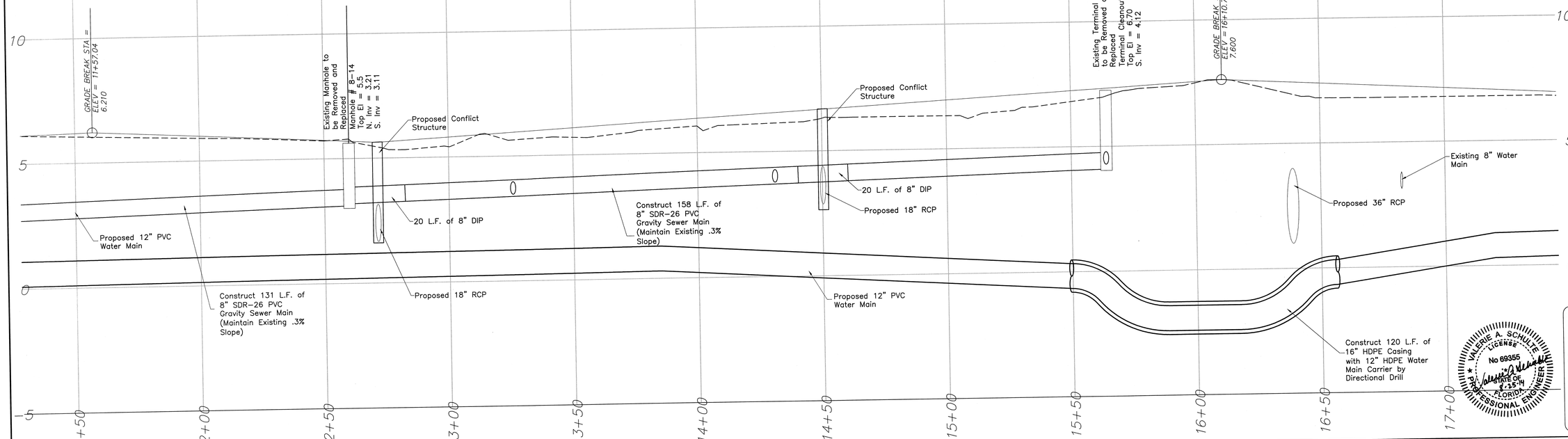
Install
(1) F.H. Assembly
(1) BSP #5

Install
(1) 12" 45° Bend

Removed Existing Fire Hydrant

Proposed 12" PVC Water Main under Proposed 36" RCP Storm Main (18" Sep)

Construct 120 L.F. of 16" HDPE Casing with 12" HDPE Water Main Carrier by Directional Drill



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NORTH 2ND STREET
WATER/WASTEWATER IMPROVEMENTS

WATER/WASTEWATER/GAS ENGINEERING

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SHEET TYPE: PLAN / PROFILE
SHEET # 5 OF 13

VALERIE A. SCHULTE LICENSE No 69355 STATE OF FLORIDA PROFESSIONAL ENGINEER

Valerie A. Schulte, P.E. PE# 69355
1717 S. 7th Street
Ft Pierce, FL 34947

MATCHLINE - STA: 17+48

MATCHLINE - STA: 23+65

1301

1401

1" = 20'

Existing R/W

Existing 6" CIP Water Main

Existing EOP

Existing 16" PVC Force Main

NORTH 2nd STREET

18+00

19+00

20+00

21+00

22+00

23+00

Adjust Existing Manhole

Existing 2" Poly Commercial Service to be Reconnected to New 12" Water Main after Certification

Existing Fire Hydrant to be Removed

Install (1) F.H. Assembly

All Existing Active Sewer Services shall be Removed and Replaced (Typ.)

All Existing Active Water Services shall be Reconnected to New Water Main after Certification

EXT. WELL

Install (1) 16"x6" T.S.V.

Construct 10 L.F. of 6" DIP Force Main for Connection.

Install (1) 6" 90° Bend

Disconnect Existing 6" DIP Force Main

Install (1) 6" Cap

Lift Station #42

Existing 6" PVC Force Main Abandoned

Existing 16" PVC Force Main under Proposed Strom Drain. (Force Main at 94" Cover)

Construct 216 L.F. of 12" PVC Water Main West 2' of East Right of Way Line (60" Cover)

Construct 65 L.F. of 6" PVC Water Main (Maintain 60" Cover under Roadway)

Proposed 6" PVC Water Main over Existing 16" Force Main

Install (1) 12'x6" Tee (1) 6" Gate Valve

Adjust Existing Manhole

Existing 16" PVC Force Main under Proposed Strom Drain. (Force Main at 60" Cover)

Construct 400 L.F. of 12" PVC Water Main West 2' of East Right of Way Line (60" Cover)

Existing 16" PVC Force Main at 65" Cover

Existing 6" PVC Force Main Abandoned

XS-19
EXT. SSMH TO REMAIN
RIM: 6.6'
(N) INV: -4.8' (EXT. 8" PVC)
(E) INV: -4.9' (EXT. 8" PVC)

GRADE BREAK STA = 18+53.02
ELEV = 6.390

XS-20
EXT. SSMH TO REMAIN
RIM: 6.7'
(N) INV: -4.4' (EXT. 8" PVC)
(S) INV: -4.4' (EXT. 8" PVC)
(W) INV: -4.2' (EXT. 6" PVC)

10

5

0

-5

Proposed 12" PVC Water Main

Proposed 30" RCP

Proposed 15" RCP

Proposed 15" RCP

Proposed 12" PVC Water Main

Existing 8" Gravity Main to Remain

17+50

18+00

18+50

19+00

19+50

20+00

20+50

21+00

21+50

22+00

22+50

23+00

23+50

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NORTH 2ND STREET
WATER/WASTEWATER IMPROVEMENTS

WATER/WASTEWATER/GAS ENGINEERING

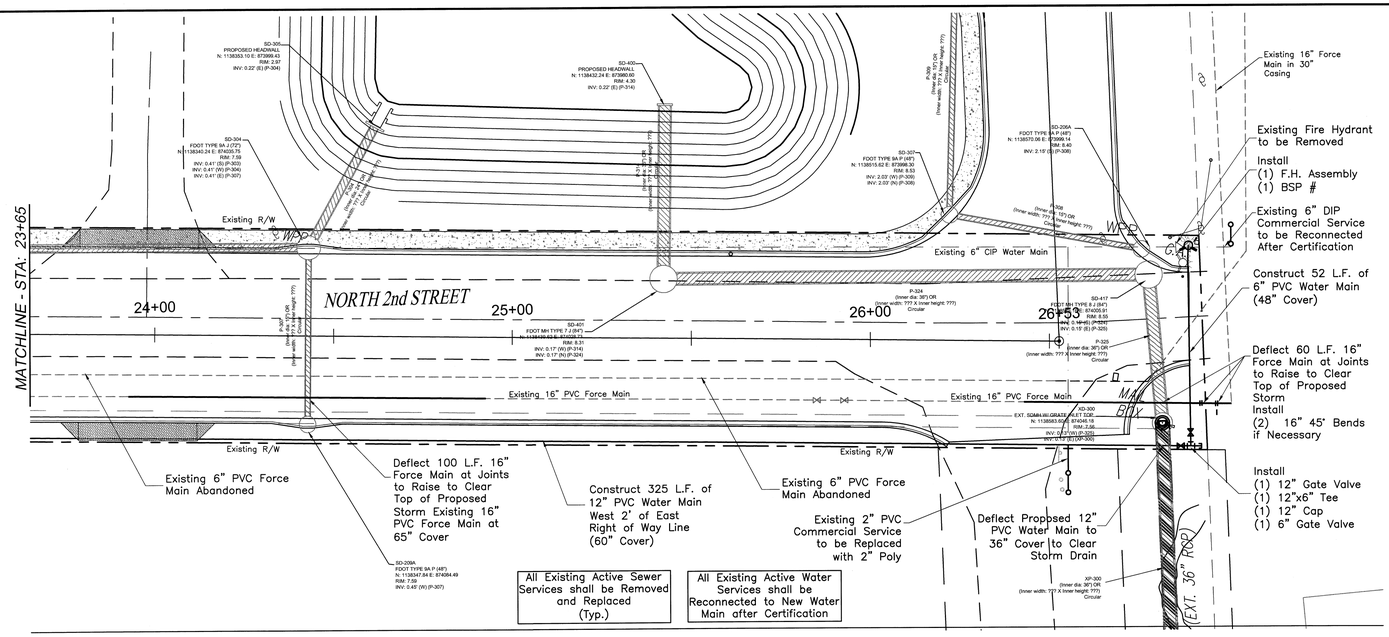
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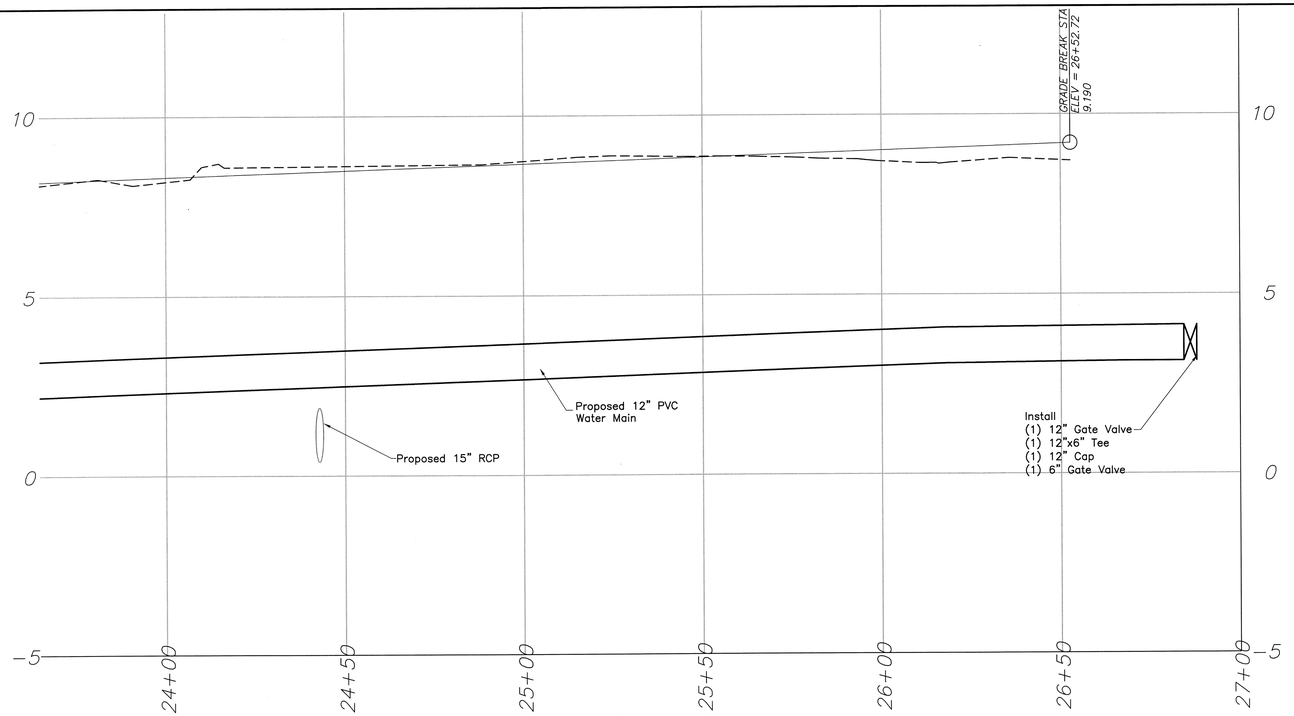
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SHEET # 6 OF 13

VALERIE A. SCHULTE LICENSE No 69355 STATE OF FLORIDA PROFESSIONAL ENGINEER

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Ft Pierce, FL. 34947





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NORTH 2ND STREET
WATER/WASTEWATER IMPROVEMENTS

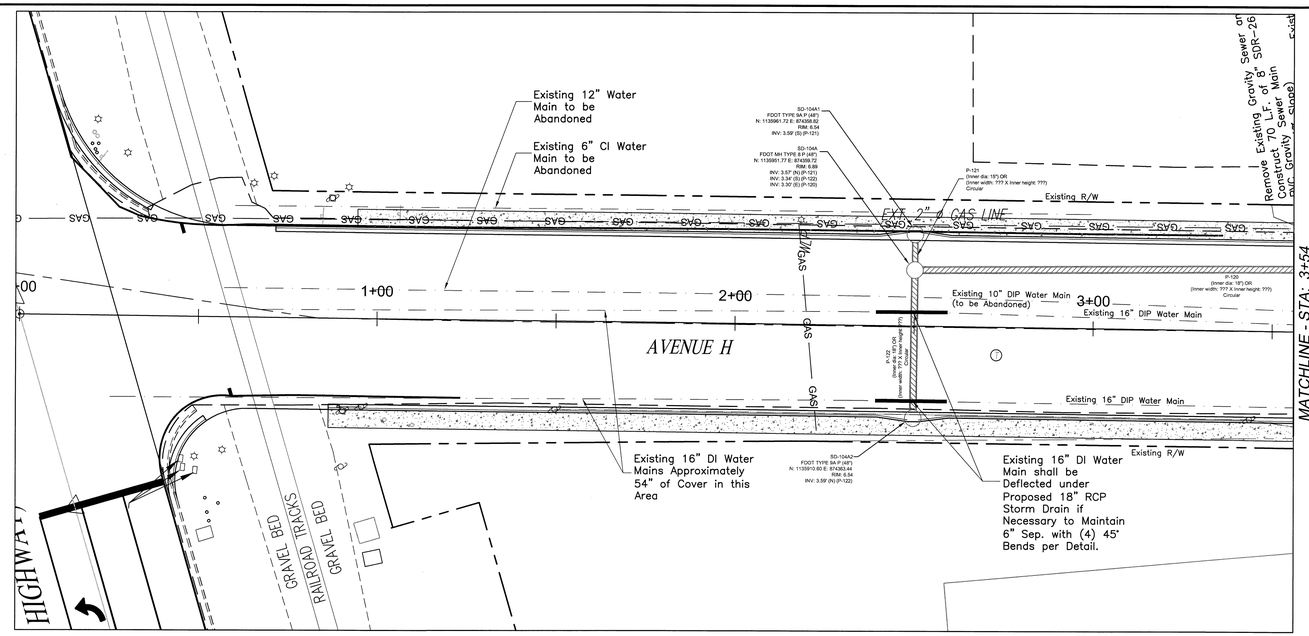
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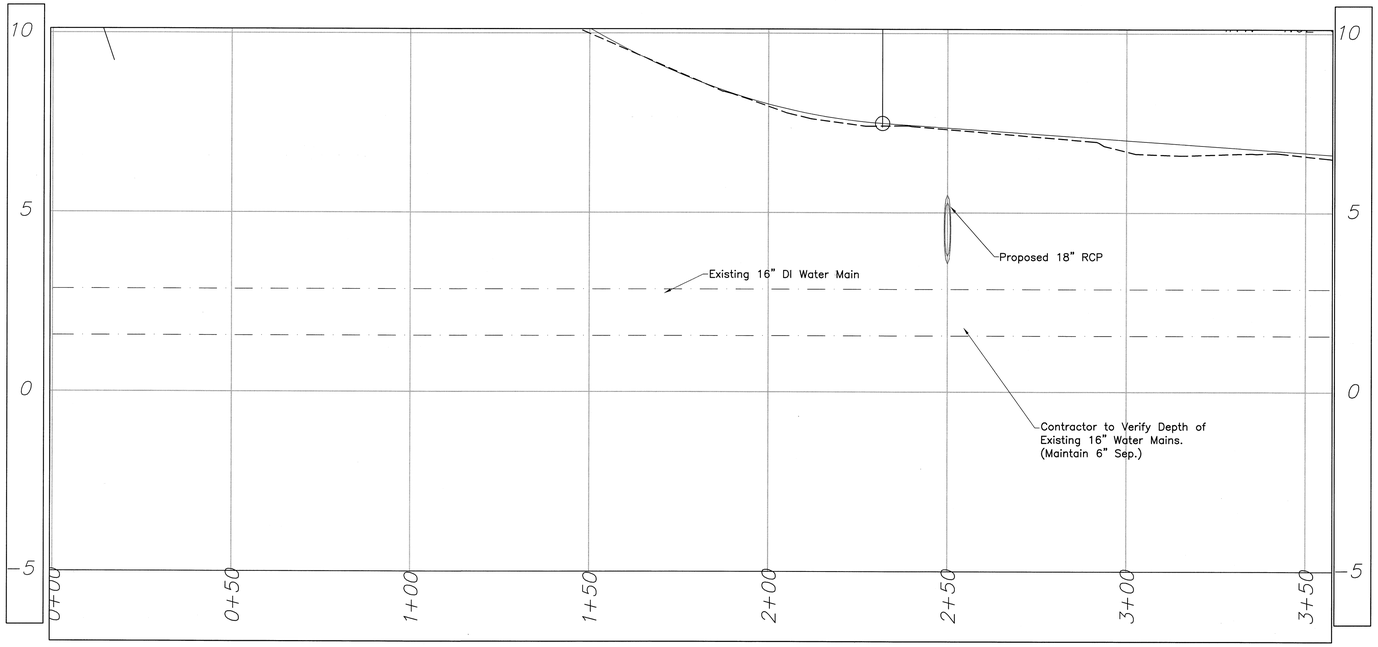
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SHEET TYPE: PLAN / PROFILE
SHEET # 7 OF 13

VALERIE A. SCHULTE LICENSE No 69355 STATE OF FLORIDA PROFESSIONAL ENGINEER
4-25-11

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1013 S. 7th Street
Ft Pierce, FL. 34947





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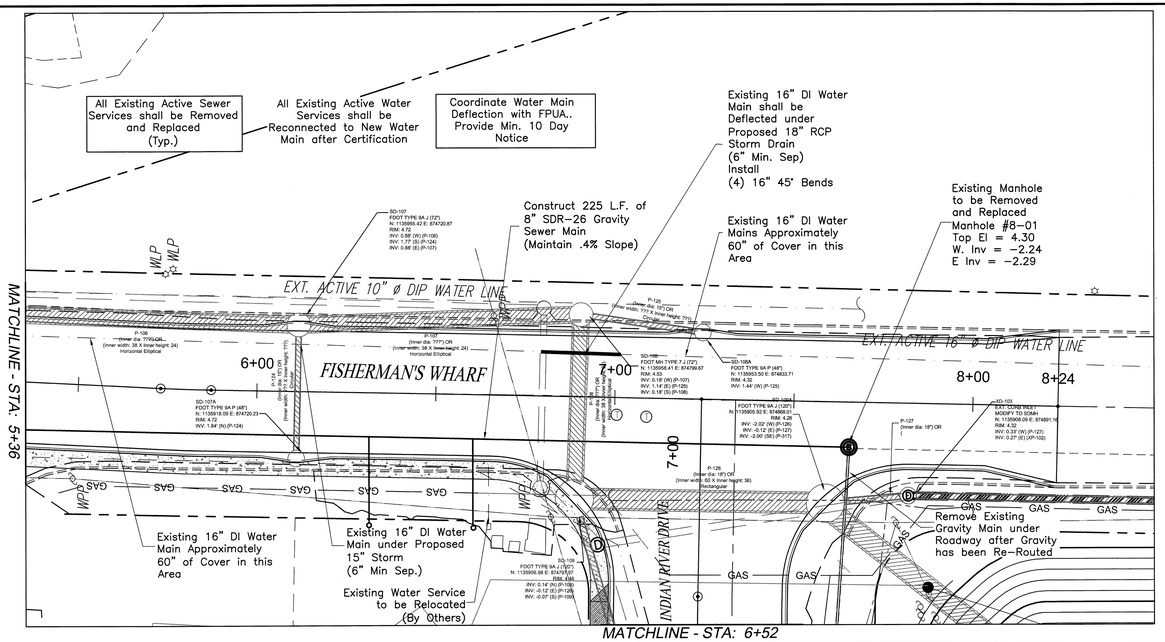
NORTH 2ND STREET
WATER/WASTEWATER IMPROVEMENTS

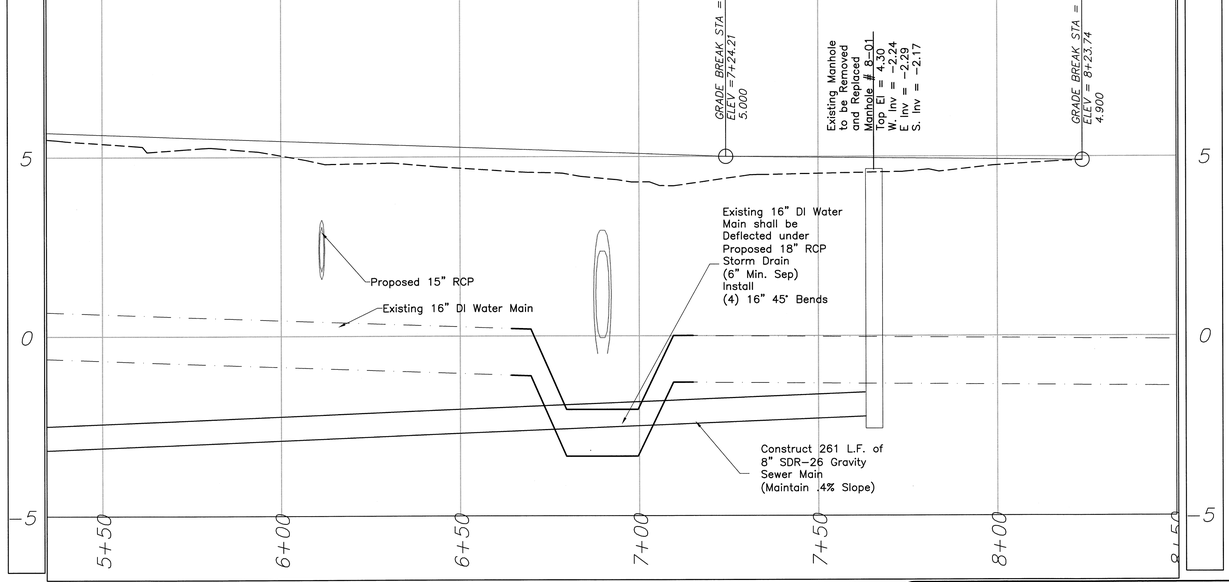
WATER/WASTEWATER/GAS ENGINEERING

FT. PIERCE UTILITIES AUTHORITY
206 SOUTH 6TH STREET
FT. PIERCE, FLORIDA 34948
(772) 466-1600 / FAX (772) 489-0396

SHEET TYPE: PLAN / PROFILE
SHEET # 8 OF 13

VALERIE A. SCHULTE LICENSE No 69355 STATE OF FLORIDA PROFESSIONAL ENGINEER
4-27-11
Valerie A. Schulte, P.E. PE# 69355
1701 S. 37th Street
Ft Pierce, FL 34947





NGVD 1929

FORT PIERCE UTILITIES AUTHORITY

VERIFY SCALE
BAR IS EQUAL TO ONE INCH ON ORIGINAL DRAWING
0 1
ADJUST ALL SCALED DIMENSIONS ACCORDINGLY

DATE:	REVISION:	BY:	APPD:

DESIGNED: JJM	DRAWING FILENAME
DRAWN BY: JJM	SCALE: 1"=20'
APPROVED: VS	DATE: 3-25-11

NORTH 2ND STREET
WATER/WASTEWATER IMPROVEMENTS
WATER/WASTEWATER/GAS ENGINEERING

FT. PIERCE UTILITIES AUTHORITY
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FT. PIERCE, FLORIDA 34948
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SHEET TYPE	SHEET #
PLAN / PROFILE	9 OF 13

VALERIE A. SCHULTE LICENSE No 69355 STATE OF FLORIDA PROFESSIONAL ENGINEER 4-25-14

Valerie A. Schulte, P.E. PE# 69355
1701 S. 37th Street
Ft Pierce, FL 34947

MATCHLINE - SHEET 2 OF 13

MATCHLINE - STA: 6+52

N

1" = 20'

Construct 143 L.F. of 16" PVC Water Main (48" Cover)

Install (1) 22.5° Bend

Contractor shall Locate Existing 16" Water Main and Make Connection after Certification
Install (1) 16" Gate Valve
(1) 16" 90° Bend
(1) BSP #6

30' FPUA Easement

Existing 16" PVC Force Main

6'

Existing 16" Water Main shall be Cut, Capped, and Abandoned
Install (1) Deadman

825

109

SD-110
FDOT TYPE 9B J (84" X 84")
DOUBLE INLET
N: 1135484.09 E: 874921.66
RIM: 5.16
INV: -0.02' (N) (P-109)
INV: -0.02' (E) (P-110)

G.A.

Existing R/W

W-109
(Inner dia: 18") OR
(Inner width: 60 X Inner height: 36)
Circular

WPP

WLP

Existing 16" DIP Water Main

Existing EOP

2+00

3+00

4+00

5+00

6+00

INDIAN RIVER DRIVE

W-107
(Inner dia: 15") OR
(Inner width: 48 X Inner height: 36)
Circular

Existing 12" VCP Gravity Main

Existing 16" PVC Force Main

Existing R/W

Existing Lift Station #8 shall be Decommissioned and Removed.
(Coordinate with FPUA)

Proposed Drainage Pond

A-05
EXT. SSMH
RIM: 5.57
INV: WELDED SHUT

Existing Force Main shall be Disconnected and Abandoned.
Remove Portion under Roadway

SD-111
FDOT TYPE 9B J (84" X 84")
DOUBLE INLET
N: 1135504.15 E: 874982.16
RIM: 4.69
INV: 0.03' (W) (P-110)

600

XD-106A
EXT. GRATE INLET

(EXT. 12" RCP)

GAS

SVS

NGVD 1929

VERIFY SCALE
BAR IS EQUAL TO ONE INCH ON ORIGINAL DRAWING
0 1
ADJUST ALL SCALED DIMENSIONS ACCORDINGLY

DATE:	REVISION:	BY:	APPD:

DESIGNED: JJM	DRAWING FILENAME
DRAWN BY: JJM	SCALE: 1"=20'
APPROVED: VS	DATE: 3-25-11

NORTH 2ND STREET
WATER/WASTEWATER IMPROVEMENTS

WATER/WASTEWATER/GAS ENGINEERING

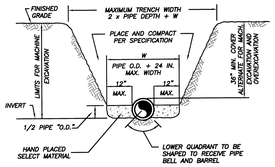
FT. PIERCE UTILITIES AUTHORITY
206 SOUTH 6TH STREET
FT. PIERCE, FLORIDA 34948
(772) 466-1600 / FAX (772) 489-0396

SHEET TYPE: PLAN / PROFILE

SHEET # 10 OF 13

VALERIE A. SCHULTE LICENSE No 69355 STATE OF FLORIDA PROFESSIONAL ENGINEER
4-25-11

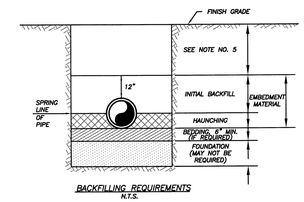
Valerie A. Schulte, P.E. PE# 69355
1701 S. 37th Street
Ft Pierce, FL 34947



NOTES:

1) THE CONTRACTOR SHALL COMPLY WITH REQUIREMENTS OF THE FLORIDA TRENCH SAFETY ACT.
2) INITIAL BACKFILL SHALL BE HAND PLACED TO 12" ABOVE THE PIPE. BACKFILL SHALL BE MECHANICALLY TAMPED TO A MINIMUM OF 100% OF MAX. DENSITY AS DETERMINED BY AASHTO METHOD T-99.

TYPICAL TRENCH DETAIL
N.T.S.

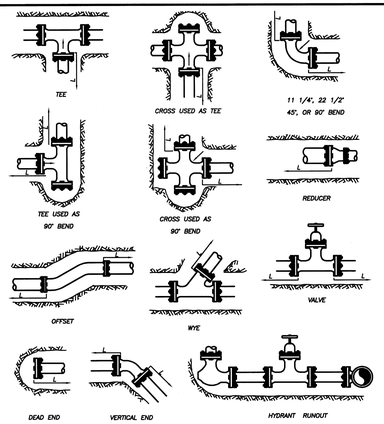


BACKFILLING REQUIREMENTS
N.T.S.

NOTES:

1) IN CERTAIN SOIL CONDITIONS A FOUNDATION MAY BE REQUIRED.
2) BEDDING IS REQUIRED PRIMARILY TO BRING THE TRENCH BOTTOM UP TO GRADE. BEDDING MATERIALS SHALL PROVIDE A UNIFORM AND ADEQUATE LONGITUDINAL SUPPORT UNDER THE PIPE.
3) HAUNCHING MATERIAL SHALL BE HAND PLACED TO THE SPRINGLINE OF THE PIPE. MATERIAL SHALL BE CONSOLIDATED UNDER THE PIPE AND HAND TAMPED TO PROVIDE ADEQUATE SIDE SUPPORT.
4) INITIAL BACKFILL MATERIAL SHALL BE HAND PLACED TO 12" ABOVE THE TOP OF PIPE. THE SOIL SHALL BE COMPACTED TO 100% MAX. DENSITY.(AASHTO T-99)
5) BACKFILL SHALL BE COMPACTED TO 100% OF MAX. DENSITY AS PER AASHTO T-99, TO A POINT 30" BELOW PROPOSED PROFILE GRADE OR EXISTING GRADE. THE FINAL 30" OF BACKFILL SHALL BE COMPACTED TO 98% OF MAX. DENSITY AS PER AASHTO T-180.
6) DENSITY TEST SHALL BE PERFORMED AT AREAS DETERMINED BY THE UTILITIES ENGINEER OR PERMIT AGENCY HAVING JURISDICTION, AT THE CONTRACTORS EXPENSE.
7) CONTRACTOR TO COMPLY WITH ALL FEDERAL, STATE AND LOCAL TRENCH SAFETY REGULATIONS.

BACKFILLING REQUIREMENTS



MECHANICAL JOINT ANCHORING REQUIREMENTS
N.T.S.

NOTES:

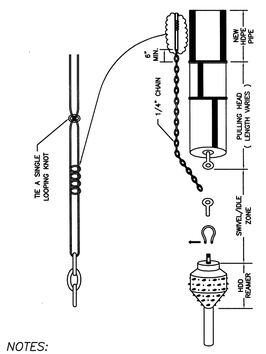
1) THE ENGINEER SHALL BE RESPONSIBLE FOR DETERMINING THE REQUIRED LENGTH TO BE RESTRAINED BASED UPON THE PROJECT AREA SOIL TYPE, PROPOSED TRENCH CONDITIONS AND DEPTH, PRESSURE OF 150 PSI, AND A SAFETY FACTOR OF TWO (2). A DRAWING OF EVERY TYPICAL FITTING ASSEMBLY WITHIN THE PROJECT SHALL BE SUBMITTED WHICH REFLECTS THE RESTRAINT DETAIL PROPOSED FOR USE, INCLUDING LENGTH OF PIPE RESTRAINT.
2) REQUIRED RESTRAINED LENGTH CALCULATIONS SHALL ALSO CONSIDER THE CONDITIONS OF OTHER BENDS OR FITTINGS THAT WILL BE LOCATED WITHIN THE CALCULATED RESTRAINED LENGTH (L) OF THE BEND OR FITTING IN QUESTION.
3) EVERY JOINT OR FITTING MUST BE RESTRAINED ON BOTH SIDES OF THE BEND AND FOR TEES ALONG THE BEND ALSO.

MECHANICAL JOINT RESTRAINT NOTES

DUE TO THE CORROSIVE ENVIRONMENT (SOIL AND AIR) ASSOCIATED WITH THE SOUTH HUTCHINSON ISLAND AREA, THE FOLLOWING MATERIAL UPGRADES WILL BE REQUIRED.

1) PIPE – ALL DUCTILE IRON PIPE SHALL BE EPOXY COATED (EXTERIOR)
2) FITTINGS – ALL DUCTILE IRON FITTINGS SHALL BE EPOXY COATED (EXTERIOR). PVC FITTINGS CAN ALSO BE USED. HOWEVER, PVC FITTINGS MUST BE EXTRUDED OR FORMED FITTINGS MEETING ALL AWWA REQUIREMENTS. NO FABRICATED FITTINGS WILL BE ALLOWED. ALL NUTS AND BOLTS SHALL BE 316SS ONLY.
3) RESTRAINTS – ALL MECHANICAL JOINT RESTRAINTS SHALL BE EPOXY COATED. ALL HARDWARE (RODS, NUTS, BOLTS, WASHERS) SHALL BE 316SS ONLY.
4) FIRE HYDRANTS – ALL NUTS AND BOLTS SHALL BE 316SS ONLY.
5) VALVES – ALL VALVES SHALL BE EPOXY COATED. ALL NUTS AND BOLTS SHALL BE EPOXY BE 316SS ONLY. VALVE STEM SHALL BE CAST BRONZE. VALVE NUT AND BOLTS SHALL BE 316SS ONLY.
6) ALL OTHER MATERIALS SHALL BE PROVIDED WITH MANUFACTURER'S STANDARD UPGRADES FOR USE IN CORROSIVE ENVIRONMENTS.

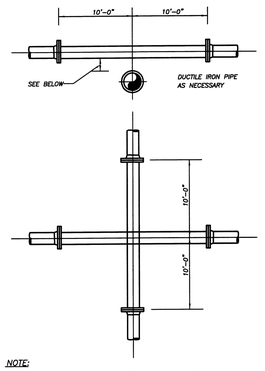
MATERIAL UPGRADE NOTES



NOTES:

1. WHERE DIRECTIONAL DRILLING LENGTHS EXCEED 750 LINEAR FEET AND/OR HDPE PIPE DIAMETER EXCEED 12 INCHES, A SECOND LENGTH OF TRACE WIRE SHALL BE INSTALLED.
2. TRACE WIRE SHALL CONFORM TO THE FOLLOWING SPECIFICATION: MANUFACTURER – COPPERHEAD INDUSTRIES, LLC PART NUMBER – 12458-EHS-500 / 12458-EHS-1000 / 12458-EHS-2500 PART NUMBER DESCRIPTION – 12 (AWG), 45 (JACKET MIL), B (JACKET COLOR: B=BLUE, G=GREEN, ETC.) – EHS (EXTRA HIGH STRENGTH-HARD DRAWN / 1150# BREAKING LOAD STRENGTH) – 500 (WIRE LENGTH IN FEET)

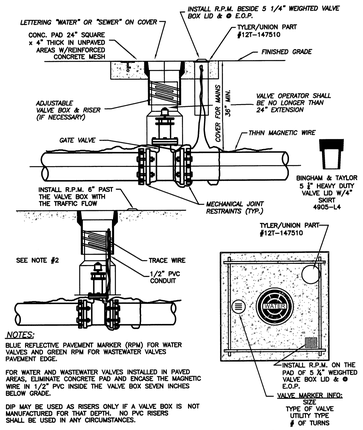
DIRECTIONAL BORE WIRE ATTACHMENT



NOTE:

PLEASE REFER TO FORT PIERCE UTILITIES STANDARD SEPARATION STATEMENT FOR WATER / SEWER CONFLICTS.

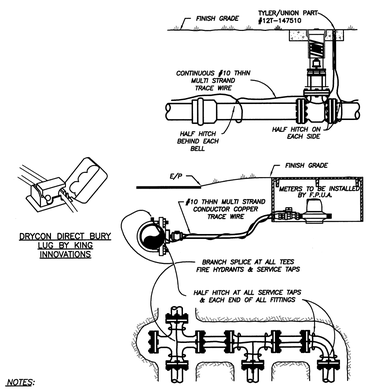
UTILITY CROSSING DETAIL
N.T.S.



NOTES:

1. BLUE REFLECTIVE PAVEMENT MARKER (RPM) FOR WATER VALVES AND GREEN RPM FOR WASTEWATER VALVES PAVEMENT EDGE.
2. FOR WATER AND WASTEWATER VALVES INSTALLED IN PAVED AREAS, ELIMINATE CONCRETE PAD AND ENCASE THE MAGNETIC WIRE IN 1/2" PVC INSIDE THE VALVE BOX SEVEN INCHES BELOW GRADE.
3. DIP MAY BE USED AS RISERS ONLY IF A VALVE BOX IS NOT MANUFACTURED FOR THAT DEPTH. NO PVC RISERS SHALL BE USED IN ANY CIRCUMSTANCES.

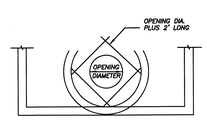
TYPICAL GATE VALVE & WEIGHTED VALVE BOX DETAIL
N.T.S.



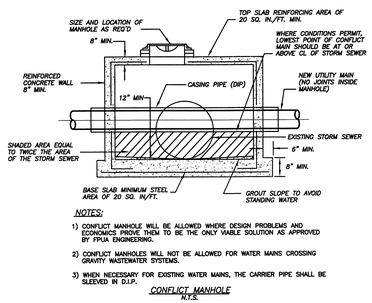
NOTES:

1) TRACE WIRE IS REQUIRED ON ALL PIPE AS NOTED BY UTILITIES ENGINEER AND SHOWN IN STANDARD DETAILS.
2) INCLUDE ALL COST OF MATERIAL & LABOR IN PRICE OF PIPE.
3) CONTRACTOR IS RESPONSIBLE FOR CONTINUITY OF ALL TRACE WIRE.

TRACE WIRE
(N.T.S.)



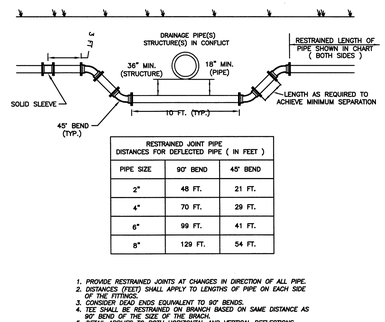
PARTIAL PLAN



NOTES:

1) CONFLICT MANHOLE WILL BE ALLOWED WHERE DESIGN PROBLEMS AND ECONOMICS PROVE THEM TO BE THE ONLY VIABLE SOLUTION AS APPROVED BY FPUA ENGINEERING.
2) CONFLICT MANHOLES WILL NOT BE ALLOWED FOR WATER MAINS CROSSING GRAVITY WASTEWATER SYSTEMS.
3) WHEN NECESSARY FOR EXISTING WATER MAINS, THE CARRIER PIPE SHALL BE SLEEVED IN D.I.P.

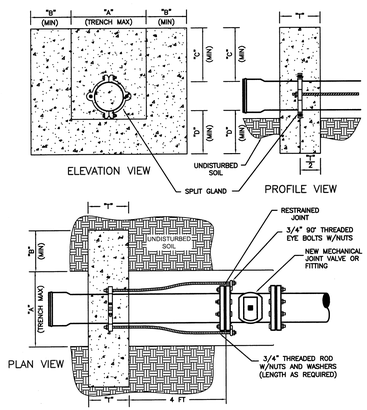
CONFLICT MANHOLE
N.T.S.



RESTRAINED JOINT PIPE DISTANCES FOR DEFLECTED PIPE (IN FEET)		
PIPE SIZE	90° BEND	45° BEND
2"	48 FT.	21 FT.
4"	70 FT.	29 FT.
6"	99 FT.	41 FT.
8"	129 FT.	54 FT.

1. PROVIDE RESTRAINED JOINTS AT CHANGES IN DIRECTION OF ALL PIPE.
2. DISTANCES (FEET) SHALL APPLY TO LENGTHS OF PIPE ON EACH SIDE OF THE FITTING.
3. CONSIDER DEAD ENDS EQUIVALENT TO 90° BENDS.
4. TEE SHALL BE RESTRAINED ON BRANCH BASED ON SAME DISTANCE AS 90° BEND OF THE SIZE OF THE BRACH.
5. DETAIL APPLIES TO BOTH HORIZONTAL AND VERTICAL DEFLECTIONS.
6. IF MULTIPLE PIPES/STRUCTURES ARE IN CONFLICT IN CLOSE PROXIMITY, EXTEND 10 FEET TYPICAL PORTION OF CONFLICT DEFLECTION AS NEEDED TO MAINTAIN DEFLECTION SPACING.

CONFLICT PIPE DETAIL



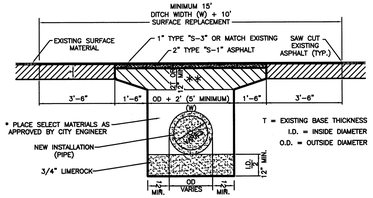
DEAD-MAN RESTRAINT BLOCK

PIPE SIZE (in)	AVERAGE O.D. (in)	PRESSURE (lb/in²)	CALCULATED THRUST (lbf)	"A" (ft-in)	"B" (ft-in)	"C" (ft-in)	"D" (ft-in)	"T" (ft-in)	CONCRETE (yd³)
6	6.9	100	3739	2'-0"	1'-0"	1'-0"	1'-3"	2'-6"	1.00
8	9.05	100	6433	2'-0"	1'-6"	1'-0"	1'-6"	3'-0"	1.75
10	11.1	100	9677	2'-6"	1'-6"	1'-6"	1'-10"	3'-0"	2.57
12	13.2	100	13685	2'-6"	2'-0"	1'-6"	1'-9"	4'-0"	3.95
16	17.4	100	23779	3'-0"	2'-0"	1'-6"	2'-6"	5'-0"	6.49
18	19.5	100	29865	3'-0"	2'-0"	1'-6"	2'-6"	6'-0"	8.09
20	21.6	100	36644	3'-0"	2'-6"	1'-6"	2'-6"	6'-6"	9.98
24	25.8	100	52279	3'-0"	2'-6"	2'-0"	2'-9"	7'-6"	14.00

NOTES:

1. THE USE OF RESTRAINT BLOCKS SHALL BE LIMITED TO SITUATIONS WHERE EXPOSING SEVERAL JOINTS OF PIPE IS NOT FEASIBLE OR AS DIRECTED BY FPUA ENGINEER.
2. ALL BEARING SURFACES TO BE CARRIED TO UNDISTURBED SOIL. WHERE TRENCH WALL HAS BEEN DISTURBED, EXCAVATE ALL LOOSE MATERIAL AND EXTEND RESTRAINT BLOCK TO UNDISTURBED MATERIAL.
3. RESTRAINT BLOCK SHALL BE INSTALLED A MINIMUM OF 4 FEET FROM ANY PIPE JOINT, FITTING OR VALVE, AT NO TIME SHALL A PIPE JOINT, FITTING OR VALVE BE ENCASED IN THE RESTRAINT BLOCK.
4. CONCRETE SHALL HAVE MINIMUM 28 DAYS COMPRESSIVE STRENGTH OF 3000 PSI.

DEAD-MAN RESTRAINT BLOCK



* INITIAL BACKFILL SHALL BE PLACED TO 12" ABOVE THE PIPE IN 6" LIFTS. BACFILL SHALL BE MECHANICALLY TAMPED TO A MINIMUM OF 95% OF MAXIMUM DENSITY AS DETERMINED BY AASHTO METHOD T-99. UPPERMOST 12" BE COMPACTED TO 98% OF T-99.

** LIMEROCK OR CRUSHED COQUINA COMPACTED TO 98% OF MAXIMUM DENSITY AS DETERMINED BY AASHTO METHOD T-180

PAVEMENT RESTORATION DETAIL WITH TRENCE CITY REQUIREMENTS



Valerie A. Schulte, P.E. PE# 69355
1701 S. 37th Street
Ft Pierce, FL 34947

FORT PIERCE UTILITIES AUTHORITY

VERIFY SCALE
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ADJUST ALL SCALED DIMENSIONS ACCORDINGLY

DATE:	REVISION:	BY:	APPD:

DESIGNED: JJM		DRAWING FILENAME	
DRAWN BY: JJM		SCALE:	
APPROVED: VS		DATE: 3-25-11	

NORTH 2ND STREET
WATER/WASTEWATER IMPROVEMENTS

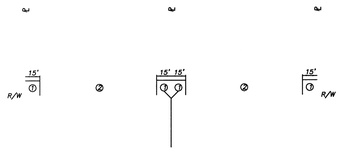
WATER/WASTEWATER/GAS ENGINEERING

FT. PIERCE UTILITIES AUTHORITY
206 SOUTH 6TH STREET
FT. PIERCE, FLORIDA 34948
(772) 466-1600 / FAX (772) 489-0396

SHEET TYPE	SHEET #
FPUA DETAILS	11 OF 13

GENERAL POLICY

WHERE COST JUSTIFIED AND OPERATIONALLY FEASIBLE, IT IS THE GENERAL POLICY OF THE F.P.U.A. TO PROVIDE WATER, ELECTRIC, SEWER AND GAS SERVICE FROM THE STREET SIDE OF A PIECE OF PROPERTY, DEPENDING ON FACTORS SUCH AS LOCATION OF EXISTING SUPPLY SOURCE FACILITIES, REAR OR SIDE LOT LINE SUPPLY MAY BE AUTHORIZED, BUT ONLY WITH PRIOR APPROVAL FROM THE F.P.U.A.



① THE PREFERRED POINT OF CONNECTION TO THE F.P.U.A. SEWER LATERAL, AREA ① , SHALL BE LOCATED IN THE CORNER OF THE PROPERTY SELECTED BY THE F.P.U.A. AS THE BEST LOCATION FOR THE LATERAL. EVERY EFFORT WILL BE MADE TO SELECT THE CORNER WHERE TWO LATERALS CAN BE CONNECTED IN A "Y" CONFIGURATION AS SHOWN.

② IF PHYSICAL BARRIERS OR OTHER OBSTACLES PREVENT THE CONNECTION OF THE BUILDING SERVICE LINE TO THE F.P.U.A. SEWER LATERAL, WITHIN AREA ① , THE F.P.U.A. ENGINEERING DEPARTMENT MAY AUTHORIZE THE CONNECTION ALONG THE PORTION OF THE R/W LINE MARKED AREA ② .

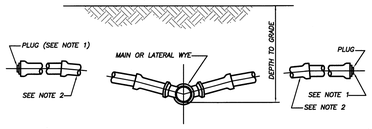
NOTES:

1) HORIZONTAL SEPARATION OF WATER AND WASTEWATER SERVICES SHOULD BE A MINIMUM OF SIX FEET AND PREFERABLY 10 FEET.

2) THE WASTEWATER LATERAL SHALL BE LOCATED WITHIN RIGHT-OF-WAY AND TERMINATE AT THE PROPERTY LINE.

3) THE F.P.U.A. SHALL BE RESPONSIBLE FOR THE MAINTENANCE AND REPAIR OF THE WASTEWATER LATERAL WITHIN THE EASEMENT OR RIGHT-OF-WAY, UP TO THE POINT OF CONNECTION.

WASTEWATER SERVICE PLACEMENT
(N.T.S.)



NOTES:

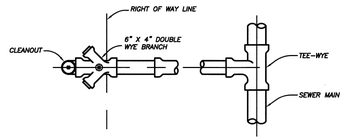
1) BALL TYPE WASTEWATER LOCATOR BY 3M CORP. OR APPROVED EQUAL.

2) MINIMUM SLOPE OF 1/8" PER FOOT, USE GREATER SLOPE WHERE POSSIBLE.

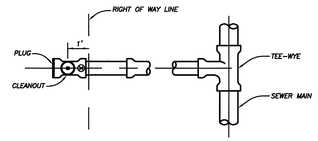
3) SERVICE LATERAL SHALL TERMINATE WITH A CLEANOUT.

4) INSTALL CLEANOUT AT THE PROPERTY LINE. REFER TO DETAIL S-1 FOR SPECIFIC PROPERTY LAYOUT.

SERVICE CONNECTION
(N.T.S.)



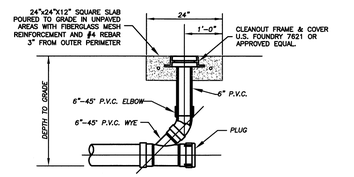
DOUBLE LATERAL SERVICE CONNECTION
AT PROPERTY LINE



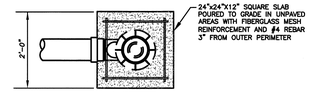
SINGLE SERVICE LATERAL CONNECTION

◉ = BALL TYPE WASTEWATER LOCATOR INSTALLED ABOVE THIS POINT BALL BY 3M CORP. OR APPROVED EQUAL
SERVICE LATERAL SHALL TERMINATE WITH A CLEANOUT

SERVICE CONNECTION
(N.T.S.)

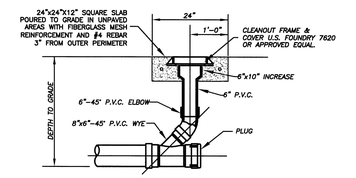


SECTION

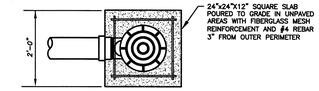


PLAN

RESIDENTIAL CLEANOUT DETAIL
(N.T.S.)

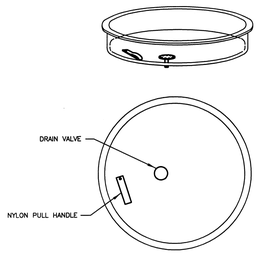


SECTION



PLAN

TERMINAL CLEANOUT DETAIL (COMMERCIAL)
(N.T.S.)



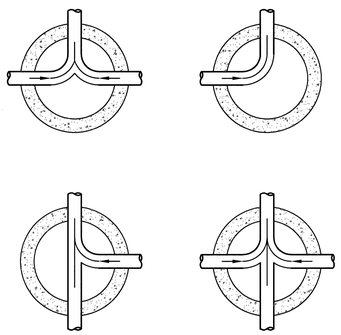
NOTES:

1) SEWER RAIN GUARDS SHALL BE INSTALLED ON ALL MANHOLES WHERE GRAVITY MAINS ARE 12" OR LESS AND IN AREAS DESIGNATED BY ENGINEER TO BE IN A FLOOD AREA.

2) SEWER RAIN GUARDS SHALL BE MANUFACTURED BY PARSON ENVIRONMENTAL PRODUCTS, INC., PART # PMI-23S (PARSON MANHOLE INSERTS) WITH DOUBLE VALVING, OR APPROVED EQUAL.

3) RAINGUARDS MUST BE "SNUG" FIT.

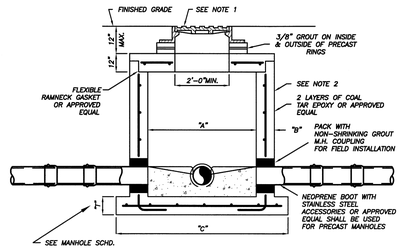
RAINGUARD DETAIL
(N.T.S.)



NOTES:

1) INVERT CHANNELS TO BE CONSTRUCTED FOR SMOOTH FLOW WITH NO OBSTRUCTIONS.

2) SPILLWAYS SHALL BE CONSTRUCTED BETWEEN PIPES WITH DIFFERENT INVERT ELEVATIONS PROVIDING FOR SMOOTH FLOWS.



PIPE DIA.	"A"	"B"	"C"	BOT. SLAB "T"
8"-24"	4'-0"	8"	76"	8"
30"-36"	5'-0"	8"	88"	10"
42"-48"	6'-0"	8"	100"	12"

TYPICAL MANHOLE DIMENSIONS

NOTES:

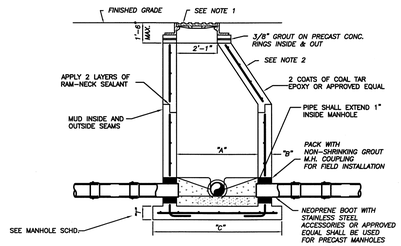
1) MANHOLE FRAME & COVER WITH THE WORDS " SANITARY SEWER" CAST IN THE COVER. U.S. FOUNDRY 170 OR APPROVED EQUAL.

2) ALL CONCRETE MANHOLES TO BE 4000 P.S.I. TO MEET OR EXCEED ASTM C478 ALL CEMENT TO BE TYPE II ACID RESISTANT. REINFORCING AREA OF 0.02 SQ. IN/FT FOR WALL SECTION MIN. TO MEET OR EXCEED ASTM A 185.

3) A MAXIMUM OF 2 LAYERS OF PRECAST CONCRETE RINGS, IF REQUIRED.

4) RAIN GUARDS SHALL BE INSTALLED IN MANHOLES THAT HAVE GRAVITY MAINS 12" OR LESS.

SHALLOW MANHOLE
DEPTH OF LESS THAN 5'-0"
(N.T.S.)



PIPE DIA.	"A"	"B"	"C"	BOT. SLAB "T"
8"-24"	4'-0"	8"	76"	8"
30"-36"	5'-0"	8"	88"	10"
42"-48"	6'-0"	8"	100"	12"

TYPICAL MANHOLE DIMENSIONS

NOTES:

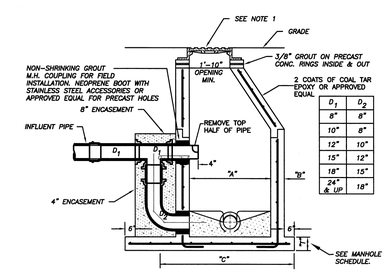
1) MANHOLE FRAME & COVER WITH THE WORDS " SANITARY SEWER" CAST IN THE COVER. U.S. FOUNDRY 170 OR APPROVED EQUAL.

2) ALL CONCRETE MANHOLES TO BE 4000 P.S.I. TO MEET OR EXCEED ASTM C478 ALL CEMENT TO BE TYPE II ACID RESISTANT. REINFORCING AREA OF 0.02 SQ. IN/FT FOR WALL SECTION MIN. TO MEET OR EXCEED ASTM A 185.

3) A MAXIMUM OF 2 LAYERS OF PRECAST CONCRETE RINGS, IF REQUIRED.

4) RAIN GUARDS SHALL BE INSTALLED IN MANHOLES THAT HAVE GRAVITY MAINS 12" OR LESS.

STANDARD MANHOLE
DEPTH 5'-0" AND GREATER
(N.T.S.)



D_1	D_2
8"	8"
10"	8"
12"	10"
15"	12"
18"	15"
24" & UP	18"

PIPE DIA.	"A"	"B"	"C"	BOT. SLAB "T"
8"-24"	4'-0"	8"	70"	8"
30"-36"	5'-0"	8"	84"	10"
42"-48"	6'-0"	8"	96"	12"

TYPICAL MANHOLE DIMENSIONS

NOTES:

1) MANHOLE FRAME & COVER WITH THE WORDS " SANITARY SEWER" CAST IN THE COVER. U.S. FOUNDRY 170 OR APPROVED EQUAL.

2) ALL CONCRETE MANHOLES TO BE 4000 P.S.I. TO MEET OR EXCEED ASTM C478 ALL CEMENT TO BE TYPE II ACID RESISTANT. REINFORCING AREA OF 0.02 SQ. IN/FT FOR WALL SECTION MIN. TO MEET OR EXCEED ASTM A 185.

3) A MAXIMUM OF 2 LAYERS OF PRECAST CONCRETE RINGS, IF REQUIRED.

4) RAIN GUARDS SHALL BE INSTALLED IN MANHOLES THAT HAVE GRAVITY MAINS 12" OR LESS.

OUTSIDE DROP MANHOLE
(N.T.S.)

VALERIE A. SCHULTE LICENSE No 69355 STATE OF FLORIDA PROFESSIONAL ENGINEER

Valerie A. Schulte, P.E. PE# 69355
1701 S. 37th Street
Ft Pierce, FL 34947

FORT PIERCE UTILITIES AUTHORITY

VERIFY SCALE
BAR IS EQUAL TO ONE INCH ON ORIGINAL DRAWING
0 1
ADJUST ALL SCALED DIMENSIONS ACCORDINGLY

DATE:	REVISION:	BY:	APPD:

DESIGNED: JJM	DRAWING FILENAME
DRAWN BY: JJM	SCALE:
APPROVED: VS	DATE: 3-25-11

NORTH 2ND STREET
WATER/WASTEWATER IMPROVEMENTS

WATER/WASTEWATER/GAS ENGINEERING

FT. PIERCE UTILITIES AUTHORITY
206 SOUTH 6TH STREET
FT. PIERCE, FLORIDA 34948
(772) 466-1600 / FAX (772) 489-0396

SHEET TYPE: FPUA DETAILS
SHEET # 12 OF 13

FORT PIERCE UTILITIES AUTHORITY
WATER DISTRIBUTION NOTES

1. ALL CONSTRUCTION MATERIAL, INSTALLATION AND TESTING SHALL CONFORM TO THE STANDARD SPECIFICATIONS OF THE FORT PIERCE UTILITIES AUTHORITY.
2. WATER MAINS WHERE SPECIFIED AS POLYVNYL CHLORIDE (PVC) SHALL CONFORM TO AWWA C-900 OR C-905, PRESSURE CLASS 150, DR (18). WATER MAINS WHERE SPECIFIED AS POLYETHYLENE (PE) SHALL CONFORM TO AWWA C-901 OR C-906, STANDARD CODE DESIGNATION PE3408, PIPE CLASS 200, DIMENSION RATIO (DR) 17 FOR DIRECT BURY, (DR) 11 FOR DIRECTIONAL BORING, AND (DR) 9 FOR 2 INCH AND SMALLER PIPELINES.
3. WATER MAIN, WHERE SPECIFIED AS DUCTILE IRON PIPE , SHALL CONFORM TO ANSI/AWWA C151/A21.51 AND SHALL BE PRESSURE CLASS 250 (MINIMUM).
4. POLYVNYL CHLORIDE WATER MAIN SHALL BE BLUE IN COLOR OR WHITE IN COLOR WITH BLUE STRIPES. THE USE OF IDENTIFICATION TAPE ATTACHED TO THE TOP OF THE PIPE MAY BE USED IN LIEU OF MARKING ON THE PIPE. ALSO DIP PIPE SHALL REQUIRE THE USE OF IDENTIFICATION TAPE AND THHN WIRE.
5. FITTINGS SHALL BE DUCTILE IRON CONFORMING TO ANSI/AWWA C-110/A21.10, CLASS 250 MIN., CEMENT LINED AND FACTORY COATED
6. GATE VALVES SHALL BE MUELLER RESILIENT SEAT, KENNDY KEN-SEAL, AMERICAN OR APPROVED EQUAL. VALVES SHALL CONFORM TO AWWA C-509.
7. WATER LINES SHALL BE BACKFILLED AND COMPACTED IN ACCORDANCE WITH FPUA DESIGN AND CONSTRUCTION STANDARDS. THE CONTRACTOR SHALL SUBMIT CERTIFIED DENSITY TESTS AS REQUIRED BY FPUA ENGINEERING AND THE CITY, COUNTY, FDOT. IN CASES WHERE PAVED AREAS FALL WITHIN THE JURISDICTION OF LOCAL OR STATE AGENCIES, THE COMPACTION REQUIREMENTS SHALL NOT BE LESS THAN THE MINIMUM REQUIRED BY THE APPROPRIATE RESPONSIBLE AGENCY.
8. NO FIELD CHANGES OR DEVIATIONS FROM THE DESIGN SHALL BE MADE WITHOUT PRIOR APPROVAL OF THE FPUA ENGINEER AND CITY/COUNTY/FDOT ENGINEER.
9. THE CONTRACTOR SHALL NOTIFY FPUA ENGINEERING AND CITY/COUNTY/FDOT ENGINEERING 48 HOURS PRIOR TO COMMENCING CONSTRUCTION.
10. A PRE-CONSTRUCTION CONFERENCE BETWEEN THE ENGINEER, THE CONTRACTOR, FPUA, AND CITY/ COUNTY/FDOT ENGINEER SHALL BE MANDATORY PRIOR TO COMMENCEMENT OF CONSTRUCTION.
11. TRAFFIC CONTROL, BARRICADES, ETC., SHALL BE IN ACCORDANCE WITH THE FLORIDA DEPARTMENT OF OF TRANSPORTATION STANDARDS AND APPROVED BY THE CITY ENGINEER.
12. MINIMUM COVER SHALL BE 36 INCHES EXCEPT AS APPROVED BY THE UTILITIES ENGINEER AND CITY/ COUNTY/FDOT ENGINEER. PIPES WITH COVER LESS THAN 30 INCHES SHALL BE CONSTRUCTED OF DUCTILE IRON OR IN PVC CASING.
13. DISTURBED AREAS SHALL BE RESTORED IN CONFORMANCE WITH THE APPLICABLE GOVERNING AGENCY REQUIREMENTS.
14. EXISTING UTILITIES AND DRAINAGE SHALL BE FIELD VERIFIED PRIOR TO CONSTRUCTION AND PROTECTED BY THE CONTRACTOR.
15. WATER MAINS SHALL BE TESTED AND DISINFECTED IN ACCORDANCE WITH THE APPLICABLE FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION AND AWWA C-651 FOR DISINFECTION.

FORT PIERCE UTILITIES AUTHORITY
WATER DISTRIBUTION NOTES
CONTINUED

16. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING EXISTING UTILITIES AND DRAINAGE.
17. THE CONTRACTOR SHALL FURNISH RECORD DRAWING INFORMATION TO THE ENGINEER INCLUDING LOCATIONS OF VALVES, FITTINGS, SERVICE CONNECTIONS, BLOWOFFS, AIR RELEASE VALVES, AND ANY OTHER PERTINENT INFORMATION NECESSARY TO LOCATE ITEMS CONSTRUCTED UNDER THIS PROJECT, AS REQUIRED BY THE UTILITIES ENGINEER.
18. THE CONTRACTOR SHALL TAP EXISTING LINES UNDER THE SUPERVISION OF THE FORT PIERCE UTILITIES AUTHORITY ONLY AFTER TESTING AND DISINFECTION HAS BEEN COMPLETED AND APPROVED ON THE TAPPING VALVE AND SLEEVE.
19. WATER MAIN SHALL BE MARKED BY THE USE OF CONTINUOUS 10 GAUGE THHN MULTI STRANDED WIRE (BLUE IN COLOR) AND IDENTIFICATION TAPE WITH "WATER" MARKED ON TAPE, PERMANENTLY ATTACHED TO THE TOP OF THE WATER MAIN IN ACCORDANCE WITH THE FORT PIERCE UTILITIES AUTHORITY SPECIFICATIONS.
20. SERVICE TAPS SHALL BE PLACED APPROXIMATELY TEN FEET AWAY FROM GATE VALVES, AS SHOWN, FOR TESTING. FOLLOWING TESTING AND STERILIZATION OF WATER LINE, CONTRACTOR SHALL PLACE A BRASS PLUG IN CORPORATION STOPS AND CURB STOPS SHALL BE REMOVED FROM TESTING LOCATIONS.
21. MECHANICAL RESTRAINTS TO BE USED ON ALL FITTINGS AND PLACED IN ACCORDANCE WITH MANUFACTURER'S OR ENGINEER'S RECOMMENDATIONS (WHICHEVER IS MORE STRINGENT) AND FPUA REQUIREMENTS.
22. ALL MAINS SHALL BE TESTED AT A MINIMUM OF 150 PSI. TESTING METHODS SHALL CONFORM TO AWWA C-600. – 2 HR MINIMUM TEST

$$L = \frac{SD(P)^{1/2}}{148{,}000}$$

L= LEAKAGE IN GPH
S= LENGTH OF PIPE IN FEET
D= PIPE DIAMETER IN INCHES
P= TESTING PRESSURE IN PSI

23. PRIOR TO ANY TESTING, ALL MAINS 6" IN DIA. AND LARGER SHALL HAVE A SWAB PASSED THRU THE ENTIRE LENGTH OF THE LINE. NOTE: SWAB SHOULD BE PLACED IN THE JOINT OF NEW LINE. END OF MAIN SHOULD BE "TURNED UP" AT 45% AND EXTENDED SO THAT SWABBING AND A FULL BORE FLUSH CAN BE ACCOMPLISHED. BLOW-OFF ASSY CAN THEN BE PLACED. WHERE LINES BRANCH, SWABS WILL BE PLACED IN BRANCH LINES AND SEQUENTIALLY SWABBED AND FLUSHED.
24. A MINIMUM SIX FEET AND PREFERABLY TEN FEET HORIZONTAL SEPARATION SHALL BE MAINTAINED BETWEEN THE WATER MAIN AND ANY WASTEWATER LINES. 6 INCHES MINIMUM VERTICAL SEPARATION IF WATER MAIN IS OVER WASTEWATER AND 12 INCHES IF WATER MAIN IS UNDER SHALL BE MAINTAINED BETWEEN THE WATER MAIN AND ANY WASTWATER LINES. THE DISTANCE SHALL BE MEASURED FROM OUTSIDE OF PIPE TO OUTSIDE OF PIPE OR STRUCTURE. WHERE THIS MINIMUM SEPARATION CANNOT BE MAINTAINED, THE CROSSING SHALL BE ARRANGED SO THAT THE WASTEWATER PIPE JOINTS AND THE WATER MAIN PIPE JOINTS ARE EQUIDISTANT FROM THE POINT OF CROSSING, AND THE WATER MAIN SHALL BE CONSTRUCTED OF DUCTILE IRON PIPE (DIP) AT THE CROSSING. SUFFICIENT LENGTHS OF DIP MUST BE USED TO PROVIDE A MINIMUM SEPARATION OF 10 FEET BETWEEN ANY TWO JOINTS. ALL JOINTS ON THE WATER MAIN WITHIN 20 FEET OF THE CROSSING MUST BE MECHANICALLY RESTRAINED. A MINIMUM VERTICAL CLEARANCE OF 6 INCHES MUST BE MAINTAINED AT ALL CROSSINGS.
25. WHERE A WATER MAIN IS TO BE INSTALLED BELOW A STORM DRAIN PIPE, A MINIMUM OF 6 INCHES OF VERTICAL CLEARANCE BETWEEN PIPES SHALL BE CONSTRUCTED OF DIP AT THE CROSSING, AND SHALL BE MECHANICALLY RESTRAINED WITHIN 20 FEET OF THE CROSSING.
26. CONTRACTOR SHALL COMPLY WITH FLORIDA TRENCH SAFETY ACT REQUIREMENTS.

FORT PIERCE UTILITIES AUTHORITY WASTEWATER CONSTRUCTION NOTES

1. ALL CONSTRUCTION MATERIAL, INSTALLATION AND TESTING SHALL CONFORM TO THE STANDARD SPECIFICATIONS OF THE FORT PIERCE UTILITIES AUTHORITY.
2. GRAVITY SEWER MAIN SHALL BE POLYVNYL CHLORIDE SDR-26, GREEN OR WHITE IN COLOR, GRAVITY SEWER MAIN SHALL HAVE LOCATOR TAPE WITH "SEWER" MARKED ON TAPE AND SHALL CONFORM TO ASTM D-3034.
3. THE MANHOLE BASE SHALL BE SET ON A FIRM, DRY AND STABLE OR COMPACTED BASE FOUNDATION. IF NECESSARY, THE CONTRACTOR SHALL UTILIZE ROCK TO PROVIDE A FIRM AND SUITABLE MANHOLE BASE FOUNDATION.
4. WASTEWATER LINES SHALL BE BACKFILLED AND COMPACTED IN ACCORDANCE WITH FPUA DESIGN AND CONSTRUCTION STANDARDS. THE CONTRACTOR SHALL SUBMIT CERTIFIED DENSITY TESTS AS REQUIRED BY FPUA ENGINEERING AND THE CITY ENGINEERING DEPARTMENT. IN CASES WHERE PAVED AREAS FALL WITHIN THE JURISDICTION OF LOCAL OR STATE AGENCIES, THE COMPACTION REQUIREMENTS SHALL NOT BE LESS THEN THE MINIMUM REQUIRED BY THE APPROPRIATE RESPONSIBLE AGENCY.
5. A 1% MINIMUM SLOPE SHALL BE MAINTAINED ON ALL SANITARY SERVICE LATERALS.
6. THE CONTRACTOR SHALL FURNISH RECORD DRAWING INFORMATION TO THE ENGINEER CONSISITING OF PIPE SIZES, LOCATION OF SERVICE TEE WYES, DIAMETER OF SERVICES, LOCATION OF ANY FITTINGS, FINAL RIM AND INVERT ELEVATION OF ALL MANHOLES AND ANY OTHER PERTINENT INFORMATION NECESSARY TO LOCATE ITEMS CONSTRUCTED UNDER THIS PROJECT.
7. MAINTAIN SIX FEET AND PREFERABLY 10 FEET HORIZONTAL DISTANCE BETWEEN WATER MAINS AND SEWER MAINS AS A MINIMUM.
8. WASTEWATER FORCE MAINS, WASTEWATER COLLECTION LINES, AND STORM SEWERS SHOULD CROSS UNDER WATER MAINS WHENEVER POSSIBLE. A MINIMUM VERTICAL DISTANCE OF 12 INCHES BETWEEN THE INVERT OF THE UPPER PIPE AND THE CROWN OF THE LOWER PIPE SHALL BE PROVIDED WHENEVER POSSIBLE. WHERE THIS MINIMUM SEPARATION CANNOT BE MAINTAINED, THE CROSSING SHALL BE ARRANGED SO THAT THE WASTEWATER PIPE JOINTS AND THE WATER PIPE JOINTS ARE EQUIDISTANCE FROM THE POINT OF CROSSING, AND THE WATER MAIN SHALL BE CONSTRUCTED OF DUCTILE IRON PIPE (DIP) AT THE CROSSING. SUFFICIENT LENGTHS OF DIP MUST BE USED TO PROVIDE A MINIMUM SEPARATION OF 10 FEET BETWEEN ANY TWO JOINTS. ALL JOINTS ON THE WATER MAIN WITHIN 20 FEET OF THE CROSSING MUST BE MECHANICALLY RESTRAINED. A MINIMUM VERTICAL CLEARANCE OF 6 INCHES MUST BE MAINTAINED AT ALL CROSSINGS.
9. A PRE-CONSTRUCTION CONFERENCE BETWEEN THE ENGINEER, THE CONTRACTOR, AND FPUA/CITY COUNTY/FDOT SHALL BE MANDATORY PRIOR TO THE COMMENCEMENT OF CONSTRUCTION.
10. NO FIELD CHANGES OR DEVIATIONS FORM THE DESIGN SHALL BE MADE WITHOUT PRIOR APPROVAL OF FPUA/CITY/COUNTY/FDOT ENGINEERS.
11. TRAFFIC CONTROL, BARRICADES, ETC. SHALL BE IN ACCORDANCE WITH THE FLORIDA DEPARTMENT OF TRANSPORTATION STANDARDS.
12. CONTRACTOR SHALL NOTIFY FORT PIERCE UTILITIES AUTHORITY 48 HOURS PRIOR TO COMMENCING CONSTRUCTION.
13. WASTEWATER FORCE MAIN SHALL BE POLYVNYL CHLORIDE CONFORMING TO AWWA C-900, AND SHALL BE CLASS 150, DR-18.
14. WASTEWATER FORCE MAIN SHALL BE GREEN IN COLOR.
15. FITTINGS SHALL BE DUCTILE IRON, CONFORMING TO ANSI/AWWA C-110/A21.10 CLASS 250 MIN. WITH INTERIOR EPOXY COATING.
16. WASTEWATER FORCE MAIN SHALL BE MARKED BY THE USE OF CONTINUOUS 10 GAUGE THHN WIRE (GREEN IN COLOR) PERMANENTLY ATTACHED TO THE TOP OF THE FORCE MAIN WITH LOCATOR TAPE MARKED "SEWER" ON TAPE IN ACCORDANCE WITH FPUA SPECIFICATIONS.
17. MINIMUM COVER SHALL BE 36 INCHES. PIPES WITH COVER LESS THAN 30 INCHES SHALL REQUIRE PRIOR APPROVAL OF THE UTILITES ENGINEER AND SHALL BE CONSTRUCTED OF DUCTILE IRON PIPE.
18. EACH SERVICE LATERAL WILL BE MARKED WITH A LOCATOR BALL AS MANUFACTURED BY 3M CORPORATION, OR APPROVED EQUAL AS REQUIRED BY FPUA ENGINEER.
19. ALL MANHOLES SHALL HAVE SEWER RAIN GUARDS INSTALLED AS REQUIRED BY FPUA ENGINEER.
20. THE CONTRACTOR SHALL COMPLY WITH THE FLORIDA TRENCH SAFETY ACT REQUIREMENTS.

STANDARD SEPARATION STATEMENT FOR WATER / SEWER CONFLICTS

1. SANITARY SEWER, FORCE MAINS, AND STORM SEWERS SHOULD CROSS UNDER WATER MAINS WHENEVER POSSIBLE. SANITARY SEWERS, FORCE MAINS AND STORM SEWERS CROSSING UNDER WATER MAINS SHALL BE LAID TO PROVIDE A MINIMUM VERTICAL DISTANCE OF 6 INCHES, PREFERABLY 12 INCHES BETWEEN THE INVERT OF THE UPPER PIPE AND THE CROWN OF THE LOWER PIPE WHEN ABOVE, AND AT LEAST 12 INCHES OF SEPARATION WHEN THE WATER MAIN IS BELOW.

WHERE SANITARY SEWER, FORCE MAINS, STORM SEWERS MUST CROSS A WATER MAIN WITH LESS THAN 6 INCHES VERTICAL SEPARATION, BOTH THE SEWER AND WATER MAIN SHALL BE CONSTRUCTED OF DUCTILE IRON PIPE (DIP) CENTERED ON THE CROSSING. (DIP IS NOT REQUIRED FOR STORM SEWERS.) SUFFICIENT LENGTHS OF DIP MUST BE USED TO PROVIDE A MINIMUM SEPARATION OF 10 FEET BETWEEN TWO JOINTS. ALL JOINTS ON THE WATER MAIN WITHIN 20 FEET OF THE CROSSING MUST BE MECHANICALLY RESTRAINED.

ALL CROSSINGS SHALL BE ARRANGED SO THAT THE SEWER PIPE JOINTS AND WATER MAIN PIPE JOINTS ARE EQUIDISTANT FROM THE POINT OF CROSSING (PIPES CENTERED ON THE CROSSING). AT SUCH CROSSINGS PIPES SHALL BE ARRANGED SO THAT ALL WATER MAIN JOINTS ARE AT LEAST THREE FEET FROM ALL JOINTS IN VACUUM-TYPE SANITARY SEWERS, STORM SEWERS, STORMWATER FORCE MAINS, OR PIPELINES CONVEYING RECLAIMED WATER REGULATED UNDER PART III OF CHAPTER 62–610, F.A.C., AND AT LEAST SIX FEET FROM ALL JOINTS IN GRAVITY OR PRESSURE TYPE SANITARY SEWERS, WASTEWATER FORCE MAINS, OR PIPELINES CONVEYING RECLAIMED WATER NOT REGULATED UNDER PART III OF CHAPTER 62–610, F.A.C.

WHERE A NEW PIPE CONFLICTS WITH AN EXISTING PIPE WITH LESS THAN 6 INCHES VERTICAL CLEARANCE, THE NEW PIPE SHALL BE CONSTRUCTED OF DIP (EXCEPT STORM SEWERS) AND NEW PIPES SHALL BE ARRANGED TO MEET THE CROSSING REQUIREMENTS ABOVE.

2. A MINIMUM 3–FOOT HORIZONTAL SEPARATION SHALL BE MAINTAINED BETWEEN ANY TYPE OF STORM SEWER AND WATER MAIN IN PARALLEL INSTALLATIONS WHENEVER POSSIBLE.

A MINIMUM 3–FOOT, AND PREFERABLE 10–FOOT HORIZONTAL SEPARATION SHALL BE MAINTAINED BETWEEN VACUUM TYPE SANITARY SEWER AND WATER MAIN IN PARALLEL INSTALLATIONS WHENEVER POSSIBLE.

A MINIMUM 10–FOOT HORIZONTAL SEPARATION SHALL BE MAINTAINED BETWEEN "ONSITE SEWAGE TREATMENT AND DISPOSAL SYSTEM" AND WATER MAIN IN PARALLEL INSTALLATIONS WHENEVER POSSIBLE.

A MINIMUM 6–FOOT, AND PREFERABLE 10–FOOT HORIZONTAL SEPARATION SHALL BE MAINTAINED BETWEEN GRAVITY OR PRESSURE SANITARY SEWER, WASTEWATER FORCE MAIN, OR PIPELINE CONVEYING RECLAIMED WATER AND WATER MAIN IN PARALLEL INSTALLATIONS WHENEVER POSSIBLE. THE MINIMUM HORIZONTAL SEPARATION DISTANCE BETWEEN WATER MAINS AND GRAVITY–TYPE SANITARY SEWERS SHALL BE REDUCED TO 3 FOOT WHERE THE BOTTOM OF THE WATER MAIN IS LAID AT LEAST SIX INCHES ABOVE THE TOP OF THE SEWER

IN CASES WHERE IT IS NOT POSSIBLE TO MAINTAIN A 10–FOOT HORIZONTAL SEPARATION, THE WATER MAIN MUST BE LAID IN A SEPARATE TRENCH OR ON A UNDISTURBED EARTH SHELF LOCATED ON ONE SIDE OF THE SEWER OR FORCE MAIN AT SUCH AN ELEVATION THAT THE BOTTOM OF THE WATER MAIN IS AT LEAST 6 INCHES ABOVE THE TOP OF THE SEWER.

WHERE IT IS NOT POSSIBLE TO MAINTAIN A VERTICAL DISTANCE OF 6 INCHES IN PARALLEL INSTALLATIONS, THE WATER MAIN SHALL BE CONSTRUCTED OF DIP AND THE SEWER OR THE FORCE MAIN SHALL BE CONSTRUCTED OF DIP (EXCEPT STORM SEWER) WITH A MINIMUM VERTICAL DISTANCE OF 6 INCHES. THE WATER MAIN SHOULD ALWAYS BE ABOVE THE SEWER. JOINTS ON THE WATER MAIN SHALL BE LOCATED AS FAR APART AS POSSIBLE FROM JOINTS ON THE SEWER OR FORCE MAIN (STAGGERED JOINTS).

3. ALL DIP SHALL BE PRESSURE CLASS 250 MIN.. ADEQUATE PROTECTIVE MEASURES AGAINST CORROSION SHALL BE USED AS DETERMINED BY THE DESIGN ENGINEER.

GENERAL POLICY

WHERE COST JUSTIFIED AND OPERATIONALLY FEASIBLE, IT IS THE GENERAL POLICY OF THE F.P.U.A. TO PROVIDE WATER, ELECTRIC, SEWER AND GAS SERVICE FROM THE STREET SIDE OF A PIECE OF PROPERTY, DEPENDING ON FACTORS SUCH AS LOCATION OF EXISTING SUPPLY SOURCE FACILITIES, REAR OR SIDE LOT LINE SUPPLY MAY BE AUTHORIZED, BUT ONLY WITH PRIOR APPROVAL FROM THE F.P.U.A.

③ THE PREFERRED POINT OF CONNECTION TO THE F.P.U.A. WATER METER, AREA ③ SHALL BE LOCATED IN THE CORNER OF THE PROPERTY ADJACENT TO THE F.P.U.A. AS THE BEST LOCATION FOR THE WATER METER. EVERY EFFORT WILL BE MADE TO SELECT THE CORNER WHERE TWO WATER SERVICES AND METERS CAN BE CONNECTED.

② IF PHYSICAL BARRIERS OR OTHER OBSTACLES PREVENT THE CONNECTION OF THE BUILDING SERVICE LINE TO THE F.P.U.A. WATER SERVICE, WITHIN AREA ③ , THE F.P.U.A. ENGINEERING DEPARTMENT MAY AUTHORIZE THE CONNECTION ALONG THE PORTION OF THE R/W LINE MARKED AREA ② , OR ALONG THE PROPERTY LINES MARKED AREA ① .

NOTES:

1. HORIZONTAL SEPARATION OF WATER AND WASTEWATER SERVICES SHOULD BE A MINIMUM OF 6 FEET AND PREFERABLY 10 FEET.
2. ALL METERS SHALL BE INSTALLED IN AN UNRESTRICTED AREA FOLLOWING EASE OF ACCESS AND PROVIDING ADEQUATE PROTECTION.
3. THE F.P.U.A. SHALL BE RESPONSIBLE FOR THE MAINTENANCE AND REPAIR OF THE WATER LATERAL WITHIN THE EASEMENT OR RIGHT–OF–WAY, UP TO THE POINT OF CONNECTION.

WATER METER PLACEMENT
(N.T.S.)

NOTES:

1. BLUE 10 GAUGE THHN WIRE SHALL BE ATTACHED TO THE SERVICE LINE.
2. WHERE SERVICES UNDER PAVEMENT ARE REQUIRED, THE POLYETHYLENE TUBING SHALL BE INSTALLED WITHIN SCHEDULE 40 PVC CASING PIPE.
3. 1" & 3/4" METER SIZES SHALL REQUIRE A LOCKABLE METER VALVE. (CURB STOP)
4. MINIMUM COVER IN UNPAVED AREAS SHALL BE 30", IN PAVED AREAS OR PLANNED ROADWAYS OR SWALES MIN. COVER SHALL BE 36".
5. FOR 2" COMMERCIAL SERVICE INSTALLATIONS, FPUA WILL INSTALL ABOVE GROUND METER PER DETAIL W-8.

TYPICAL SINGLE WATER SERVICE CONNECTION
(N.T.S.)

NOTES:

1. BLUE 10 GAUGE THHN WIRE SHALL BE ATTACHED TO THE SERVICE LINE.
2. WHERE SERVICES UNDER PAVEMENT ARE REQUIRED, THE POLYETHYLENE TUBING SHALL BE INSTALLED WITHIN SCHEDULE 40 PVC CASING PIPE.
3. 1" & 3/4" METER SIZES SHALL REQUIRE A LOCKABLE METER VALVE. (CURB STOP)
4. MINIMUM COVER IN UNPAVED AREAS SHALL BE 30", IN PAVED AREAS OR PLANNED ROADWAYS OR SWALES MIN. COVER SHALL BE 36".

TYPICAL DOUBLE WATER SERVICE CONNECTION
(N.T.S.)

NOTES:

1. HYDRANT SHALL BE INSTALLED PLUMB & TRUE.
2. HYDRANT SHALL BE PAINTED CARNIVAL RED FROM FACTORY.
3. HEEL TO REST IN UNDISTURBED SOIL.
4. THE ONLY HYDRANTS ACCEPTABLE ARE: KENNEDY GUARDIAN, MUELLER CENTURION, & AMERICAN AVK, CLOW OR APPROVED EQUAL.
5. HYDRANT ASSEMBLY MUST BE RESTRAINED TO TEE.
6. ALL FITTINGS SHALL BE MECHANICAL JOINT.
7. ENTIRE ASSEMBLY TO BE MECHANICALLY RESTRAINED.
8. BLUE LOCATOR SHALL BE PLACED IN CENTER OF TRAVEL LANE CLOSEST TO HYDRANT.
9. ALL HYDRANT VALVE BOX COVERS SHALL BE PAINTED CARNIVAL RED.
10. LOCATE WIRE SHALL TERMINATE AT HYDRANT ISOLATION VALVE.
11. HYDRANTS SHALL BE NO MORE THAN FIFTEEN FEET (15 FT.) FROM THE CURB OF ROADWAYS OR FROM THE EDGE OF PAVEMENT. CLEARANCES OF SEVEN AND ONE HALF FEET (7FT–6IN.) IN FRONT OF AND TO THE SIDES OF THE FIRE HYDRANTS, WITH FOUR FOOT (4 FT.) CLEARANCE TO THE REAR OF HYDRANTS SHALL BE MAINTAINED.

TYPICAL FIRE HYDRANT ASSEMBLY
(N.T.S.)

BACTERIOLOGICAL SAMPLING POINT @ FIRE HYDRANT
(N.T.S.)

BACTERIOLOGICAL SAMPLING POINT DETAIL
(N.T.S.)

NOTE:

AFTER TESTING REMOVE 1" P.E. LINE AND CAP WITH BRASS PLUG AT CORPORATION STOP.

Valerie A. Schulte, P.E. PE# 69355
1701 S. 37th Street
Ft Pierce, FL 34947

VALERIE A. SCHULTE LICENSE No 69355 STATE OF FLORIDA PROFESSIONAL ENGINEER
6-25-11

FORT PIERCE UTILITIES AUTHORITY

VERIFY SCALE
BAR IS EQUAL TO ONE INCH ON ORIGINAL DRAWING
0 ■ 1
ADJUST ALL SCALED DIMENSIONS ACCORDINGLY

DATE:	REVISION:	BY:	APPD:

DESIGNED: JJM
DRAWN BY: JJM
APPROVED: VS
DRAWING FILENAME:
SCALE:
DATE: 3-25-11

NORTH 2ND STREET
WATER/WASTEWATER IMPROVEMENTS

WATER/WASTEWATER/GAS ENGINEERING

FT. PIERCE UTILITIES AUTHORITY
206 SOUTH 6TH STREET
FT. PIERCE, FLORIDA 34948
(772) 466-1600 / FAX (772) 489-0396

SHEET TYPE: FPUA DETAILS
SHEET # 13 OF 13

GAS DISTRIBUTION LINE RELOCATION
NORTH 2ND STREET IMPROVEMENT PROJECT



PROJECT LOCATION

VICINITY MAP
N.T.S

SHEET INDEX

HEET NUMBER	SHEET TITLE/DESCRIPTION
1 OF 14	COVER SHEET
2 OF 14	PLAN SHEET – STA. –00+65 TO 04+70
3 OF 14	PLAN SHEET – STA. 04+70 TO 03+10
4 OF 14	PLAN SHEET – STA. 03+10 TO 09+17
5 OF 14	PLAN SHEET – STA. 09+17 TO 15+22
6 OF 14	PLAN SHEET – STA. 15+22 TO 21+27
7 OF 14	PLAN SHEET – STA. 21+27 TO 26+90
8 OF 14	PLAN SHEET – STA. 00+80 TO 02+57
9 OF 14	PLAN SHEET – STA. 02+00 TO 04+74
10 OF 14	PLAN SHEET – STA. 06+25 TO 08+60
11 OF 14	PROFILE SHEET – STA. –00+65 TO 18+70
12 OF 14	PROFILE SHEET – STA. 18+70 TO 27+00
13 OF 14	PROFILE SHEET – STA. 00+50 TO 07+50 AND 0+50
14 OF 14	DETAIL & FLOW DIAGRAM SHEET

PRELIMILARY

					N. 2ND STREET ROAD IMPROVEMENT PROJECT	
					N.2ND ST.(SEAWAY DR TO NORTH END)	
09-07-14	INITIAL RELEASE		P.JL		RELOCATE GAS MAIN	
DATE:	DESCRIPTION:		BY:	AP:		
ELECTRIC ENGINEERING 1701 SOUTH 37TH STREET P.O.Box 3191 (34985) FT. PIERCE, FLORIDA 34947 (772) 466-1600 / FAX (772) 461-1938		VERIFY SCALE BAR IS EQUAL TO ONE INCH ON ORIGINAL DRAWING ADJUST ALL SCALED DIMENSIONS ACCORDINGLY	SCALE: 1=20	DESIGNED: P.JL	JOB #: 20150409-1	
			SHEET: Plan	DRAWN: P.JL	SHEET 1 OF 15	

NORTH

MATCHLINE STA. 04+70.00 - SHEET 3

"PRIVATE RESIDENCE" 705-0035-000/1 WARD I. SNYDER 637 N. 2nd STREET

"PRIVATE RESIDENCE" 705-0034-000/4 WARD I. SNYDER 647 N. 2nd STREET

"PRIVATE RESIDENCE" 405-0033-000/7 COASTAL PROPERTY LLC 651 N. 2ND STREET

"PRIVATE RESIDENCE" 705-0022-000/7 COASTAL PROPERTY LLC 655 N. 2nd STREET

"ST. LUCIE OUTBOARD MARINE" 705-0020-000/3 ST. LUCIE OUTBOARD MARINE, INC. 657 N. 2nd STREET

TRAILER PARK ROAD

AVENUE G - 25' R/W

SEAWAY DRIVE

NORTH 2nd STREET Existing 12" Water Main(Abandoned)

Existing R/W

CONCRETE TRAFFIC SEPARATOR

EXISTING 1/2" P.E. GAS SERVICE LINE

(29) INSTALL 1" P.E ELBOW 1" TO 1/2" REDUCER (RED) DETAIL SHEET 14 STA. 00+83L

(28) INSTALL 1"X1"X1" 3 WAY TEE DETAIL SHEET 14 BORE PIT - GAS EXIT 1-2" HDPE(E) STA. 01+00L

(31) INSTALL 1" P.E. ELBOW DETAIL SHEET 14

ABANDON 2" STEEL GAS IN PLACE

CONSTRUCT TRENCH 1" P.E. (154wall) Gas (63') MINIMUM 36" COVER

(30) INSTALL 1" P.E. ELBOW DETAIL SHEET 14 STA. 01+14L

(17) REMOVE GAS VALVE V-272 SEE DETAIL SHEET 14 STATION 01+42

ABANDON EXISTING 2" STEEL GAS IN PLACE STATION 1+75 TO 7+45

(33) INSTALL 2"X2"X2" 3 WAY TEE 2" TO 1" REDUCER (RED) 1" TO 1/2" REDUCER (RED) DETAIL SHEET 14

ABANDON EXISTING 1/2" P.E. GAS IN PLACE STATION 03+60

EXISTING 1/2" P.E. GAS SERVICE LINE

CONSTRUCT DIRECTIONAL BORE 2" P.E. (154wall) Gas (470') MINIMUM 36" COVER SEE PROFILE "AA" - (STATION 01+00 TO 07+00 SHT-11)

(1) INSTALL GAS VALVE 2" P.E. ELBOW DETAIL SHEET 14 BORE PIT - GAS EXIT 1-2" HDPE(W) STA. -00+65L

(25) REMOVE GAS VALVE V-740 DETAIL SHEET 14

CONSTRUCT DIRECTIONAL BORE 2" P.E. (154wall) Gas (55') MINIMUM 36" COVER STATION -00+65

(26) INSTALL 2" P.E. ELBOW DETAIL SHEET 14 BORE PIT - GAS EXIT 1-2" HDPE(S) ENTRANCE 1-2" HDPE(E) STA. -00+65R

CONSTRUCT DIRECTIONAL BORE 2" P.E. (154wall) Gas (180') MINIMUM 36" COVER SEE PROFILE "AA" - (STATION -00+65 TO 07+00 SHT-11)

CONSTRUCT TRENCH 1" P.E. (154wall) Gas (22') MINIMUM 36" COVER SEE PROFILE "AA" - (STATION -00+65 TO 07+00 SHT-11)

CONSTRUCT DIRECTIONAL BORE 1" P.E. (154wall) Gas (55') MINIMUM 36" COVER STATION 01+00 SEE PROFILE "AA" - (STATION -00+65 TO 07+00 SHT-11)

(32) INSTALL 2"X2"X2" 3 WAY TEE 2" TO 1" REDUCER (RED) DETAIL SHEET 14

(27) INSTALL 2"X2"X2" 3 WAY TEE 2" TO 1" REDUCER (RED) DETAIL SHEET 14 BORE PIT - GAS ENTRANCE 1-2" HDPE(S) ENTRANCE 1-2" HDPE(N) ENTRANCE 1-2" HDPE(W) STA. 01+00R

EXISTING 1" P.E. GAS SERVICE LINE

CONSTRUCT TRENCH 1" P.E. (154wall) Gas (14') MINIMUM 36" COVER SEE PROFILE "AA" - (STATION -00+65 TO 07+00 SHT-11)

ABANDON EXISTING 1" P.E. GAS IN PLACE STATION 1+08

EXISTING SDMH TO REMAIN (CONFLICT BOX) STA.: 0+51.98 OFFSET: 2.68' L INV. 1.35 (W) (E) INV. 1.35 (S) RIM: 7.02'

EXT. CURB INLET RIM: 7.7' (N) INV: 3.0' (15"RCP)

EXT. CURB INLET RIM: 7.2' (E) INV: 2.1' (15"RCP)

EXISTING CURB XD-110 TO BE MODIFIED TO INLET TO SDMH STA.: 0+51.98 OFFSET: 11.49' R INV: 2.30' (E) RIM: 7.20' INV: 3.10' (SW) INV: 2.30' (S)

EXT. CURB INLET XD-111 STA.: 2+18 INLET OFFSET: 47.06' R RIM: 7.20' INV: 2.20' (NE)

PRELIMINARY

MATCHLINE - AA - SHEET 9

					N. 2ND STREET ROAD IMPROVEMENT PROJECT
					N.2ND ST (SEAWAY DR TO NORTH END)
05-07-14	INITIAL RELEASE	P.S.			RELOCATE GAS MAIN
DATE:	DESCRIPTION:	BY:	AP:		

ELECTRIC ENGINEERING
1101 SOUTH 37TH STREET
P.O.Box 3191 (34950)
FT. PIERCE, FLORIDA 34947
(772) 489-1600 / FAX (772) 461-1938

VERIFY SCALE BAR IS EQUAL TO ONE INCH ON ORIGINAL DRAWING ADJUST ALL SCALED DIMENSIONS ACCORDINGLY

SCALE:	DESIGNED:	JOB #:
1= 20	P.S.	2010/0409-1
SHEET:	DRAWN:	SHEET
Plan	JPL	2 OF 14

NORTH

MATCHLINE STA. 02+57.00 - SHEET 8

MATCHLINE STA. 04+70.00 - SHEET 2

MATCHLINE STA. 03+10.00 - SHEET 4

MATCHLINE STA. 06+25.00 - SHEET 10

ABANDON
EXISTING 2" STEEL GAS IN PLACE

ABANDON
EXISTING 2" STEEL GAS IN PLACE
STATION 0+00 TO SOUTH END OF FISHERMANS WHARF

ABANDON
EXISTING 4" STEEL GAS IN PLACE
STATION 2+20 TO 4+10

CONSTRUCT TRENCH
4" P.E. (.154wall) Gas (205')
MINIMUM 30" COVER
STATION 02+20 TO 04+00
MAINTAIN 18" FROM ANY UTILITY

(18) REMOVE
GAS VALVE
V-16
SEE DETAIL SHEET 14
STATION 03+80

(19) REMOVE
GAS VALVE
V-17
SEE DETAIL SHEET 14
STATION 00+42

(20) REMOVE
GAS VALVE
V-18
SEE DETAIL SHEET 14
STATION 00+62

(5) NSTALL
4"x4"x4" 3 WAY TEE
4" TO 2" REDUCER (RED)
SEE DETAIL SHEET 14
STATION 00+75
BORE PIT - GAS
ENTRANCE 1-4" HDPE(D)
EXIT 1-2" HDPE(W)
STA. 00+75R

(36) NSTALL
GAS VALVE
SEE DETAIL SHEET 14
STATION 00+87L

(36) NSTALL
GAS VALVE
SEE DETAIL SHEET 14
STATION 00+75

ABANDON
EXISTING 2" ST GAS IN PLACE
STATION 00+25 TO 03+10

ABANDON
EXISTING 4" ST GAS IN PLACE
STATION 00+25 TO 03+10

CONSTRUCT DIRECTIONAL BORE
4" P.E. (.154wall) Gas (270')
MINIMUM 36" COVER
SEE PROFILE "AA" - <STATION 00+75 TO 03+45 SHT:11)

CONSTRUCT DIRECTIONAL BORE
4" P.E. (.154wall) Gas (85')
MINIMUM 36" COVER
SEE PROFILE "AA" - <STATION 00+75 SHT:11)

(4) INSTALL
2" P.E. GAS ELBOW
SEE DETAIL SHEET 14
STATION 00+75
BORE PIT - GAS
ENTRANCE 1-2" HDPE(W)
ENTRANCE 1-2" HDPE(E)
STA. 00+75R

CONSTRUCT DIRECTIONAL BORE
2" P.E. (.154wall) Gas (150')
MINIMUM 36" COVER
SEE PROFILE "AA" & "EE" - <STATION 07+15 TO 00+75 SHT:11&13)

(2) INSTALL
2" P.E. GAS ELBOW
SEE DETAIL SHEET 14
STATION 07+00
BORE PIT - GAS
EXIT 1-4" HDPE(S)
STA. 07+00R

BORE PIT - GAS
EXIT 1-2" HDPE(S)
ENTRANCE 1-2" HDPE(N)
STA. 06+00R

CONSTRUCT TRENCH
2" P.E. (.154wall) Gas (30')
MINIMUM 36" COVER
STATION 05+00 TO 05+30
SEE PROFILE "EE" - <STATION 05+00 TO 05+30 SHT:13)

(3) INSTALL
2"X2"X2" 3 WAY TEE
SEE DETAIL SHEET 14
STATION 05+27
BORE PIT - GAS
EXIT 1-2" HDPE(S)
ENTRANCE 1-2" HDPE(E)
STA. 05+07L

CONSTRUCT DIRECTIONAL BORE
2" P.E. (.154wall) Gas (230')
MINIMUM 36" COVER
SEE PROFILE "AA" - <STATION 01+00 TO 07+00 SHT:11)

CONSTRUCT DIRECTIONAL BORE
2" P.E. (.154wall) Gas (230')
MINIMUM 36" COVER
STATION 05+30 TO 07+60
SEE PROFILE "EE" - <STATION 05+30 TO 07+60 SHT:13)

ABANDON
EXISTING 2" STEEL GAS IN PLACE
N. 2ND STREET TO STATION 6+25

AVENUE H - 66R/W
NORTH 2nd STREET
TERMINAL DRIVE
FEC SPUR LINE
FEC SPUR
FISHERMAN'S WHARF
TRAILER PARK ROAD 2
Existing 16" DIP Water Main
Existing 10" DIP Water Main (to be Abandoned)
Existing 16" PVC Force Main
New R/W Line
Old R/W Line
Existing R/W
Existing EOP
"ST. LUCIE OUTBOARD MARINA"
705-0019-000/3
ST. LUCIE OUTBOARD MARINE INC.
657 N. 2nd STREET
"DEBROOKS CORNER"
341-0000-000/5
DWIGHT DEBOLT, ET AL
107 FISHERMAN'S WHARF
"VACANT LOT"
3410005000/6
ST. LUCIE COUNTY
TBD
30' UTILITY EASEMENT
(PER MASTELLER & MOLER, INC. PLANS)
"THE SEA"

PRELIMILARY

					N. 2ND STREET ROAD IMPROVEMENT PROJECT
					N.2ND ST (SEAWAY DR TO NORTH END)
05-07-14	INITIAL RELEASE		PJL		RELOCATE GAS MAIN
DATE:	DESCRIPTION:		BY:	AP:	

ELECTRIC ENGINEERING
1701 SOUTH 37TH STREET
P.O.Box 3191 (34952)
FT. PIERCE, FLORIDA 34947
(772) 465-1600 / FAX (772) 461-1938

VERIFY SCALE BAR IS EQUAL TO ONE INCH ON ORIGINAL DRAWING. ADJUST ALL SCALED DIMENSIONS ACCORDINGLY.

SCALE:	DESIGNED:	JOB #:
1= 20	PJL	20100409-1
SHEET:	DRAWN:	SHEET
Plan	PJL	3 OF 14

NORTH

MATCHLINE STA. 03+10.00 - SHEET 3

MATCHLINE STA. 09+17.00 - SHEET 5

"PALMDALE OIL COMPANY
705-0007-00/9
PALMDALE OIL COMPANY
911 N. 2nd STREET

BORE PIT - GAS
EXIT 1-4" HDPE(S)
ENTRANCE 1-4" HDPE(N)
STA. 03+45L

ABANDON
EXISTING 4" STEEL GAS IN PLACE
STATION 03+10 TO 5+75

ABANDON
EXISTING 2" STEEL GAS IN PLACE
STATION 03+10 TO 5+75

CONSTRUCT DIRECTIONAL BORE
4" P.E. (.154wall) Gas (125')
MINIMUM 36" COVER
SEE PROFILE "AA" - <STATION 03+45 TO 04+70 SHT:11>

BORE PIT - GAS
EXIT 1-4" HDPE(S)
ENTRANCE 1-4" HDPE(N)
STA. 04+70L

CONSTRUCT DIRECTIONAL BORE
4" P.E. (.154wall) Gas (140')
MINIMUM 36" COVER
SEE PROFILE "AA" & "BB" - <STATION 04+70 TO 06+10 SHT:11>

(6) INSTALL
4"X4"X4" 3 WAY TEE
4" TO 2" REDUCER (RED)
SEE DETAIL SHEET 14
STATION 06+10
BORE PIT - GAS
EXIT 1-4" HDPE(S)
ENTRANCE 1-2" HDPE(W)
STA. 06+10L

ABANDONED
2" STEEL GAS IN PLACE

EXISTING
2" HDPE GAS IN PLACE

(8) INSTALL
4"X4"X4" 3 WAY TEE
4" TO 2" REDUCER (RED)
GAS VALVE
SEE DETAIL SHEET 14
STATION 06+88
BORE PIT - GAS
ENTRANCE 1-4" HDPE(N)
STA. 06+88L

(21) REMOVE
GAS VALVE
V-19
SEE DETAIL SHEET 14
STATION 06+45

(22) REMOVE
GAS VALVE
V-20
SEE DETAIL SHEET 14
STATION 06+90

ABANDON
EXISTING 2" STEEL GAS IN PLACE
STATION 06+50 TO 09+17

CONSTRUCT DIRECTIONAL BORE
4" P.E. (.154wall) Gas (262')
MINIMUM 36" COVER
SEE PROFILE "BB" - <STATION 06+88 TO 09+50 SHT:11>

CONSTRUCT TRENCH
4" P.E. (.154wall) Gas (78')
MINIMUM 36" COVER
SEE PROFILE "BB" - <STATION 06+10 TO 06+88 SHT:11>

ABANDON
EXISTING 4" STEEL GAS IN PLACE
STATION 5+75 TO 6+50

ABANDON
EXISTING 2" STEEL GAS IN PLACE
STATION 5+75 TO 6+50

CONSTRUCT DIRECTIONAL BORE
2" P.E. (.154wall) Gas (60')
MINIMUM 36" COVER
SEE PROFILE "BB" - <STATION 06+10 SHT:11>

(7) BORE PIT - GAS
EXIT 1-2" HDPE(E)
STA. 06+10R

ABANDON
EXISTING 2" STEEL GAS IN PLACE

CONSTRUCT DIRECTIONAL BORE
2" P.E. (.154wall) Gas (60')
MINIMUM 36" COVER
SEE PROFILE "BB" - <STATION 06+10 SHT:11>

4+00 5+00 6+00 7+00 8+00 9+00 10+00 9+50

Existing R/W
Existing EOP
Existing 16" PVC Force Main
Existing 12" CIP Water Main
Existing 8" VCP Gravity Main
Existing 6" HDPE Water Main
NORTH 2nd STREET
PORT AVENUE

"PACKERS SUPPLY COMPANY"
313-0001-00/1
BERNARD A EGAN GROVES INC
1000 N. 2nd STREET

PRELIMINARY

					N. 2ND STREET ROAD IMPROVEMENT PROJECT
					N.2ND ST (SEAWAY DR TO NORTH END)
05-07-14	INITIAL RELEASE	P.S.			RELOCATE GAS MAIN
DATE:	DESCRIPTION:	BY:	AP:		

ELECTRIC ENGINEERING
1101 SOUTH 25TH STREET
FT. PIERCE, FLORIDA 34947
(772) 466-1600 / FAX (772) 461-1638

VERIFY SCALE BAR IS EQUAL TO 1" ON THIS DRAWING
ONE INCH ON ORIGINAL DRAWING
ADJUST ALL SCALED DIMENSIONS ACCORDINGLY

SCALE:	DESIGNED:	JOB #:
1=20	P.S.	20100409-1
SHEET:	DRAWN:	SHEET
Plan	P.S.	4 OF 14

NORTH

MATCHLINE STA. 09+17.00 - SHEET 4

MATCHLINE STA. 15+22.00 - SHEET 6

BORE PIT - GAS
ENTRANCE 1-4" HDPE(OD
EXIT 1-4" HDPE(CS)
STA. 09+50L

CONSTRUCT DIRECTIONAL BORE
4" PE (3544ø10) Gas (SDR9
MINIMUM 36" COVER
SEE PROFILE "BB" - (STATION 09+50 TO 14+79 SHT41)

ABANDON
EXISTING 2" STEEL GAS IN PLACE
STATION 09+17 TO 15+22

BORE PIT - GAS
ENTRANCE 1-4" HDPE(OD
EXIT 1-4" HDPE(CS)
STA. 14+79L

FPI 13670
45/S
STA. 09+46L

FPI 13670
45/S
STA. 09+67L

FPI 13675
45/S
STA. 10+69L

FPI 33037
45/S
STA. 11+47L

FPI 13666
STA. 12+35L

FPI 13669
45/S
STA. 12+35L

FPI 13668
45/S
STA. 14+25L

FPI 13668
45/S
STA. 14+63L

FPI 13667
45/S
STA. 10+66R

FPI 13696
45/S

Existing R/W

Existing EOP

Existing 12" CIP Water Main

Existing 16" PVC Force Main

NORTH 2nd STREET - R/W VARIES

10+00

11+00

12+00

13+00

14+00

15+00

25 MPH ZONE

"CRACKER BOY OVERFLOW"
705-0001-000/4
JAMCO, INC.
N. 2nd STREET

"CANVAS MAN."
312-0001-00/8
MOLLYWOG LLC
1302 N. 2nd STREET

"EGAN PACKING"
311-0002-00/2
BERNARD A EGAN GROVES INC
1110 N. 2nd STREET

"VACANT LOT"
133-0001-00/9
DESTIN BEACH IN

1110

FEC SPUR LINE

FEC SPUR LINE

PRELIMILARY

05-07-14	INITIAL RELEASE			P.JL	
DATE:	I	DESCRIPTION:		BY:	AP:

FORT PIERCE UTILITIES AUTHORITY

ELECTRIC ENGINEERING
1701 SOUTH 25TH STREET
P.O.Box 3191 (34985)
FT. PIERCE, FLORIDA 34947
(772) 466-1600 / FAX (772) 461-1938

N. 2ND STREET ROAD IMPROVEMENT PROJECT
N.2ND ST (SEAWAY DR TO NORTH END)
RELOCATE GAS MAIN

VERIFY SCALE BAR IS EQUAL TO ONE INCH ON ORIGINAL DRAWING. ADJUST ALL SCALED DIMENSIONS ACCORDINGLY

SCALE:	DESIGNED:	JOB #:
1=20	PJL	20100409-1
SHEET:	DRAWN:	SHEET
Plan	PJL	5 OF 14

NORTH

MATCHLINE STA. 15+22.00 - SHEET 5

MATCHLINE STA. 21+27.00 - SHEET 7

Rinker Materials
1301 N 2nd Street

1301

FEC RAILROAD

(37) REMOVE & RELOCATE
TD LOC 38 - STATION 15+80
CHART BOX - PRESSURE RECORDER
SEE DETAIL SHEET 14
STATION 15+80

CONSTRUCT DIRECTIONAL BORE
4" P.E. (.154wall) Gas (361')
MINIMUM 36" COVER
SEE PROFILE "BB" - (STATION 14+79 TD 18+40 SHT:11)

ABANDON
EXISTING 2" STEEL GAS IN PLACE
STATION 15+22 TD 21+27

BORE PIT - GAS
ENTRANCE 1-4" HDPE(DR)
EXIT 1-4" HDPE(S)
STA. 18+40L

ABANDON
EXISTING 2" STEEL GAS IN PLACE
STATION 15+22 TD 21+27

CONSTRUCT DIRECTIONAL BORE
4" P.E. (.154wall) Gas (320')
MINIMUM 36" COVER
STATION 18+40 TD 21+60
SEE PROFILE "BB" & "CC" - (STATION 18+40 TD 21+60 SHT:11&12)

FPL WELL

Existing R/W

Existing 6" CIP Water Main

Existing EOP

16+00 17+00 18+00 NORTH 2nd STREET 19+00 20+00 21+00

Existing 16" PVC Force Main

Existing 6" PVC Force Main – Abandoned

Existing 16" PVC Force Main

Water Main

AVENUE M

99+0

GAS VALVE V-21

ABANDON
EXISTING 2" STEEL GAS IN PLACE
STATION 16+35

(23) REMOVE
GAS VALVE
V-21
SEE DETAIL SHEET 14
STATION 16+36

PRELIMILARY

				N. 2ND STREET ROAD IMPROVEMENT PROJECT
				N.2ND ST.(SEAWAY DR TO NORTH END)
05-07-14	INITIAL RELEASE	P.S.		RELOCATE GAS MAIN
DATE:	DESCRIPTION:	BY:	AP:	

FORT PIERCE UTILITIES AUTHORITY

ELECTRIC ENGINEERING
1701 SOUTH 25TH STREET
P.O.Box 3191 (34950)
FT. PIERCE, FLORIDA 34947
(772) 466-1600 / FAX (772) 461-1938

VERIFY SCALE BAR IS EQUAL TO 1"
ONE INCH ON ORIGINAL DRAWING
ADJUST ALL SCALED DIMENSIONS ACCORDINGLY

SCALE:	DESIGNED:	JOB #:
1=20	PJL	20100409-1
SHEET:	DRAWN:	SHEET
Plan	PJL	6 OF 14

NORTH

MATCHLINE STA. 21+27.00 - SHEET 6

(8) INSTALL
FROM LOC 37 - STATION 15+80
CHART BOX - PRESSURE RECORDER
SEE DETAIL SHEET 14
STATION 21+82

ABANDON
EXISTING 2" STEEL GAS IN PLACE
STATION 21+27 TO 22+00

FPL 13582
SS RA
STA: 21+43L

FPL 13583
SS RA
STA: 21+40L

FPL 13584
SS RA
STA: 24+34L

FPL 33043
SS RA
STA: 23+48L

FPL 33044
SS RA
STA: 24+98L

FPL 33045
SS RA
STA: 25+74L

FPL 33046
SS RA
STA: 26+65L

FPL 33047
SS RA
STA: 26+87L

FPL 33048
SS RA
STA: 26+87L

FPL 33049
SS RA
STA: 26+87L

FPL 33050
SS RA
STA: 26+87L

FPL 33051
SS RA
STA: 26+87L

FPL 33052
SS RA
STA: 26+87L

FPL

NORTH

US 1 (DIXIE HIGHWAY) - R/W VARIES

0+00
1+00
2+00
3+00
3+74

AVENUE H - 66'R/W

1+00
2+00

TRAFFIC SIGNAL POLE
TRAFFIC SIGNAL POLE
SIGNAL BOX

GRAVEL BED
RAILROAD TRACKS
GRAVEL BED
GRAVEL BED
RAILROAD TRACKS
GRAVEL BED

Existing 10" DIP Water Main (to be Abandoned)
Existing 16" DIP Water Main
Existing 16" DIP Water Main
Existing R/W
Existing R/W

FPI 13529
STA: 0+94L

FPI 33405
STA: 01+74

FPI 13530
STA: 0+94R

FPI 13527
STA: 01+48L

FPI 33406
STA: 01+70

FPI 33404
STA: 02+26L

FPI 7428
STA: 02+20R

EXISTING
4" STEEL GAS LINE

(11) INSTALL
FUSE "4" P.E. SERVICE LINE
SEE DETAIL SHEET 14
STATION 02+20

"UNKNOWN"
708-0009-000/9
LLOYD BELL
9 FISHERMAN'S WHARF

PRELIMILARY

MATCHLINE STA. 02+57.00 - SHEET 3

FORT PIERCE UTILITIES AUTHORITY

DATE:	DESCRIPTION:	BY:	AP:
05-07-14	INITIAL RELEASE	PJL	

ELECTRIC ENGINEERING
1101 SOUTH 25TH STREET
P.O. BOX 3480
FT. PIERCE, FLORIDA 34947
(772) 466-1600 / FAX (772) 461-1638

N. 2ND STREET ROAD IMPROVEMENT PROJECT
N.2ND ST (SEAWAY DR TO NORTH END)
RELOCATE GAS MAIN

VERIFY SCALE BAR IS EQUAL TO 1" ON ORIGINAL DRAWING
ADJUST ALL SCALED DIMENSIONS ACCORDINGLY

SCALE:	DESIGNED:	JOB #:
1=20	PJL	20100409-1
SHEET:	DRAWN:	SHEET
Plan	PJL	8 OF 14

MATCHLINE - AA - SHEET 2

NORTH

SEAWAY DRIVE (SR A1A) - R/W VARIES

INDIAN RIVER DRIVE

0+00 1+00 2+00 3+00 4+00

"VACANT LOT"
801-0008-000/8
DENNIS J HORVATH
N. 2ND STREET

PARKING LOT
801-0006-000/4
Dennis J Horvath
N 2nd Street

"VACANT LOT"
341-0007-000/0
DENNIS J. HORVATH
N. 2ND STREET

"AL'S BAIT & TACK"
341-0006-000/3
HAROLD H. SMYTH
658 N. 2ND STREET

"VACANT LOT"
341-0009-010/7
ST. LUCIE COUNTY
25 FISHERMAN'S WHARF

EXISTING FEEDER HANDHOLE

EXISTING FEEDER HANDHOLE

Existing 16" DIP Water Main

Existing 12" VCP Gravity Main

ADJUST AS NEEDED
2" P.E. (.154wall) Gas
STATION 02+55
MAINTAIN 18" FROM ANY UTILITY
** TO BE CONSTRUCTED DURING DRAINAGE INSTALLATION

ABANDON
EXISTING 1" P.E. GAS IN PLACE

CONSTRUCT TRENCH
1" P.E. (.154wall) Gas (100')
MINIMUM 30" COVER
MAINTAIN 18" FROM ANY UTILITY

(12) INSTALL
FUSE 1" P.E. SERVICE LINE
SEE DETAIL SHEET 14

(13) INSTALL
1" P.E. GAS ELBOW
SEE DETAIL SHEET 14

(24) INSTALL
1" P.E. GAS ELBOW
SEE DETAIL SHEET 14

C-DP

C-EE

C-DP

PRELIMIARY

MATCHLINE STA. 04+74.00 - SHEET 10

09-07-14	INITIAL RELEASE	PJL		N. 2ND STREET ROAD IMPROVEMENT PROJECT	
DATE:	DESCRIPTION:	BY:	AP:	N.2ND ST (SEAWAY DR TO NORTH END)	
ELECTRIC ENGINEERING 1301 SOUTH 37TH STREET P.O.Box 3191 (34985) FT. PIERCE, FLORIDA 34947 (772) 466-1600 / FAX (772) 461-1938				RELOCATE GAS MAIN	
				VERIFY SCALE BAR IS EQUAL TO ONE INCH ON ORIGINAL DRAWING ADJUST ALL SCALED DIMENSIONS ACCORDINGLY	SCALE: 1=20 / DESIGNED: PJL / JOB #: 20100409-1 SHEET: Plan / DRAWN: PJL / SHEET 9 OF 14

NORTH

MATCHLINE STA. 06+25.00 - SHEET 3

MATCHLINE STA. 04+74.00 - SHEET 9

EXISTING
1/2" P.E. GAS SERVICE LINE

INSTALL (34)
2"X2"X2" 3 WAY TEE
2" TO 1" REDUCER (RED)
1" TO 1/2" REDUCER (RED)
DETAIL SHEET 14

ABANDON
EXISTING 2" STEEL GAS IN PLACE
STATION 6+25 TO EAST END

CONSTRUCT DIRECTIONAL BORE
2" P.E. (154+ssll) Gas (325')
MINIMUM 36" COVER
SEE PROFILE "EE" - (STATION 05+00 TO 07+60 SHT-13)

FPI 322
45.0A
STA: 05+00L

FPI 13534
45.0R
CONCAST
STA: 06+80L

FPI 13535
45.0L
CONCAST
STA: 06+40L

C-VG

C-DD

Existing R/W

6+00

Existing 16" DIP Water Main

Existing EOP

5+00

INDIAN RIVER DRIVE

Existing EOP

7+00

Existing R/W

FISHERMAN'S WHARF

Existing 16" DIP Water Main

8+00

8+24

TERMINAL DRIVE - 50' R/W

GAS VALVE
C-EP

C-SSMH
C-EP

C-DD
C-EP

Existing 8" PVC Gravity Main

INSTALL (16)
FUSE 2" P.E. SERVICE LINE
SEE DETAIL SHEET 14
STATION 06+65

EXISTING
2" P.E. GAS LINE

CONSTRUCT TRENCH
2" P.E. (154+ssll) Gas (20')
MINIMUM 36" COVER
STATION 07+60 TO 07+80
SEE PROFILE "EE" - (STATION 07+60 TO 07+80 SHT-13)

INSTALL (14)
2"X2"X2" 3 WAY TEE
SEE DETAIL SHEET 14
STATION 07+60

BORE PIT - GAS
EXIT (-2" HDPE(W))
STA 07+60L

INSTALL (15)
2" P.E. GAS CAP
SEE DETAIL SHEET 14
STATION 07+80

FPI 33409
45.0A
STA: 08+15L

FPI 13532
45.0L
STA: 08+59R

FPI 13537
45.0R
CONCAST
STA: 09+50L

HDD

"CHICKEN BY..."
341-0004-000/9
JOSEPH G. MILLER
109 FISHERMAN'S WHARF

"VACANT LOT"
341-0009-000/4
FISHMONGER INVESTORS LLC
23 FISHERMAN'S WHARF

"UNKNOWN"
240334100100004
O.R.B.: 2066, PP. 2857 & 2858
ST. LUCIE COUNTY
21 FISHERMAN'S WHARF

"CK MARINE CONSTRUCTION"
341-0001-000/8
KING MARITIME GROUP LLC
18 FISHERMAN'S WHARF

"UNKNOWN"
314-0005-000/2
KING MARITIME GROUP LLC
100 TERMINAL DRIVE

PRELIMILARY

FORT PIERCE UTILITIES AUTHORITY

DATE:	DESCRIPTION:	BY:	AP:
05-07-14	INITIAL RELEASE	PJL	

ELECTRIC ENGINEERING
1701 SOUTH 27TH STREET
P.O.Box 3191 (34950)
FT. PIERCE, FLORIDA 34947
(772)-466-1600 / FAX (772)-461-1938

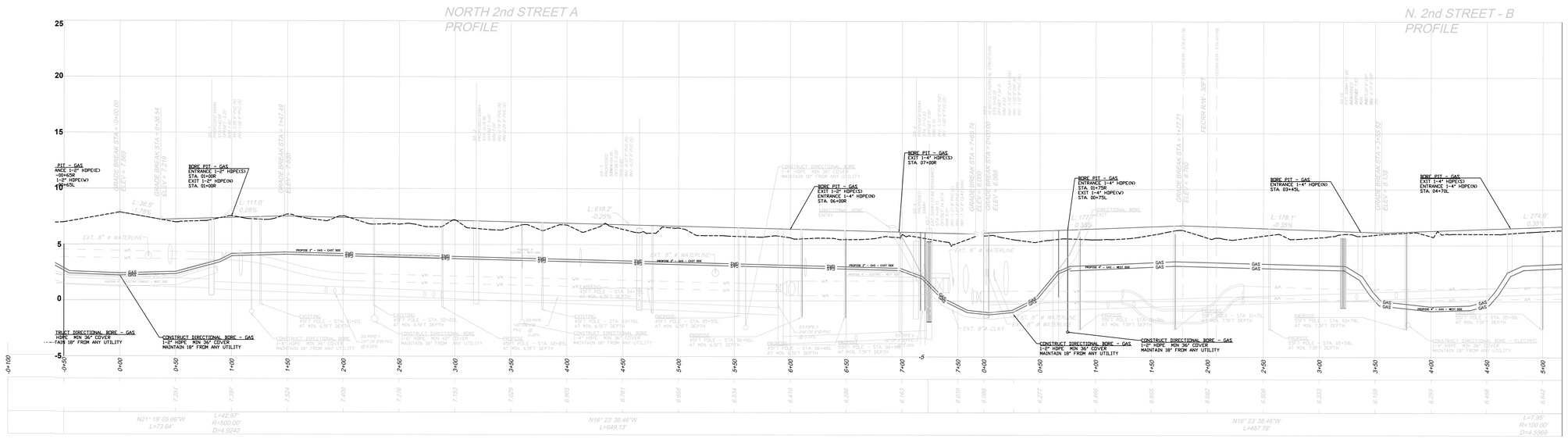
VERIFY SCALE BAR IS EQUAL TO ONE INCH ON ORIGINAL DRAWING ADJUST ALL SCALED DIMENSIONS ACCORDINGLY

N. 2ND STREET ROAD IMPROVEMENT PROJECT
N.2ND ST.(SEAWAY DR TO NORTH END)
RELOCATE GAS MAIN

SCALE:	DESIGNED:	JOB #:
1=20	PJL	20100409-1
SHEET:	DRAWN:	SHEET
Plan	PJL	10 OF 14

NORTH

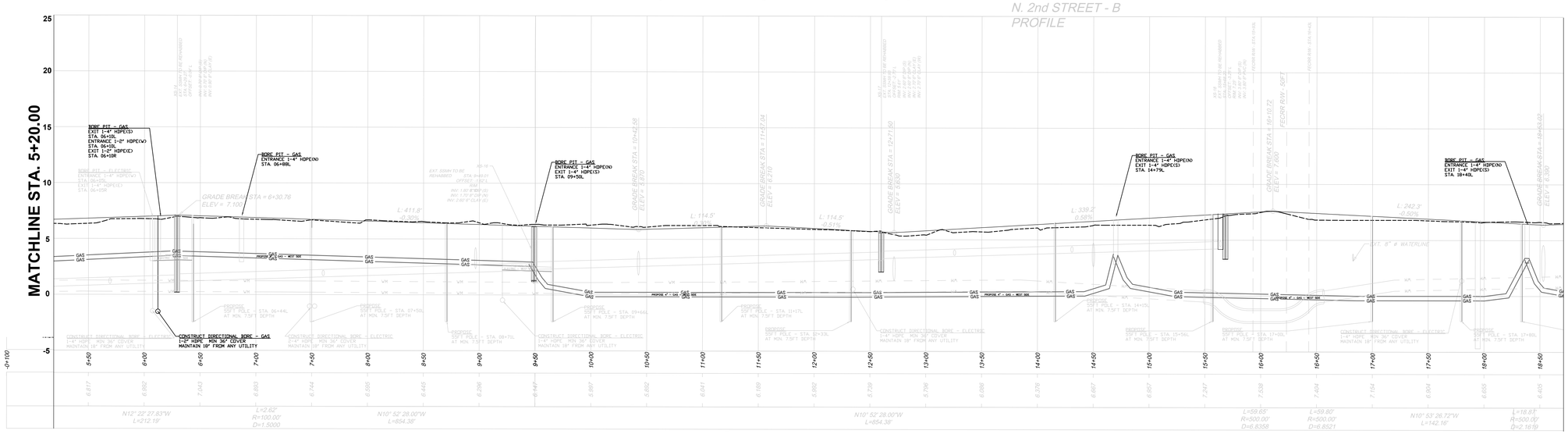
NORTH 2ND STREET - PROFILE "AA"



HORIZONTAL SCALE: 1"=50'
VERTICAL SCALE: 1"=40'

PRELIMILARY

NORTH 2ND STREET - PROFILE "BB"

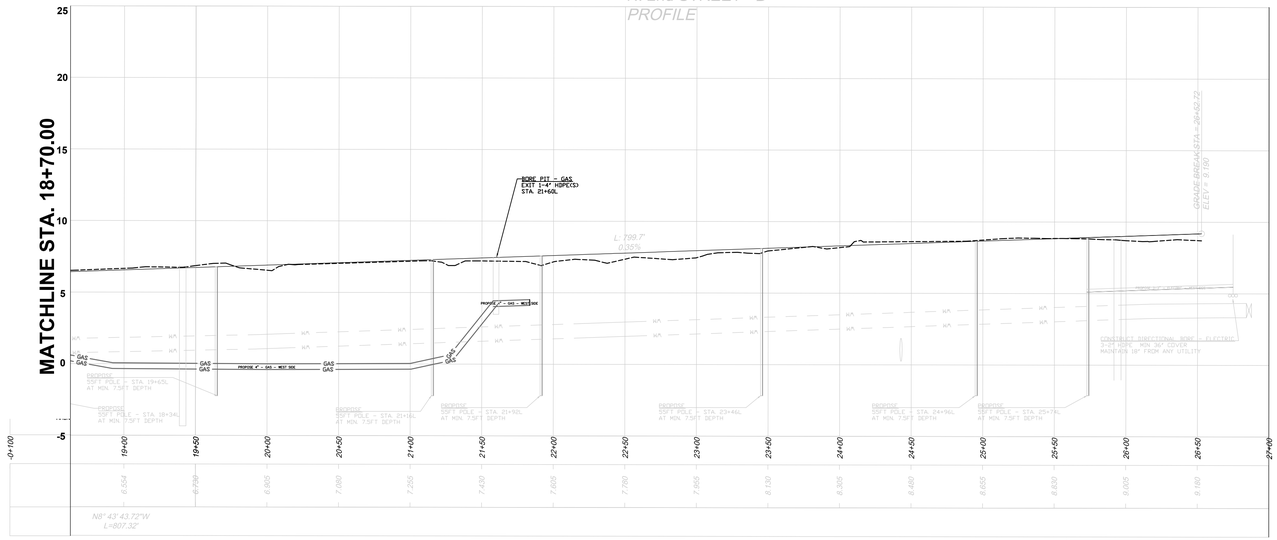


HORIZONTAL SCALE: 1"=50'
VERTICAL SCALE: 1"=40'

FORT PIERCE UTILITIES AUTHORITY			N. 2ND STREET ROAD IMPROVEMENT PROJECT	
			N.2ND ST.(SEAWAY DR TO NORTH END)	
			PROFILE PLAN	
09-07-14	INITIAL RELEASE	PJL		
DATE:	DESCRIPTION:	BY: AP:		
ELECTRIC ENGINEERING 1101 SOUTH 7TH STREET P.O.Box 3191 (34950) FT. PIERCE, FLORIDA 34947 (772)-466-1600 / FAX (772)-461-1938		VERIFY SCALE BAR IS EQUAL TO ONE INCH ON ORIGINAL DRAWING ADJUST ALL SCALED DIMENSIONS ACCORDINGLY	SCALE: 1=50(40)	DESIGNED: PJL
				JOB #: 20100409-1
			SHEET: Plan	DRAWN: PJL
				SHEET 11 OF 14

NORTH

NORTH 2ND STREET - PROFILE "CC"



HORIZONTAL SCALE: 1"=50'
VERTICAL SCALE: 1"=10'

PRELIMILARY

					N. 2ND STREET ROAD IMPROVEMENT PROJECT
					N.2ND ST (SEAWAY DR TO NORTH END)
05-07-14	INITIAL RELEASE	PJL			PROFILE PLAN
DATE:	DESCRIPTION:	BY:	AP:		

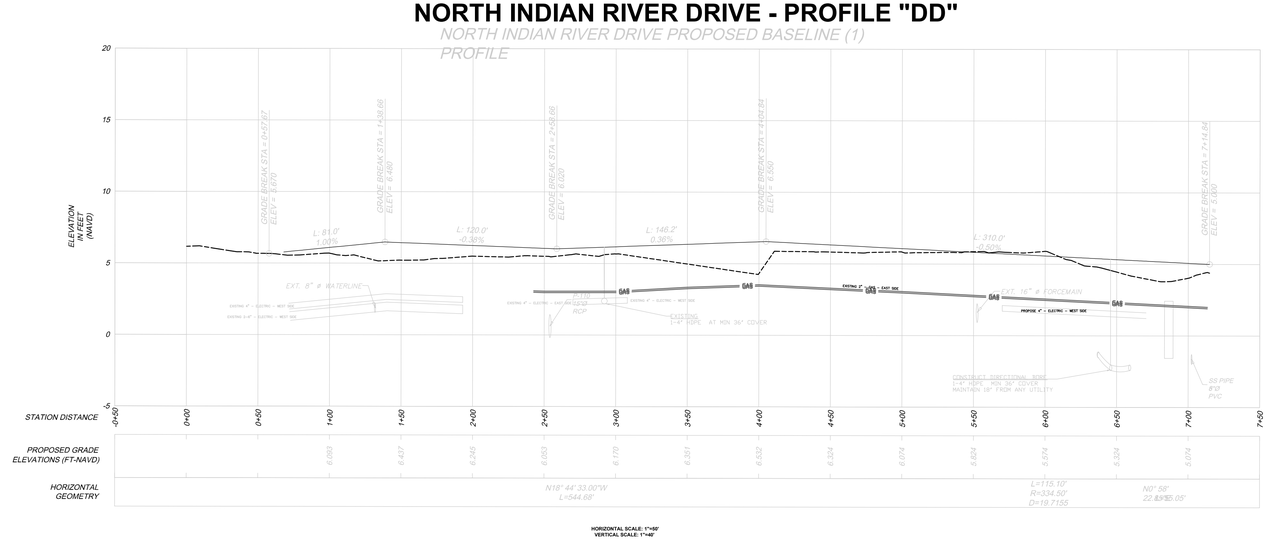
ELECTRIC ENGINEERING
1701 SOUTH 27TH STREET
P.O.Box 3191 (34982)
FT. PIERCE, FLORIDA 34947
(772) 465-1600 / FAX (772) 461-1938

VERIFY SCALE BAR IS EQUAL TO ONE INCH ON ORIGINAL DRAWING. ADJUST ALL SCALED DIMENSIONS ACCORDINGLY

SCALE:	DESIGNED:	JOB #:
1=50/40	PJL	20100409-1
SHEET:	DRAWN:	SHEET
Plan	PJL	12 OF 14

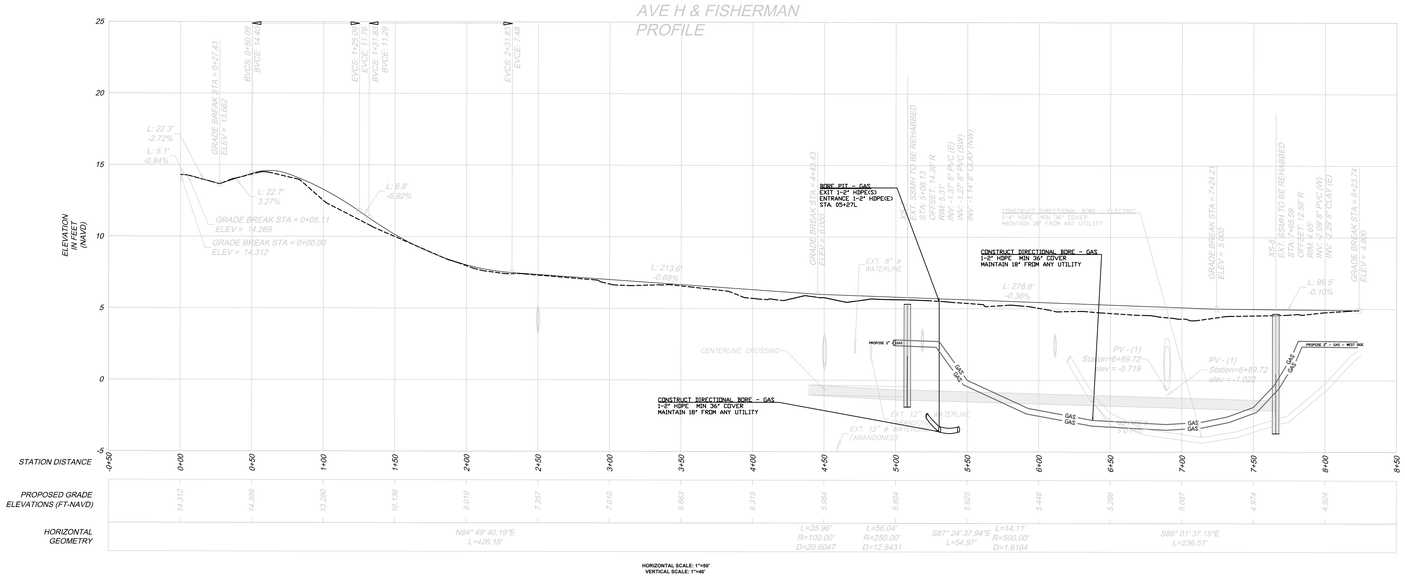
NORTH

NORTH INDIAN RIVER DRIVE - PROFILE "DD"



HORIZONTAL SCALE: 1"=100'
VERTICAL SCALE: 1"=40'

AVENUE H & FISHERMAN'S WHARF - PROFILE "EE"



HORIZONTAL SCALE: 1"=50'
VERTICAL SCALE: 1"=40'

PRELIMILARY

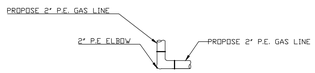
09-07-14	INITIAL RELEASE	PJL			
DATE:	DESCRIPTION:	BY:	AP:		

FORT PIERCE UTILITIES AUTHORITY
ELECTRIC ENGINEERING
1701 SOUTH 25TH STREET
P.O.Box 3191 (34950)
FT. PIERCE, FLORIDA 34947
(772) 466-1600 / FAX (772) 461-1938

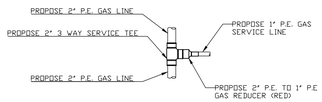
N. 2ND STREET ROAD IMPROVEMENT PROJECT
N.2ND ST (SEAWAY DR TO NORTH END)
PROFILE PLAN

VERIFY SCALE BAR IS EQUAL TO ONE INCH ON ORIGINAL DRAWING. ADJUST ALL SCALED DIMENSIONS ACCORDINGLY	SCALE: 1=50ft	DESIGNED: PJL	JOB #: 20100409-1
	SHEET: Plan	DRAWN: PJL	SHEET 13 OF 14

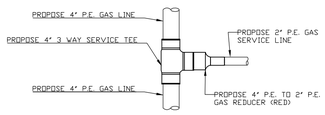
LOCATION 1, 2, 4 & 26
2" P.E. ELBOW DETAIL
N.T.S.



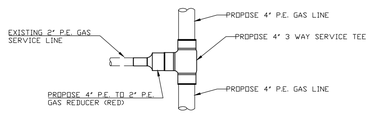
LOCATION 14 & 27
SERVICE CONNECTION DETAIL
N.T.S.



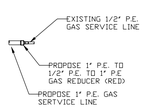
LOCATION 5 & 6
SERVICE CONNECTION DETAIL
N.T.S.



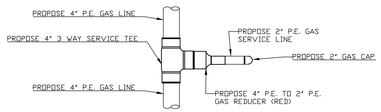
LOCATION 8
SERVICE CONNECTION DETAIL
N.T.S.



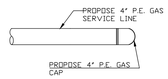
LOCATION 29
SERVICE CONNECTION DETAIL
N.T.S.



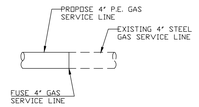
LOCATION 9
SERVICE CONNECTION DETAIL
N.T.S.



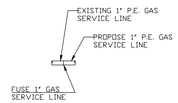
LOCATION 10
4" P.E. CAP DETAIL
N.T.S.



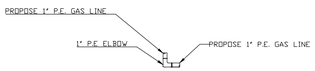
LOCATION 11
FUSE 4" P.E. TO 4" P.E. DETAIL
N.T.S.



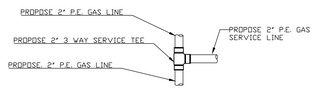
LOCATION 12
1" P.E. TO 1" P.E. FUSE DETAIL
N.T.S.



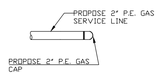
LOCATION 13, 24, 29, 30 & 31
1" P.E. ELBOW DETAIL
N.T.S.



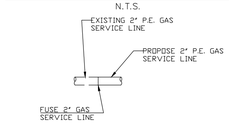
LOCATION 3 & 14
SERVICE CONNECTION DETAIL
N.T.S.



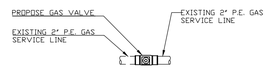
LOCATION 15
2" P.E. CAP DETAIL
N.T.S.



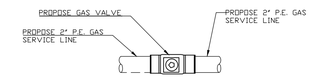
LOCATION 16
FUSE 2" P.E. TO 2" P.E. DETAIL
N.T.S.



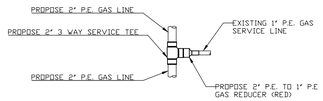
LOCATION 1 & 35
GAS VALVE & SERVICE CONNECTION DETAIL
N.T.S.



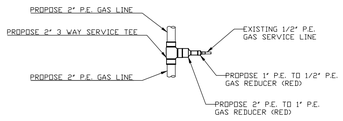
LOCATION 5, 8 & 36
GAS VALVE & SERVICE CONNECTION DETAIL
N.T.S.



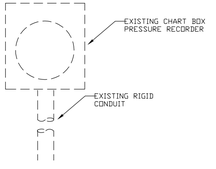
LOCATION 32
SERVICE CONNECTION DETAIL
N.T.S.



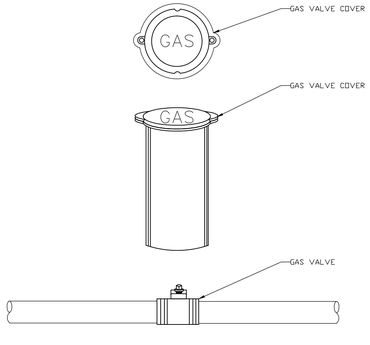
LOCATION 33 & 34
SERVICE CONNECTION DETAIL
N.T.S.



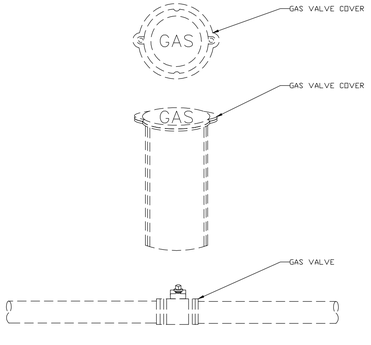
LOCATION 37 & 38
CHART BOX – PRESSURE REDORDER DETAIL
N.T.S.



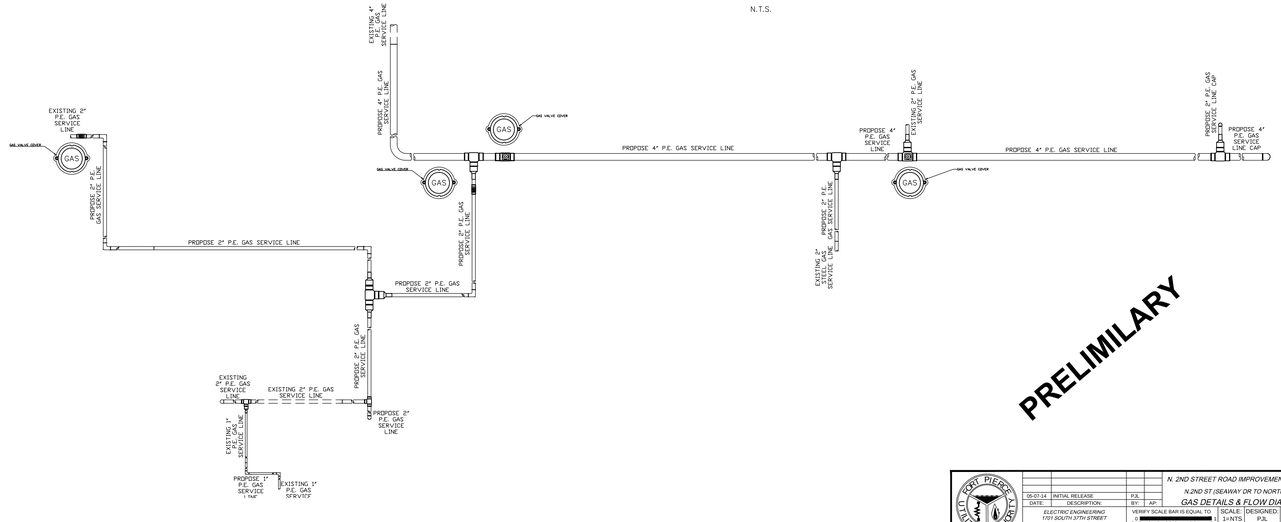
LOCATION 1, 5, 8, 35 & 36
GAS VALVE DETAIL
N.T.S.



LOCATION 17, 18, 19, 20, 21, 22, 23 & 25
GAS VALVE DETAIL
N.T.S.



GAS FLOW DIAGRAM
N.T.S.



PRELIMIARY

05-07-14	INITIAL RELEASE	PJL		
DATE:	DESCRIPTION:	BY:	AP:	

ELECTRIC ENGINEERING
1101 SOUTH 37TH STREET
SUITE 101
FT. PIERCE, FLORIDA 34947
(772) 466-1600 / FAX (772) 461-1938

VERIFY SCALE BAR IS EQUAL TO ONE INCH ON ORIGINAL DRAWING ADJUST ALL SCALED DIMENSIONS ACCORDINGLY

N. 2ND STREET ROAD IMPROVEMENT PROJECT
N.2ND ST (SEAWAY DR TO NORTH END)
GAS DETAILS & FLOW DIAGRAM

SCALE	DESIGNED	JOB #:
1=NTS	PJL	20100409-1
SHEET:	DRAWN	SHEET
Plan	JPL	14 OF 14

OVERHEAD ELECTRIC DISTRIBUTION LINE REBUILD AND UNDERGROUND ROAD CROSSING CONVERSIONS

NORTH 2ND STREET IMPROVEMENT PROJECT



PROJECT LOCATION

VICINITY MAP
N.T.S

SHEET INDEX

SHEET NUMBER	SHEET TITLE/DESCRIPTION
1 OF 15	COVER SHEET
2 OF 15	PLAN SHEET – STA. 01+00 TO 04+70
3 OF 15	PLAN SHEET – STA. 04+70 TO 03+10
4 OF 15	PLAN SHEET – STA. 03+10 TO 09+17
5 OF 15	PLAN SHEET – STA. 09+17 TO 15+22
6 OF 15	PLAN SHEET – STA. 15+22 TO 21+27
7 OF 15	PLAN SHEET – STA. 21+27 TO 26+90
8 OF 15	PLAN SHEET – STA. 00+80 TO 02+57
9 OF 15	PLAN SHEET – STA. 02+00 TO 04+74
10 OF 15	PLAN SHEET – STA. 06+25 TO 08+60
11 OF 15	PROFILE SHEET – STA. 00+50 TO 19+90
12 OF 15	PROFILE SHEET – STA. 19+90 TO 27+00
13 OF 15	PROFILE SHEET – STA. 00+50 TO 07+50 AND 0+50 TO 8+50
14 OF 15	PROFILE SHEET – STA. 00+50 TO 09+59
15 OF 15	PROFILE SHEET – STA. 09+59 TO 26+80

PRELIMILARY

FORT PIERCE UTILITIES AUTHORITY

DATE:	DESCRIPTION:	BY:	AP:
05-07-14	INITIAL RELEASE	PJL	

N. 2ND STREET ROAD IMPROVEMENT PROJECT
N.2ND ST (SEAWAY DR TO NORTH END)
REBUILD OH ELECTRIC DISTRIBUTION LINE & CONVERT CROSSINGS

ELECTRIC ENGINEERING
1701 SOUTH 25TH STREET
P.O.Box 3191 (34982)
FT. PIERCE, FLORIDA 34947
(772) 465-1600 / FAX (772) 461-1938

VERIFY SCALE BAR IS EQUAL TO ONE INCH ON ORIGINAL DRAWING ADJUST ALL SCALED DIMENSIONS ACCORDINGLY

SCALE:	DESIGNED:	JOB #:
1=20	PJL	20100409-1
SHEET: Plan	DRAWN: PJL	SHEET 1 OF 15

NORTH

MATCHLINE STA. 04+70.00 - SHEET 3

MATCHLINE - AA - SHEET 9

PRELIMILARY

EXISTING		PROPOSE	
PMH	PRIMARY HANDHOLE – 24" x 36"	PMH	PRIMARY HANDHOLE – 24" x 36"
SMH	SECONDARY HANDHOLE – 24" x 36"	SMH	SECONDARY HANDHOLE – 24" x 36"
SH	SECONDARY HANDHOLE – 13" x 24"	SH	SECONDARY HANDHOLE – 13" x 24"
	WOOD POLE		WOOD POLE
	CONCRETE POLE		CONCRETE POLE
	POLEMOUNTED TRANSFORMER		POLEMOUNTED TRANSFORMER
	DOWN GUY & ANCHOR (GY)		DOWN GUY & ANCHOR (GY)
	DOWN GUY & ANCHOR (WEAST)		DOWN GUY & ANCHOR (WEAST)
3-PMH	3-PHASE PADMOUNT TRANSFORMER	3-PMH	3-PHASE PADMOUNT TRANSFORMER
1-PMH	1-PHASE PADMOUNT TRANSFORMER	1-PMH	1-PHASE PADMOUNT TRANSFORMER
	ELECTRIC METER		ELECTRIC METER
	LIGHT		LIGHT

EXISTING 11562	*EXISTING* 11562	*EXISTING* 11562	*REMOVE* 11563	*EXISTING* 11558	*INSTALL* 33025
37.5KVA – Aø	37.5KVA – Bø	37.5KVA – Cø	37.5KVA – Cø	25KVA – Bø	25KVA – Cø
(D1) TRANSFORMER DATA	(D1) TRANSFORMER DATA	(D1) TRANSFORMER DATA	(D2) TRANSFORMER DATA	(D4) TRANSFORMER DATA	(D3) TRANSFORMER DATA
F.P.U.A. #	F.P.U.A. #	F.P.U.A. #	F.P.U.A. #	F.P.U.A. #	F.P.U.A. #
FACILITY POINT ID:	FACILITY POINT ID:	FACILITY POINT ID:	FACILITY POINT ID:	FACILITY POINT ID:	FACILITY POINT ID:
SERIAL #	SERIAL #	SERIAL #	SERIAL #	SERIAL #	
MANUFACTURER	MANUFACTURER	MANUFACTURER	MANUFACTURER	MANUFACTURER	
IMPEDANCE	IMPEDANCE	IMPEDANCE	IMPEDANCE	IMPEDANCE	

				N. 2ND STREET ROAD IMPROVEMENT PROJECT		
				N.2ND ST (SEAWAY DR TO NORTH END)		
09-07-14	INITIAL RELEASE	P.S.		REBUILD OH ELECTRIC DISTRIBUTION LINE & CONVERT CROSSINGS		
DATE:	DESCRIPTION:	BY:	AP:			
ELECTRIC ENGINEERING 1701 SOUTH 37TH STREET P.O.Box 3191 (34952) FT. PIERCE, FLORIDA 34947 (772) 466-1600 / FAX (772) 461-1938				VERIFY SCALE BAR IS EQUAL TO ONE INCH ON ORIGINAL DRAWING. ADJUST ALL SCALED DIMENSIONS ACCORDINGLY	SCALE: 1=20	DESIGNED: P.S.
					SHEET: Plan	DRAWN: JPL
						SHEET 2 OF 15

NORTH

MATCHLINE STA. 02+57.00 - SHEET 8

MATCHLINE STA. 04+70.00 - SHEET 2

MATCHLINE STA. 03+10.00 - SHEET 4

MATCHLINE STA. 06+25.00 - SHEET 10

PRELIMILARY

FPI#11525 REMOVE 40/S VA-1C1-6CU & 6NX(E&W)

FPI#11569 (66) REMOVE 45/2 XC-1C3-2/0 & 2/0NX(S&N) VA-7A1-15S & 15SNX(W) TRANSFER 250W HPS (S/L) TO LDC 10 (STA60+86L) JOINT USE COMCAST TO REMOVE ATTACHMENT

FPI#33010 (69) INSTALL 45 IIIA VA-5C1-15SAAAC & 15SNX(E&W) UR-1CV5C1-1/0,15KV TO LDC 8X(210') E3:1 E1 (1)MULTI-HELIX ANC (20'LD) 250W HPS (S/L) M-1A

FPI#11568 (7) INSTALL 45 IIIA UT-P3 (78' X 66') 112ABC, 120/208V 3-1/0, 15KV TO LDC 6 (185')

FPI#33027 (9) INSTALL 55 IIIA VC-5C3-394.5AAAC & 15SNX(S) UR-4VSC3-1000MCM TO LDC 10(X800') E3:2 E3:3 E3:1 E1 (2)MULTI-HELIX ANC (18' & 22'LD) 250W HPS (S/L) M-1A JOINT USE AT&T AND COMCAST TO ATTACH

FPI#11547 (60) REMOVE 40/2 VA-6C1-6CU & 6NX(E&W) E1 10'ANC

FPI#11570 (6) INSTALL 45 IIIA VC-1C3-394.5AAAC & 15SNX(N&S) UR-3V1C3-1/0, 15KV TO LDC 7X(120') 250W HPS (S/L) FROM LDC 67 M-1A JOINT USE AT&T AND COMCAST TO ATTACH

FPI#33026 (8) INSTALL 45 IIIA VC-1C3-394.5AAAC & 15SNX(S&N) UR-1CV1C1-1/0, 15KV TO LDC 69X(210') M-1A JOINT USE AT&T AND COMCAST TO ATTACH

FPI#33400 (94) INSTALL 45 IIIA VC-1C3-394.5AAAC & 15SNX(S&N) G2-BCV1 25B 50C 4"SEC-RISER(4/0CU) 4/0QPX URD TO LDC 9S (150') M-1A JOINT USE AT&T AND COMCAST TO ATTACH

FPI#11567 (5) REMOVE VC-5C3-2/0 & 2/0NXN INSTALL VC-5C3-394.5AAAC & 15SNXN

FPI#33029 (11) INSTALL 55 IIIA VC-1C3-394.5AAAC & 15SNXN XB-7AV1C-#4CU & #4(X)W G1-CV1 25C M-1A 250W HPS (S/L) FROM LDC 63 250W HPS FLOOD LIGHT (R/L) FROM LDC 63 JOINT USE AT&T AND COMCAST TO ATTACH

FPI#33030 (93) INSTALL 50/2 XB-5X2-#4CU & 4N(X)W XB-5AC2-#4CU & 4N(X)E E3 E1 (1)MULTI-HELIX ANC (20'LD) M1 TRANSFER 2-#4CU & 4N(X&W)

FPI#13660 (63) REMOVE 35/2 TRANSFER 250W HPS (S/L) TO LDC 11 250W HPS FLOOD LIGHT (R/L) TO LDC 11 JOINT USE COMCAST TO REMOVE ATTACHMENT

FPI#33403 (72) INSTALL 35 III 2"SEC-RISER(1/0TPX)X215'(FROM LDC 10) 250W HPS (S/L)

FPI#33028 (10) INSTALL 55 IIIA VC-5C3-394.5AAAC & 15SNXN UR-4VSC3-1000MCM TO LDC 9X(800') 2"SEC-RISER(1/0TPX)X215'(TO LDC 72) E3:2 E3:3 E3:1 E1 (2)MULTI-HELIX ANC (18' & 22'LD) 250W HPS (S/L) M-1A JOINT USE AT&T AND COMCAST TO ATTACH

FPI#33031 (12) INSTALL 55 IIIA VC-1C3-394.5AAAC & 15SNX(N) G2-ABV1 50A 25B M-1A 100W HPS (R/L) FROM LDC 62 250W HPS (S/L) FROM LDC 62 JOINT USE AT&T AND COMCAST TO ATTACH

FPI#13658 (62) REMOVE 45/2 XC-1C3-2/0 & 2/0NX(S&N) VA-7A1-15S & 15SNX(W) TRANSFER 100W HPS (R/L) TO LDC 12 250W HPS (S/L) TO LDC 12 #6DPX, DH TO LDC 12 JOINT USE COMCAST TO REMOVE ATTACHMENT

FPI#13531 (64) REMOVE 35/3 150W HPS (S/L)

CONSTRUCT TRENCH 1-2" SCH 40 PVC (135') MIN 30" COVER

FPI#33031 (12) INSTALL 55 IIIA VC-1C3-394.5AAAC & 15SNX(N) G2-ABV1 50A 25B M-1A 100W HPS (R/L) FROM LDC 62 250W HPS (S/L) FROM LDC 62 JOINT USE AT&T AND COMCAST TO ATTACH

CONSTRUCT DIRECTIONAL BORE 6" HDPE MIN 42" COVER (172')(FROM LDC 9 TO 10) SEE PROFILE- "AA" - (STA06+98L TO 00+86L SHT-11)

CONSTRUCT TRENCH 1-2" SCH 40 PVC (130')(FROM LDC 8 TO 69) MIN 36" COVER

FPI#13532 (61) REMOVE 40/S XC-1C3-2/0 & 2/0NX(S&N) XB-7A(2-4CU & 4N(X)W E3 E1 10'ANC JOINT USE COMCAST TO REMOVE ATTACHMENT

CONSTRUCT DIRECTIONAL BORE 1-4" HDPE MIN 36" COVER (65') SEE PROFILE- "AA" - (STA05+61 SHT-11)

INSTALL (95) 4/0QPX, URD TO LDC 94 (105') SEC-HH (13" X 24")

CUSTOMER TO PROVIDE & INSTALL CONDUITS & SECONDARY CONDUCTORS MIN 24" COVER

CUSTOMER TO PROVIDE & INSTALL (93) 200AMP 3Ø METER CAN 200AMP 120/240 3Ø SERVICE FPUA TO INSTALL 200AMP 3Ø METER

FPI#11570 (67) REMOVE 45 IIIA XC-6C3-2/0 & 2/0NX(S&N) UR-3 (3-1/0, 15KV FROM LDC 68 E1 E3:1 MULTI-HELIX ANCHOR TRANSFER 250W HPS (S/L) TO LDC 5 JOINT USE AT&T AND COMCAST TO REMOVE ATTACHMENT

FPI#11568 (68) REMOVE 3-1/0, 15KV FROM LDC 67 TRANSFER TO LDC 7 UT-P3 (78' X 66') 112ABC, 120/208V

FPI#13533 (92) REMOVE 35/S INSTALL 35 III TRANSFER #6DPX, DH(E) 150W HPS (S/L) - FACING NORTH ** 150W HPS BEING FED FROM CUSTOMER SERVICE

INSTALL (91) SEC-HH (24" X 36") 3500PX URD TO LDC 86 (280') 4/0TPX URD TO LDC 107 FISHERMAN'S WHARF (50') CONDUIT ONLY TO LDC 109 FISHERMAN'S WHARF (60') TRANSFER 1/0QPX, DH FROM LDC 89 FOR 109 1/0QPX URD TO LDC 90 (55')

CONSTRUCT TRENCH 1-2" SCH 40 PVC (40') MIN 30" COVER (FROM LDC 91 TO 107 FISHERMAN'S WHARF)

CONSTRUCT TRENCH 1-2" SCH 40 PVC (50') MIN 30" COVER (FROM LDC 91 TO 109 FISHERMAN'S WHARF)

CONSTRUCT TRENCH 1-2" SCH 40 PVC (10') MIN 30" COVER

FPI#33402 (90) INSTALL 35 III 2"SEC-RISER(1/0QPX)X55') 150W HPS (S/L) FROM LDC 88 - FACING NORTH ATTACH #6DPX, DH(E&W)

"ST. LUCIE OUTBOARD MARINA" 705-0019-000/3 ST. LUCIE OUTBOARD MARINE INC. 657 N. 2nd STREET

"VACANT LOT" 3410005000/6 ST. LUCIE COUNTY TBD

"DEBROSSE, DEBOLT, DWIGHT & MARY" 407 FISHERMAN'S WHARF

NORTH 2nd STREET

AVENUE H - 66'R/W

TERMINAL DRIVE

FEC SPUR LINE

FEC SPUR

FISHERMAN'S WHARF

TRAILER PARK ROAD

Existing 10" DIP Water Main (to be Abandoned)

Existing 16" DIP Water Main

Existing 16" PVC Force Main

New R/W Line

Old R/W Line

Existing R/W

Existing EOP

3+00

2+00

1+00

0+00

7+00

6+00

5+00

4+00

3+00

2+00

1+00

0+00

EXISTING	PROPOSE
PRIMARY HANDHOLE – 24" x 36"	PRIMARY HANDHOLE – 24" x 36"
SECONDARY HANDHOLE – 24" x 36"	SECONDARY HANDHOLE – 24" x 36"
SECONDARY HANDHOLE – 17" x 24"	SECONDARY HANDHOLE – 17" x 24"
WOOD POLE	WOOD POLE
CONCRETE POLE	CONCRETE POLE
POLEMOUNTED TRANSFORMER	POLEMOUNTED TRANSFORMER
DOWN GUY & ANCHOR (GY)	DOWN GUY & ANCHOR (GY)
DOWN GUY & ANCHOR (W&GY)	DOWN GUY & ANCHOR (W&GY)
3-PHASE PADMOUNT TRANSFORMER	3-PHASE PADMOUNT TRANSFORMER
1-PHASE PADMOUNT TRANSFORMER	1-PHASE PADMOUNT TRANSFORMER
ELECTRIC METER	ELECTRIC METER
LIGHT	LIGHT

EXISTING 11568

* 112.5KVA – ABC# *
(67) TRANSFORMER DATA
F.P.U.A. #
FACILITY POINT ID:
SERIAL #
MANUFACTURER
IMPEDANCE

INSTALL 33029
* 25KVA – C# *
(11) TRANSFORMER DATA
F.P.U.A. #
FACILITY POINT ID:

INSTALL 33031
* 50KVA – A# *
(12) TRANSFORMER DATA
F.P.U.A. #
FACILITY POINT ID:

INSTALL 33031
* 25KVA – B# *
(12) TRANSFORMER DATA
F.P.U.A. #
FACILITY POINT ID:

INSTALL 33400
* 25KVA – B# *
(94) TRANSFORMER DATA
F.P.U.A. #
FACILITY POINT ID:

INSTALL 33025
* 50KVA – C# *
(24) TRANSFORMER DATA
F.P.U.A. #
FACILITY POINT ID:

FORT PIERCE UTILITIES AUTHORITY

N. 2ND STREET ROAD IMPROVEMENT PROJECT
N.2ND ST (SEAWAY DR TO NORTH END)
REBUILD OH ELECTRIC DISTRIBUTION LINE & CONVERT CROSSINGS

DATE	DESCRIPTION	BY	AP
09-07-14	INITIAL RELEASE	PJL	

ELECTRIC ENGINEERING
1701 SOUTH 27TH STREET
P.O.Box 3191 (34950)
FT. PIERCE, FLORIDA 34947
(772) 466-1600 / FAX (772) 461-1938

VERIFY SCALE BAR IS EQUAL TO ONE INCH ON ORIGINAL DRAWING. ADJUST ALL SCALED DIMENSIONS ACCORDINGLY

SCALE: 1=20
DESIGNED: PJL
DRAWN: PJL
JOB #: 2010409-1
SHEET: Plan
SHEET 3 OF 15

NORTH

MATCHLINE STA. 03+10.00 - SHEET 3

MATCHLINE STA. 09+17.00 - SHEET 5

"PALMDALE OIL COMPANY
705-0007-00/9
PALMDALE OIL COMPANY
911 N. 2nd STREET"

"PACKERS SUPPLY COMPANY"
313-0001-00/1
BERNARD A. EGAN GROVES INC
1000 N. 2nd STREET"

PRELIMINARY

NORTH 2nd STREET

PORT AVENUE

Existing R/W

Existing EOP

Existing 16" PVC Force Main

Existing 12" CIP Water Main

Existing 8" VCP Gravity Main

Existing 6" HDPE Water Main

CONSTRUCT DIRECTIONAL BORE
1-4" HDPE MIN 36" COVER (65')
SEE PROFILE- "AA" - (STA03+79 SHT-11)

CONSTRUCT DIRECTIONAL BORE
1-4" HDPE MIN 36" COVER (55')
SEE PROFILE- "BB" - (STA06+07 SHT-11)

CONSTRUCT TRENCH
1-4" SCH 40 PVC (40')
MIN 30" COVER

CONSTRUCT DIRECTIONAL BORE
2-4" HDPE MIN 36" COVER (90')
SEE PROFILE- "BB" - (STA07+50 SHT-11)

CONSTRUCT TRENCH
1-4" SCH 40 PVC (35')
MIN 36" COVER

(12) FPI#33032
INSTALL
5S IIIA
VC-1C3-394.5AAAC & 155NX(N)
UR-3V1C3-1/0, 15KV TO LOC 59X(480')
M-1A
250W HPS (S/L)

(14) FPI#33033
INSTALL
5S IIIA
VC-1C3-394.5AAAC & 155NX(S&N)
E3:1
(2)E3
E1
(2)MULTI-HELIX ANC (18' & 22'LD)
M-1A
250W HPS (S/L)

(17) FPI#13655
REMOVE
XC-5C3-77.47AAAC & 2NX(E)
INSTALL
XC-5C3-1555AAAC & 155NX(E)
E3:1
(2)E3
E1
(2)MULTI-HELIX ANC (18' & 22'LD)

(16) FPI#33035
INSTALL
5S/2
XC-5C3-155AAAC & 155NX(V)
XC-7AX5C3-155AAAC & 155NX(E)
E3:1
(2)E3
E1
(2)MULTI-HELIX ANC (18' & 22'LD)
M1

(15) FPI#33034
INSTALL
5S IIIA
VC-1C3-394.5AAAC & 155NX(S&N)
XC-5AC3-155AAAC & 155NX(E)
G1-BV1
2SB
2*SEC-RISER(1/0TPX)
1/0TPX URD TO LOC 57 (180')
250W HPS (S/L)
M-1A

(18) FPI#33036
INSTALL
5S IIIA
VC-1C3-394.5AAAC & 155NX(S&N)
G3-V1(240/120V)
50A
50B
50C
UR-SEC5(PARALLEL 350MCM AL QPX TO LOC 20X(300')
** USE 6' ELBOW AT RISER
SECONDARY HAND HOLE (24"X36")
250W HPS (S/L)
M-1A

(21) REMOVE
FPI#13669
40/5
XC-1C3-2/0 & 2/0NX(S&N)
XC-7AC3-#4CU & 4NX(V)
(3)CAPACITOR BANK
INSTALL
FPI#13669
5S IIIA
VC-1C3-394.5AAAC & 155NX(S&N)
XC-7AC3-#4CU & 4NX(V)
250W HPS (S/L)
M-1A

(20) FPI #31639
REMOVE
FPI#31639
45 IIIA
XC-5AC3-155 & 155NX(W)
G3-X1
50A
50B
50C
(2)UR-SEC5(PARALLEL 350MCM)
INSTALL
PARALLEL 350MCM AL QPX TO LOC 18(300')
EXISTING
SECONDARY HAND HOLE (24"X36")
W/PARRALLEL 350MCM
JOINT USE
AT&T AND COMCAST TO REMOVE ATTACHMENT

(19) REMOVE
FPI#13631
45 IIIA
XC-1C3-2/0 & 2/0NX(S&N)
XC-7AC3-155 & 155NX(E)
150W HPS (S/L)
CONNECT
TO EXISTING 2-4" PVC AT 36" COVER
JOINT USE
AT&T AND COMCAST TO REMOVE ATTACHMENT

(57) FPI#13652
TDP POLE
REMOVE
XC-1C3-2/0 & 2/0NX(S&N)
XC-7A(1-155 & 155NX(W)
INSTALL
2*SEC-RISER(1/0TPX)
SECONDARY HAND HOLE (13"X24")
1/0TPX URD TO LOC 15 (180')
EXISTING
150W HPS (S/L)

(58) FPI#13671
REMOVE
40/5
XC-1C3-2/0 & 2/0NX(S&N)
(3)CAPACITOR BANK

(59) FPI#13642
REMOVE
40/5
XC-1C3-2/0 & 2/0NX(S&N)
UR-3 (3-1/0, 15KV)XE)
INSTALL
PRIMARY HAND HOLE (24" X 36")
(3-1/0, 15KV)XEX3-1/0, 15KV TO LOC 13X480')XN)

(60) FPI#13661
REMOVE
40/5
XC-1C3-2/0 & 2/0NX(S&N)
G2
15A
10B
150W HPS (S/L)
JOINT USE
COMCAST TO REMOVE ATTACHMENT

EXISTING	PROPOSE
PRIMARY HANDHOLE – 24" x 36"	PRIMARY HANDHOLE – 24" x 36"
SECONDARY HANDHOLE – 24" x 36"	SECONDARY HANDHOLE – 24" x 36"
SECONDARY HANDHOLE – 13" x 24"	SECONDARY HANDHOLE – 13" x 24"
WOOD POLE	WOOD POLE
CONCRETE POLE	CONCRETE POLE
POLEMOUNTED TRANSFORMER	POLEMOUNTED TRANSFORMER
DOWN GUY & ANCHOR (2D')	DOWN GUY & ANCHOR (2D')
DOWN GUY & ANCHOR (NTAGY)	DOWN GUY & ANCHOR (NTAGY)
3-PHASE PADMOUNT TRANSFORMER	3-PHASE PADMOUNT TRANSFORMER
1-PHASE PADMOUNT TRANSFORMER	1-PHASE PADMOUNT TRANSFORMER
ELECTRIC METER	ELECTRIC METER
LIGHT	LIGHT

INSTALL 33034	INSTALL 33036	INSTALL 33036	INSTALL 33036	REMOVE 31639	REMOVE 31639	REMOVE 31639	REMOVE 13661	REMOVE 13661
25KVA – Bø	50KVA – Aø	50KVA – Bø	50KVA – Cø	50KVA – Aø	50KVA – Bø	50KVA – Cø	15KVA – Aø	10KVA – Bø
(15) TRANSFORMER DATA	(18) TRANSFORMER DATA	(18) TRANSFORMER DATA	(18) TRANSFORMER DATA	(20) TRANSFORMER DATA	(20) TRANSFORMER DATA	(20) TRANSFORMER DATA	(60) TRANSFORMER DATA	(60) TRANSFORMER DATA
F.P.U.A. #	F.P.U.A. #	F.P.U.A. #	F.P.U.A. #	F.P.U.A. #	F.P.U.A. #	F.P.U.A. #	F.P.U.A. #	F.P.U.A. #
FACILITY POINT ID:	FACILITY POINT ID:	FACILITY POINT ID:	FACILITY POINT ID:	FACILITY POINT ID:	FACILITY POINT ID:	FACILITY POINT ID:	FACILITY POINT ID:	FACILITY POINT ID:
				SERIAL #	SERIAL #	SERIAL #	SERIAL #	SERIAL #
				MANUFACTURER	MANUFACTURER	MANUFACTURER	MANUFACTURER	MANUFACTURER
				IMPEDANCE	IMPEDANCE	IMPEDANCE	IMPEDANCE	IMPEDANCE

FORT PIERCE UTILITIES AUTHORITY

DATE	DESCRIPTION	BY	APP
05-07-14	INITIAL RELEASE	PJL	
	REBUILD OH ELECTRIC DISTRIBUTION LINE & CONVERT CROSSINGS		

ELECTRIC ENGINEERING
1701 SOUTH 27TH STREET
P.O.Box 3191 (34950)
FT. PIERCE, FLORIDA 34947
(772) 466-1600 / FAX (772) 461-1938

VERIFY SCALE BAR IS EQUAL TO ONE INCH ON ORIGINAL DRAWING. ADJUST SCALE ACCORDINGLY

SCALE: 1=20
DESIGNED: PJL
DRAWN: PJL
JOB #: 20100409-1
SHEET: Plan
SHEET 4 OF 15

N. 2ND STREET ROAD IMPROVEMENT PROJECT
N.2ND ST (SEAWAY DR TO NORTH END)

NORTH

MATCHLINE STA. 09+17.00 - SHEET 4

MATCHLINE STA. 15+22.00 - SHEET 6

"CRACKER BOY OVERFLOW"
705-0001-000/4
JAMCO, INC.
N. 2nd STREET

"CRACKER BOY OVERFLOW"
705-0001-000/4
JAMCO, INC.
N. 2nd STREET

"CANVAS MAN"
312-0001-00/8
MOLLYWOG LLC
1302 N. 2nd STREET

"EGAN PACKING"
311-0002-00/2
BERNARD A EGAN GROVES INC
1110 N. 2nd STREET

"VACANT LOT"
133-0001-00/9
DESTIN BEACH INC.

1110

CONSTRUCT TRENCH
1-4" SCH 40 PVC (40')
MIN 30" COVER

CONSTRUCT DIRECTIONAL BORE
1-4" HDPE MIN 36" COVER (55')
SEE PROFILE- "BB" - (STA09+20 SHT#11)

C-GP
C-GB

C-SSFME

Existing EOP

10+00

11+00

12+00

13+00

14+00

15+00

NORTH 2nd STREET - R/W VARIES

Existing R/W

Existing EOP

Existing 12" CIP Water Main

Existing 12" CIP Water Main

Existing 16" PVC Force Main

Existing 12" CIP W

CONSTRUCT DIRECTIONAL BORE
1-4" HDPE MIN 36" COVER (55')
SEE PROFILE- "BB" - (STA12+35 SHT#11)

C-SSFME

C-WE

C-WP

C-GP

C-DD

C-SSE

CONSTRUCT TRENCH
1-4" SCH 40 PVC (45')
MIN 30" COVE

FPI#13696
40/5

FEC SPUR LINE

FEC SPUR LINE

PRELIMILARY

(22) REMOVE
FPI#13670
40/5
XC-1C3-2/0 & 2/0NXS&N)
GI-A
15A
150W HPS (S/L)
INSTALL
FPI#13670
55 IIIA
VC-1C3-394.5AAAC & 155NXS&N)
GI-AV1
25A
4"SEC-RISER(4/0TPX TO LDC 22A)X140')
250W HPS (S/L)
M-1A

(56) FPI#13675
TOP POLE
REMOVE
XC-1C3-2/0 & 2/0NXS&N)
EXISTING
250W HPS FLOOD LIGHT (R/L)

(23) INSTALL
FPI#13037
55 IIIA
VC-1C3-394.5AAAC & 155NXS&N)
250W HPS (S/L)
M-1A

(24) REMOVE
FPI#13666
40/5
XC-1C3-2/0 & 2/0NXS&N)
XC-5AC3-155AAAC & 155NXE)
INSTALL
FPI#13666
55 IIIA
VC-1C3-394.5AAAC & 155NXS&N)
UR-3V1C3-1/0, 15KV TO LDC 25X615')
250W HPS (S/L)
M-1A
TRANSFER
250W HPS FLOOD LIGHT (R/L)

(27) REMOVE
FPI#13698
40/5
XC-1C3-2/0 & 2/0NXS&N)
GI-A
15A
2"SEC-RISER(1/0TPX)
150W HPS (S/L)
INSTALL
FPI#13698
55 IIIA
VC-1C3-394.5AAAC & 155NXS&N)
GI-CV1
25C
2"SEC-RISER(1/0TPX)
1/0TPX URD TO LDC 1B (150')
SEC-HH (13' X 24')
250W HPS (S/L)
M-1A
TRANSFER
250W HPS FLOOD LIGHT (R/L)

(22) INSTALL
SECONDARY HH (13' X 24')
4/0TPX URD TO LDC 22 (140')
1/0TPX URD TO LDC 22B (30')

CONSTRUCT TRENCH
1-4" SCH 40 PVC (145')
MIN 30" COVER

CONSTRUCT TRENCH
1-2" SCH 40 PVC (15')
MIN 30" COVER

CONSTRUCT TRENCH
1-2" SCH 40 PVC (30')
MIN 30" COVER

(22B)

(26) INSTALL
SECONDARY HH (13' X 24')
1/0TPX URD TO LDC 22A (155')
1/0TPX URD TO LDC 26A (50')

(26A) FPI#13667
INSTALL
2"SEC-RISER(1/0TPX)
1/0TPX URD TO LDC 26 (50')

FPI#13696
(25) REMOVE
VC-7AC3-155AAAC & 155NXVW)
INSTALL
UR-3V5C3-1/0, 15KV TO LDC 24X615')

EXISTING		PROPOSE	
PMH	PRIMARY HANDHOLE – 24" X 36"	PMH	PRIMARY HANDHOLE – 24" X 36"
SMH	SECONDARY HANDHOLE – 24" X 36"	SMH	SECONDARY HANDHOLE – 24" X 36"
SHH	SECONDARY HANDHOLE – 13" X 24"	SHH	SECONDARY HANDHOLE – 13" X 24"
	WOOD POLE		WOOD POLE
	CONCRETE POLE		CONCRETE POLE
	POLEMOUNTED TRANSFORMER		POLEMOUNTED TRANSFORMER
	DOWN GUY & ANCHOR (GF)		DOWN GUY & ANCHOR (GF)
	DOWN GUY & ANCHOR (NEAT)		DOWN GUY & ANCHOR (NEAT)
	3-PHASE PADMOUNT TRANSFORMER		3-PHASE PADMOUNT TRANSFORMER
	1-PHASE PADMOUNT TRANSFORMER		1-PHASE PADMOUNT TRANSFORMER
	ELECTRIC METER		ELECTRIC METER
	LIGHT		LIGHT

INSTALL
13670

* 25KVA – A8 *
(22) TRANSFORMER DATA
F.P.U.A. #
FACILITY POINT ID:

REMOVE
13670

* 15KVA – A8 *
(22) TRANSFORMER DATA
F.P.U.A. #
FACILITY POINT ID:
SERIAL #
MANUFACTURER
IMPEDANCE

INSTALL
13698

* 15KVA – A8 *
(27) TRANSFORMER DATA
F.P.U.A. #
FACILITY POINT ID:

REMOVE
13698

* 25KVA – C8 *
(27) TRANSFORMER DATA
F.P.U.A. #
FACILITY POINT ID:
SERIAL #
MANUFACTURER
IMPEDANCE

FORT PIERCE UTILITIES AUTHORITY

DATE	DESCRIPTION	BY	APP
09-07-14	INITIAL RELEASE	PJL	

ELECTRIC ENGINEERING
1701 SOUTH 37TH STREET
P.O Box 3191 (34950)
FT. PIERCE, FLORIDA 34947
(772) 466-1600 / FAX (772) 465-1938

VERIFY SCALE BAR IS EQUAL TO 1" WHEN PLOTTED ON ORIGINAL DRAWING
ADJUST ALL SCALED DIMENSIONS ACCORDINGLY

SCALE: 1=20
DESIGNED: PJL
JOB #: 20100409-1
DRAWN: PJL
SHEET: Plan
SHEET: 5 OF 15

N. 2ND STREET ROAD IMPROVEMENT PROJECT
N.2ND ST (SEAWAY DR TO NORTH END)
REBUILD OH ELECTRIC DISTRIBUTION LINE & CONVERT CROSSINGS

NORTH

MATCHLINE STA. 15+22.00 - SHEET 5

MATCHLINE STA. 21+27.00 - SHEET 7

FEC RAILROAD

AVENUE M

NORTH 2nd STREET

Existing R/W

Existing EOP

Existing 6" CIP Water Main

Existing 16" PVC Force Main

Existing 6" PVC Force Main – Abandoned

Existing 16" PVC Force Main

Water Main

16+00 17+00 18+00 19+00 20+00 21+00

96+0

Rinker Materials
1301 N 2nd Street

1301

FPL WELL

(28) REMOVE
FPI#13641
40/5
XC-1C3-2/0 & 2/0NXS&N)
XC-5AC3-#6CU & 6NX(W)
150W HPS (S/L)
INSTALL
FPI#13641
55 IIIA
VC-1C3-394.5AAAC & 155NXS&N)
XC-7AC3-#6CU & 6NX(W)
250W HPS (S/L)
M-1A
TRANSFER
150W HPS (R/L)

(55) REMOVE
FPI#13638
40/5
XC-5C3-2/0 & 2/0NXS&N)

(29) INSTALL
FPI#33038
55 IIIA
VC-1C3-394.5AAAC & 155NXS&N)
250W HPS (S/L)
M-1A

(30) INSTALL
FPI#33039
55 IIIA
VC-1C3-394.5AAAC & 155NXS&N)
G2-BCV1
25B
25C
2"SEC-RISER(4/0QPX URD TO LDC 30A (12'5")
M-1A

(31) REMOVE
FPI#13639
40/3
XC-1C3-2/0 & 2/0NXS&N)
XC-1C3-394.5AAAC & 155NXE&W)
INSTALL
FPI#13639
55 IIIA
VC-1C3-394.5AAAC & 155NXS&N)
XC-5AC33-394.5AAAC & 155NXE&W)
250W HPS (S/L)
M-1A

(49) INSTALL
FPI#33040
45 IIIA
XC-5C3-394.5AAAC & 155NX(W)
XC-5AC3-394.5AAAC & 155NX(E)
E3:1
(2)E3
E1
(2)MULTI-HELIX ANC (18' & 22'LD)
M-1A

(53) REMOVE
FPI#13577
40/5
XC-6C3-2/0 & 2/0NXS&N)
TRANSFER
250W HPS (R/L) FROM LDC 0

(32) INSTALL
FPI#33041
55 IIIA
VC-1C3-394.5AAAC & 155NXS&N)
250W HPS (R/L) FROM LDC 0
250W HPS (S/L) FROM LDC 0
M-1A

(51) REMOVE
FPI#13580
40/5
XC-1C3-2/0 & 2/0NXS&N)
XC-7AC3-#4CU & 4NX(W)
E2(E)

(33) INSTALL
FPI#33042
55 IIIA
VC-1C3-394.5AAAC & 155NXS&N)
250W HPS (S/L)
M-1A

(50) REMOVE
FPI#13581
40/5
XC-1C3-2/0 & 2/0NXS&N)

CONSTRUCT DIRECTIONAL BORE
1-4" HDPE MIN 36" COVER (70')
SEE PROFILE- "BB" - (STA17+80 SHT(11)

(608) EXISTING
LIFT STATION SERVICE

CONSTRUCT TRENCH
1-2" SCH 40 PVC (20')
MIN 30" COVER

(54) REMOVE
FPI#13640
40/5
XC-5C3-2/0 & 2/0NX(S&N)
G2-BC
25B
25C
2"SEC-RISER(1/0QPX)
E3:1
E1
10'ANC

(60) INSTALL
SECONDARY HH (13" X 24")
4/0QPX URD TO LDC 30 (12'5")
4/0QPX URD TO LDC 30B (30')

(52) REMOVE
FPI#13579
35/5
E2(W)
E1
10'ANC

PRELIMINARY

EXISTING	PROPOSE
PRIMARY HANDHOLE – 24" X 36"	PRIMARY HANDHOLE – 24" X 36"
SECONDARY HANDHOLE – 24" X 36"	SECONDARY HANDHOLE – 24" X 36"
SECONDARY HANDHOLE – 13" X 24"	SECONDARY HANDHOLE – 13" X 24"
WOOD POLE	WOOD POLE
CONCRETE POLE	CONCRETE POLE
POLEMOUNTED TRANSFORMER	POLEMOUNTED TRANSFORMER
DOWN GUY & ANCHOR (30')	DOWN GUY & ANCHOR (30')
DOWN GUY & ANCHOR (18'6x2')	DOWN GUY & ANCHOR (18'6x2')
3-PHASE PADMOUNT TRANSFORMER	3-PHASE PADMOUNT TRANSFORMER
1-PHASE PADMOUNT TRANSFORMER	1-PHASE PADMOUNT TRANSFORMER
ELECTRIC METER	ELECTRIC METER
LIGHT	LIGHT

INSTALL 33039	INSTALL 33039	REMOVE 13640	REMOVE 13640
* 25KVA – Bø *	* 25KVA – Cø *	* 25KVA – Bø *	* 25KVA – Cø *
(30) TRANSFORMER DATA	(30) TRANSFORMER DATA	(54) TRANSFORMER DATA	(54) TRANSFORMER DATA
F.P.U.A. #	F.P.U.A. #	F.P.U.A. #	F.P.U.A. #
FACILITY POINT ID:	FACILITY POINT ID:	FACILITY POINT ID:	FACILITY POINT ID:
		SERIAL #	SERIAL #
		MANUFACTURER	MANUFACTURER
		IMPEDANCE	IMPEDANCE

FORT PIERCE UTILITIES AUTHORITY

DATE:	DESCRIPTION:	BY:	AP:
05-07-14	INITIAL RELEASE	PJL	

REBUILD OH ELECTRIC DISTRIBUTION LINE & CONVERT CROSSRIDGE

ELECTRIC ENGINEERING
1701 SOUTH 25TH STREET
P.O.Box 3191 (34950)
FT. PIERCE, FLORIDA 34947
(772) 466-1600 / FAX (772) 461-1938

VERIFY SCALE BAR IS EQUAL TO 1" ON THIS DRAWING
ADJUST ALL SCALED DIMENSIONS ACCORDINGLY

N. 2ND STREET ROAD IMPROVEMENT PROJECT
N.2ND ST.(SEAWAY DR TO NORTH END)

SCALE:	DESIGNED:	JOB #:
1=20.	PJL	20100409-1
SHEET:	DRAWN:	SHEET
Plan	PJL	6 OF 15

NORTH

MATCHLINE STA. 21+27.00 - SHEET 6

22+00 | 23+00 | NORTH 2nd STREET - R/W VARIES | 24+00 | 25+00 | 26+00 | 26+53 | 1+76

Existing EOP
Existing 6" PVC Force Main – Abandoned
Existing 16" PVC Force Main
Existing R/W
Existing 6" CIP Water Main
C-DP
C-WD
C-SSFME
50' ACCESS EASEMENT
OPEN CUT (20'WIDE)
EXISTING DRIVEWAY

REMOVE (34)
FPI#13582
40/S
XC-3C3-2/0 & 2/0NX(S)
XB-3C3-2/0 & 2/0NX(N)
UR-3
E3:1
E1
10"ANC
150W HPS (S/L)
INSTALL
FPI#
SS IIIA
VC-1C3-394.5AAAC & 155NX(S&N)
UR-3V1C3-1/0, 15KV TD LDC 353X(150')
250W HPS (S/L)
M-1A

FPI#13582
INSTALL
PRIMARY HH (24" X 36")
3-1/0, 15KV TD LDC 34 (150')

INSTALL (36)
FPI#33043
SS IIIA
VC-1C3-394.5AAAC & 155NX(S&N)
250W HPS (S/L)
M-1A

REMOVE (48)
FPI#13584
40/S
XB-1C3-2/0 & 2/0NX(S&N)
150W HPS (R/L)

INSTALL (37)
FPI#33044
SS IIIA
VC-1C3-394.5AAAC & 155NX(S&N)
250W HPS (S/L)
M-1A

INSTALL (36)
FPI#33045
SS IIIA
VC-1C3-394.5AAAC & 155NX(S&N)
UR-3V5C3-1/0, 15KV TD LDC 39X(495')
E3:3
E3:1
E3
E1
(2)MULTI-HELIX ANC (18' & 22'LD)
250W HPS (S/L)
M-1A

REMOVE (47)
FPI#13585
40/S
XB-5C2-2/0 & 2/0NX(S)
XB-5AC2-2/0 & 2/0NX(N)
G2-AC
25A
15C
E3:1
E1
10"ANC
150W HPS (S/L)

INSTALL (39)
PRIMARY HH (24" X 36")
3-1/0, 15KV TD LDC 38X(495')ABC#
1-1/0, 15KV TD LDC 40X(5')A#
1-1/0, 15KV TD LDC 41X(10')B#
1-1/0, 15KV TD LDC 43X(80')C#

CONSTRUCT TRENCH
3-2" SCH 40 PVC (315')
MIN 30" COVER

INSTALL (43)
PRIMARY HH (24" X 36")
1-1/0, 15KV TD LDC 40X(90')A#
1-1/0, 15KV TD LDC 44X(10')A#
1-1/0, 15KV TD LDC 39X(80')C#
1-1/0, 15KV TD LDC 45X(10')C#

FPI#13586
REMOVE
TDP POLE
XB-7C2-2/0 & 2/0NX(W)
G2-AC
15A
37.5C
E3:1
E1
10"ANC
INSTALL
2"SEC-RISER(4/0QPX)
4/0QPX URD TO LDC 45 (45')

FPI#33049
INSTALL
UT-P1 (48" X 55")

CONSTRUCT TRENCH
3-2" SCH 40 PVC (336')
MIN 36" COVER

FPI#33046
INSTALL
UT-P1 (48" X 55")
37.5A, 120/240V
1-1/0, 15KV TO LDC 39X(
1-1/0, 15KV TO LDC 43X(

FPI#33047
INSTALL
UT-P1 (48" X 55")
50A, 120/240V
1-1/0, 15KV TO LDC 39X(
4/0QTPX, URD TO LDC 42

CONSTRUCT TRENCH
1-4" SCH 40 PVC (20')
MIN 30" COVER

FPI#13587
REMOVE
TDP POLE
VB-5A(2-2/0 & 2/0NX(S
VB-5C2-2/0 & 2/0NX(E
E3:1
E1
10"ANC
INSTALL
2"SEC-RISER(4/0QPX)
4/0QPX URD TO LDC 41(

CONSTRUCT DIRECTIONAL BO
3-2" HDPE MIN 36" COVER
MAINTAIN 18" FROM ANY UT

FPI#33048
INSTALL
UT-P1 (48" X 55")
37.5C, 120/240V
1-1/0, 15KV TO LDC 43

PRELIMILARY

EXISTING	PROPOSE
PRIMARY HANDHOLE – 24" X 36"	PRIMARY HANDHOLE – 24" X 36"
SECONDARY HANDHOLE – 24" X 36"	SECONDARY HANDHOLE – 24" X 36"
SECONDARY HANDHOLE – 17" X 24"	SECONDARY HANDHOLE – 17" X 24"
WOOD POLE	WOOD POLE
CONCRETE POLE	CONCRETE POLE
POLEMOUNTED TRANSFORMER	POLEMOUNTED TRANSFORMER
DOWN GUY & ANCHOR (GY)	DOWN GUY & ANCHOR (GY)
DOWN GUY & ANCHOR (GY&AT)	DOWN GUY & ANCHOR (GY&AT)
3-PHASE PADMOUNT TRANSFORMER	3-PHASE PADMOUNT TRANSFORMER
1-PHASE PADMOUNT TRANSFORMER	1-PHASE PADMOUNT TRANSFORMER
ELECTRIC METER	ELECTRIC METER
LIGHT	LIGHT

INSTALL 33046
(46) TRANSFORMER DATA
37.5KVA – A@
F.P.U.A. #
FACILITY POINT ID:

INSTALL 33047
(41) TRANSFORMER DATA
50KVA – B@
F.P.U.A. #
FACILITY POINT ID:

INSTALL 33048
(44) TRANSFORMER DATA
37.5KVA – C@
F.P.U.A. #
FACILITY POINT ID:

INSTALL 33049
(45) TRANSFORMER DATA
50KVA – A@
F.P.U.A. #
FACILITY POINT ID:

REMOVE 13586
(46) TRANSFORMER DATA
15KVA – A@
FACILITY POINT ID:
SERIAL #
MANUFACTURER
IMPEDANCE

REMOVE 13586
(46) TRANSFORMER DATA
37.5KVA – C@
FACILITY POINT ID:
SERIAL #
MANUFACTURER
IMPEDANCE

REMOVE 13585
(47) TRANSFORMER DATA
25KVA – A@
FACILITY POINT ID:
SERIAL #
MANUFACTURER
IMPEDANCE

REMOVE 13585
(47) TRANSFORMER DATA
15KVA – C@
FACILITY POINT ID:
SERIAL #
MANUFACTURER
IMPEDANCE

05-07-14	INITIAL RELEASE	P.JL	
DATE:	DESCRIPTION:	BY:	AP

REBUILD OH ELECTRIC DISTRIBUTION LINE & CONSENT CROSSINGS

ELECTRIC ENGINEERING
1701 SOUTH 37TH STREET
P.O.Box 3191 (34982)
FT. PIERCE, FLORIDA 34947
(772) 466-1600 / FAX (772) 461-1938

VERIFY SCALE BAR IS EQUAL TO ONE INCH ON ORIGINAL DRAWING ADJUST ALL SCALED DIMENSIONS ACCORDINGLY

N. 2ND STREET ROAD IMPROVEMENT PROJECT
N.2ND ST.(SEAWAY DR TO NORTH END)

SCALE:	DESIGNED:	JOB #:
1=20	P.JL	20100409-1
SHEET:	DRAWN:	SHEET
Plan	P.JL	7 OF 15

NORTH

US 1 (DIXIE HIGHWAY) - R/W VARIES

0+00 1+00 2+00 3+00 3+74

AVENUE H - 66RW

TRAFFIC SIGNAL POLE

TRAFFIC SIGNAL POLE

SIGNAL BOX

GRAVEL BED
RAILROAD TRACKS
GRAVEL BED

GRAVEL BED
RAILROAD TRACKS
GRAVEL BED

Existing 10" DIP Water Main (to be Abandoned)

Existing 16" DIP Water Main

Existing 16" DIP Water Main

Existing R/W

Existing R/W

2+00

0+00

DHS

DHS

DHS

DHS

DHS

DHS

FPI 13530
45 IIIA
STA: 0+94R

FPI 13529
45 IIIA
STA: 0+94L

FPI 33405
45 IIIA
STA: 01+14

FPI 13527
45 IIIA
STA: 01+48L

FPI 33406
45 IIIA
STA: 03+70

FPI 13526
45 IIIA
STA: 02+20R

FPI 33404
45 IIIA
STA: 02+39L

EXISTING (71)
FECRR SERVICE

EXISTING (74)
POLE AND RENTAL LIGHT

(76) FPI#12529
REMOVE
35/5
E2
E1
10'ANC
TRANSFER
250W HPS (S/L) TO LDC 71

(71) FPI#33405
INSTALL
45 IIIA
VA-5(1-155AAAC & 155NX(E)
G1-CV5
25C
E3
E1
(1)MULTI-HELIX ANC (20'LD)
M-1A
250W HPS (S/L) FROM LDC 76

(73) FPI#33406
INSTALL
35 III
250W HPS (S/L) FROM LDC 77

(75) FPI#13527
REMOVE
40/5
VA-5(1-6CU & 6NX(E&W)
G1
25C
E2

(77) FPI#13526
REMOVE
35/5
TRANSFER
250W HPS (S/L) TO LDC 73

(70) FPI#33404
INSTALL
45 IIIA
VA-1(1-155AAAC & 155NX(E&W)
G1-CV1
25C
M-1A
250W HPS (S/L)

"UNKNOWN"
708-0009-000/9
LLOYD BELL
9 FISHERMAN'S WHARF

PRELIMINARY

MATCHLINE STA. 02+57.00 - SHEET 3

EXISTING		PROPOSE	
PMH	PRIMARY HANDHOLE – 24" X 36"	PMH	PRIMARY HANDHOLE – 24" X 36"
SMH	SECONDARY HANDHOLE – 24" X 36"	SMH	SECONDARY HANDHOLE – 24" X 36"
SH	SECONDARY HANDHOLE – 17" X 24"	SH	SECONDARY HANDHOLE – 17" X 24"
	WOOD POLE		WOOD POLE
	CONCRETE POLE		CONCRETE POLE
	POLEMOUNTED TRANSFORMER		POLEMOUNTED TRANSFORMER
	DOWN GUY & ANCHOR (SIF)		DOWN GUY & ANCHOR (SIF)
	DOWN GUY & ANCHOR (18'&22')		DOWN GUY & ANCHOR (18'&22')
3-PHASE PADMOUNT TRANSFORMER		3-PHASE PADMOUNT TRANSFORMER	
1-PHASE PADMOUNT TRANSFORMER		1-PHASE PADMOUNT TRANSFORMER	
	ELECTRIC METER		ELECTRIC METER
	LIGHT		LIGHT

***INSTALL* 33404**

25KVA – C# (76) TRANSFORMER DATA
F.P.U.A. #
FACILITY POINT ID:

***INSTALL* 33405**

25KVA – C# (71) TRANSFORMER DATA
F.P.U.A. #
FACILITY POINT ID:

***REMOVE* 13527**

25KVA – C# (75) TRANSFORMER DATA
F.P.U.A. #
FACILITY POINT ID:
SERIAL #
MANUFACTURER
IMPEDANCE

FORT PIERCE UTILITIES AUTHORITY

DATE:	DESCRIPTION:	BY:	AP:
05-07-14	INITIAL RELEASE	PJL	

ELECTRIC ENGINEERING
1701 SOUTH 25TH STREET
P.O. BOX 3480
FT. PIERCE, FLORIDA 34947
(772) 466-1600 / FAX (772) 461-1638

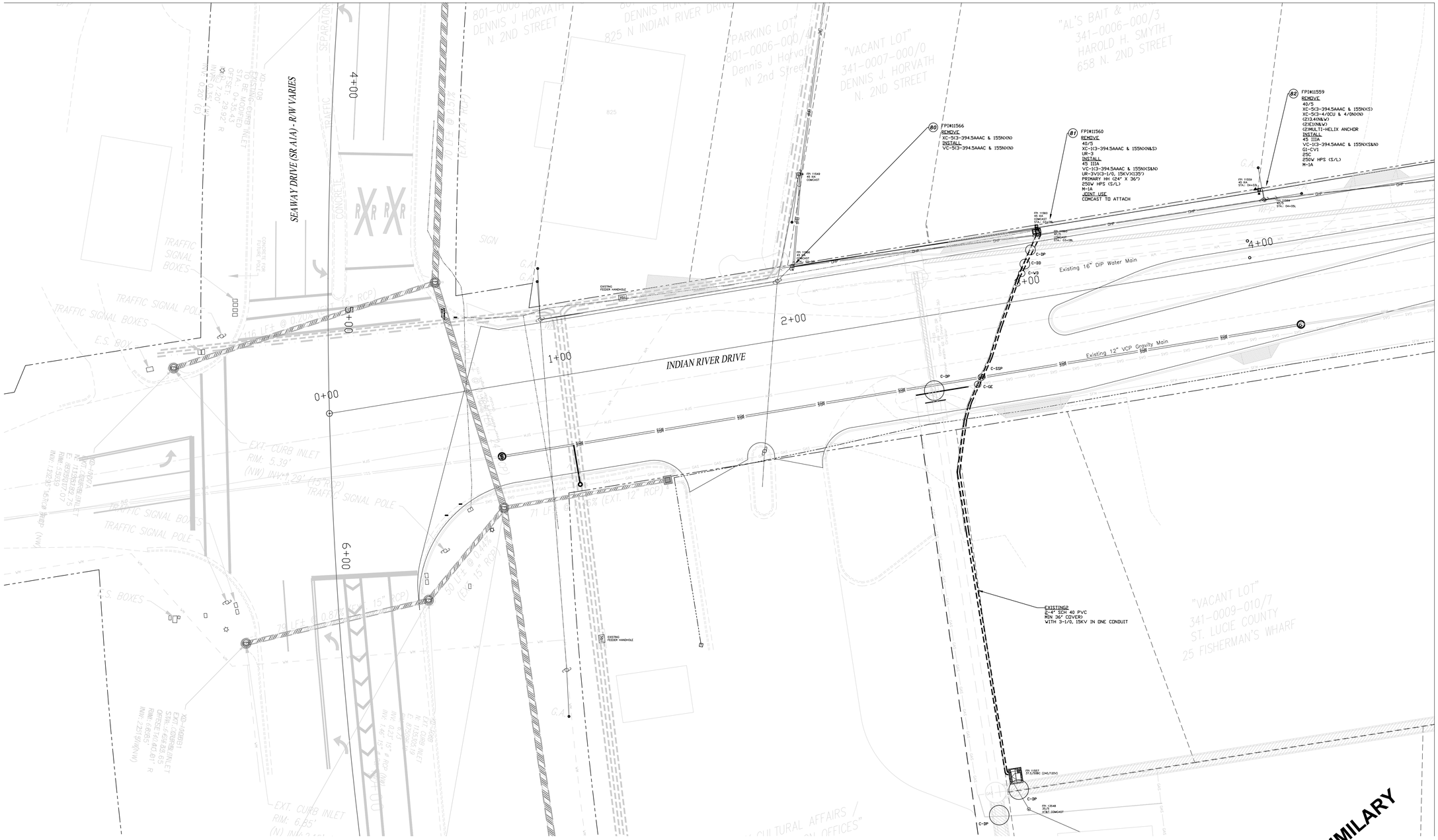
N. 2ND STREET ROAD IMPROVEMENT PROJECT
N.2ND ST (SEAWAY DR TO NORTH END)
REBUILD OH ELECTRIC DISTRIBUTION LINE & CONVERT CROSSINGS

VERIFY SCALE BAR IS EQUAL TO 1" BEFORE USING ONE PRINT ON ORIGINAL DRAWING. ADJUST ALL SCALED DIMENSIONS ACCORDINGLY

SCALE:	DESIGNED:	JOB #:
1=20	PJL	20100409-1
SHEET:	DRAWN:	SHEET
Plan	PJL	8 OF 15

MATCHLINE - AA - SHEET 2

NORTH


SEAWAY DRIVE (SR A1A) - R/W VARIES
INDIAN RIVER DRIVE
0+00
1+00
2+00
3+00
4+00
5+00
6+00
EXISTING FEEDER HANDHOLE
EXISTING FEEDER HANDHOLE
EXISTING FEEDER HANDHOLE

NORTH

MATCHLINE STA. 06+25.00 - SHEET 3

MATCHLINE STA. 04+74.00 - SHEET 9

(84) FPI#33408
INSTALL
45 IIIA
VC-5C3-394.5AAAC & 155NX(S)
UR-3V5C3-1/0, 15KV TO LDC 85) (960')
E3.3
E3.1
E3
E1
(2MULTI-HELIX ANC (18' & 22'LDXN)
250W HPS (S/L)
M-1A
CONSTRUCT TRENCH
1-4" SCH 40 PVC (60')
MIN 36" COVER

(83) FPI#33407
INSTALL
45 IIIA
VC-6C3-394.5AAAC & 155NX(S&N)
250W HPS (S/L)
M-1A

(89) FPI#13534
REMOVE
TOP POLE
XC-1C3-2/0 & 2/0NX(S&N)
XC-5C3-155 & 155NX(E)
E3
E1
10'ANC
INSTALL
35 III
TRANSFER
150W HPS (S/L)
#6SPX, DH
JOINT USE
COMCAST TO REMOVE ATTACHMENT

(88) FPI#13535
REMOVE
40/5
XC-7AC3-2/0 & 2/0NX(S)
G2
15B
25C
E3
E1
10'ANC
TRANSFER
150W HPS (S/L) TO LDC 90

CONSTRUCT DIRECTIONAL BORE
1-4" HDPE MIN 36" COVER (120')
SEE PROFILE- "DD" - (STA06+40 SHT:13)

CONSTRUCT DIRECTIONAL BORE
1-4" HDPE MIN 36" COVER (225')
SEE PROFILE- "EE" - (STA06+20L TO 08+18L SHT:11)

(87) FPI#13536
REMOVE
40 /S
XC-1C3-155 & 155NX(E)
2"SEC-RISER1/0QPX)
TRANSFER
150W HPS (S/L) TO LDC 86
JOINT USE
COMCAST TO REMOVE ATTACHMENT

CONSTRUCT TRENCH
1-4" SCH 40 PVC (76')
MIN 36" COVER

(86) FPI#33410
INSTALL
45 IIIA
XC-5C3-155AAAC & 155NX(W)
G2-X5
25B
25C
5"SEC-RISER(3500PX URD TO LDC 90X280')
E3
E1
(1MULTI-HELIX ANC (20'LD)
150W HPS (S/L) FROM LDC 87
M-1A
JOINT USE
COMCAST TO ATTACH

(85) FPI#33409
INSTALL
45 IIIA
XC-ALC3-155AAAC & 155NX(E&W) - DN ALLEY ARME
UR-3X1C3-1/0, 15KV TO LDC 84X960')
M-1A
JOINT USE
COMCAST TO ATTACH

"CHICKEN BY THE SEA"
341-0004-000/9
JOSEPH G. MILLER
109 FISHERMAN'S WHARF

"VACANT LOT"
341-0009-000/4
FISHMONGER INVESTORS LLC
23 FISHERMAN'S WHARF

"UNKNOWN"
240334100100004
O.R.B.: 2066, PP. 2857 & 2858
ST. LUCIE COUNTY
21 FISHERMAN'S WHARF

"CK MARINE CONSTRUCTION"
341-0001-000/8
KING MARITIME GROUP LLC
18 FISHERMAN'S WHARF

"UNKNOWN"
314-0005-000/2
KING MARITIME GROUP LLC
100 TERMINAL DRIVE

INDIAN RIVER DRIVE
FISHERMAN'S WHARF
TERMINAL DRIVE - 50' R/W
Existing R/W
Existing EOP
Existing 16" DIP Water Main
Existing 8" PVC Gravity Main
Existing 18" DIP Water Main
5+00
6+00
7+00
8+00
8+24

EXISTING		PROPOSE	
PRIMARY	PRIMARY HANDHOLE - 24" x 36"	PRIMARY	PRIMARY HANDHOLE - 24" x 36"
SECONDARY	SECONDARY HANDHOLE - 24" x 36"	SECONDARY	SECONDARY HANDHOLE - 24" x 36"
SECONDARY	SECONDARY HANDHOLE - 17" x 24"	SECONDARY	SECONDARY HANDHOLE - 17" x 24"
	WOOD POLE		WOOD POLE
	CONCRETE POLE		CONCRETE POLE
	POLEMOUNTED TRANSFORMER		POLEMOUNTED TRANSFORMER
	CONN. OUT & ANCHOR (OF)		CONN. OUT & ANCHOR (OF)
	CONN. OUT & ANCHOR (NT&OF)		CONN. OUT & ANCHOR (NT&OF)
3-PHASE PADMOUNT TRANSFORMER		3-PHASE PADMOUNT TRANSFORMER	
1-PHASE PADMOUNT TRANSFORMER		1-PHASE PADMOUNT TRANSFORMER	
ELECTRIC METER		ELECTRIC METER	
LIGHT		LIGHT	

INSTALL ***33410***

* 25KVA – Bø *NEW
(84) TRANSFORMER DATA
F.P.U.A. #_____
FACILITY POINT ID: _____

INSTALL ***33410***

* 25KVA – Cø *NEW
(84) TRANSFORMER DATA
F.P.U.A. #_____
FACILITY POINT ID: _____

REMOVE ***13535***

* 15KVA – Bø *NEW
(88) TRANSFORMER DATA
F.P.U.A. #_____
FACILITY POINT ID: _____
SERIAL # _____
MANUFACTURER _____
IMPEDANCE _____

REMOVE ***13640***

* 25KVA – Cø *NEW
(88) TRANSFORMER DATA
F.P.U.A. #_____
FACILITY POINT ID: _____
SERIAL # _____
MANUFACTURER _____
IMPEDANCE _____

PRELIMILARY

FORT PIERCE UTILITIES AUTHORITY

DATE:	DESCRIPTION:	BY:	AP:
09-07-14	INITIAL RELEASE	PJL	

ELECTRIC ENGINEERING
1701 SOUTH 27TH STREET
P.O.Box 3191 (34950)
FT. PIERCE, FLORIDA 34947
(772)-466-1600 / FAX (772)-461-1938

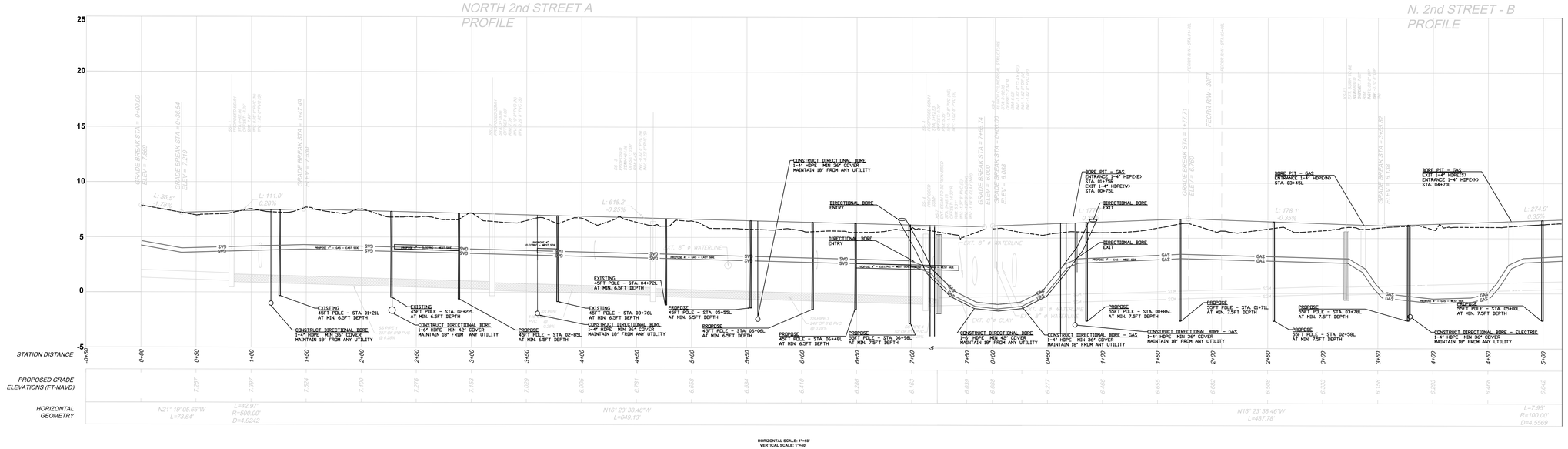
N. 2ND STREET ROAD IMPROVEMENT PROJECT
N.2ND ST.(SEAWAY DR TO NORTH END)
REBUILD OH ELECTRIC DISTRIBUTION LINE & CONVERT CROSSINGS

VERIFY SCALE BAR IS EQUAL TO ONE INCH ON ORIGINAL DRAWING ADJUST ALL SCALED DIMENSIONS ACCORDINGLY

SCALE:	DESIGNED:	JOB #:
1=20	PJL	20100409-1
SHEET: Plan	DRAWN: PJL	SHEET 10 OF 15

NORTH

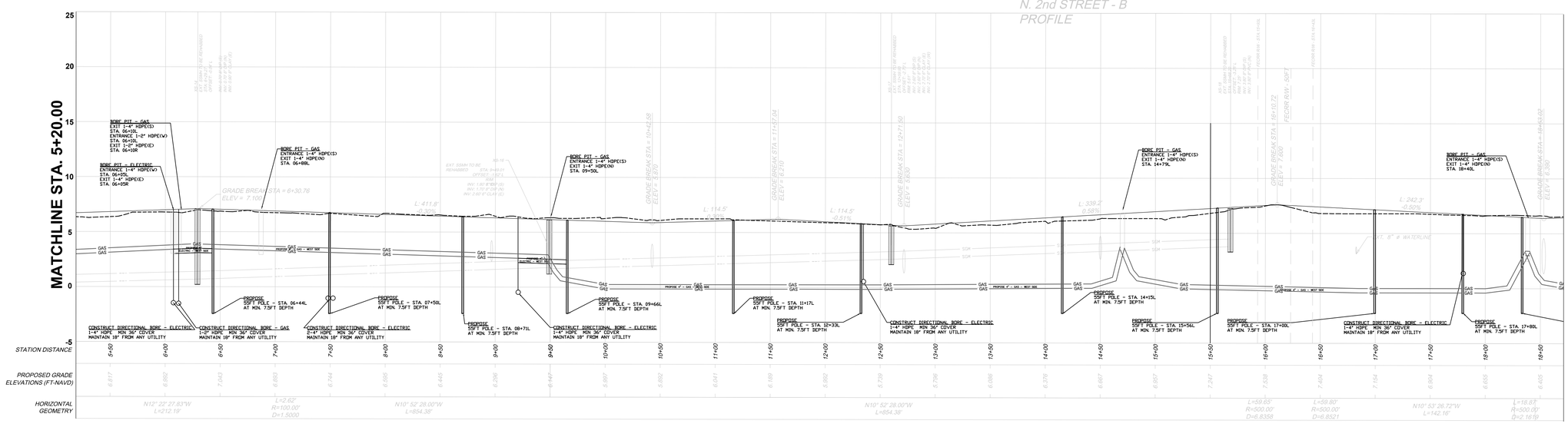
NORTH 2ND STREET - PROFILE "AA"



HORIZONTAL SCALE: 1"=50'
VERTICAL SCALE: 1"=40'

PRELIMILARY

NORTH 2ND STREET - PROFILE "BB"



HORIZONTAL SCALE: 1"=50'
VERTICAL SCALE: 1"=40'

PRELIMINARY

05-07-14	INITIAL RELEASE	P.S.		
DATE:	DESCRIPTION:	BY:	AP:	

FORT PIERCE UTILITIES AUTHORITY

ELECTRIC ENGINEERING
1701 SOUTH 37TH STREET
P.O.Box 3191 (34982)
FT. PIERCE, FLORIDA 34947
(772) 466-1600 / FAX (772) 461-1638

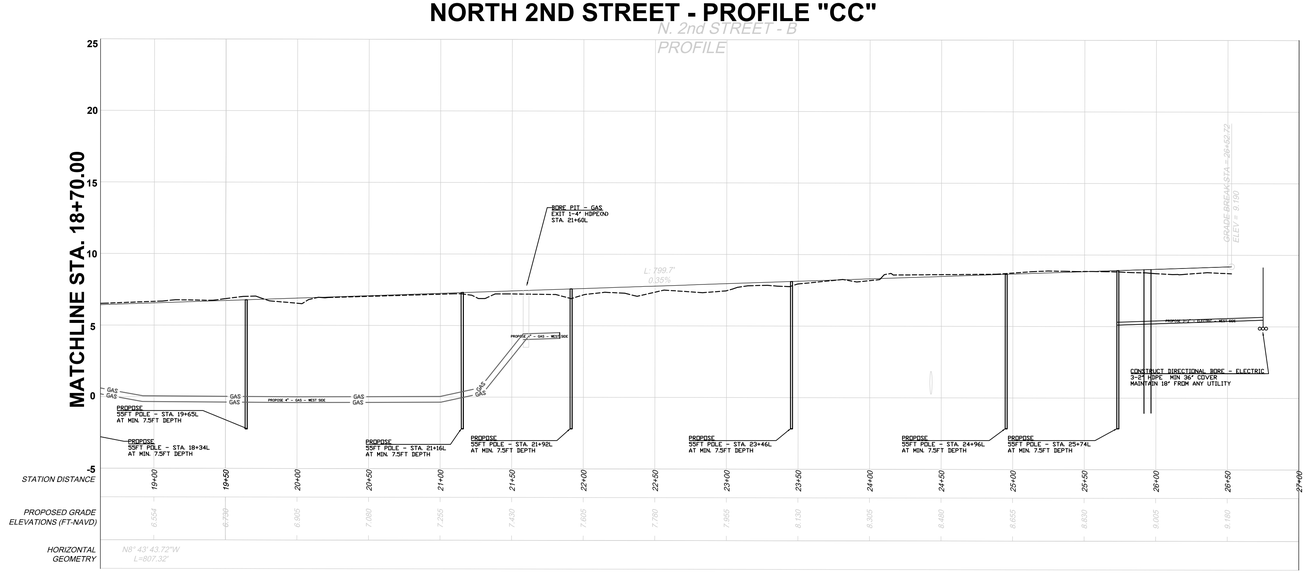
VERIFY SCALE BAR IS EQUAL TO ONE INCH ON ORIGINAL DRAWING ADJUST ALL SCALED DIMENSIONS ACCORDINGLY

N. 2ND STREET ROAD IMPROVEMENT PROJECT
N.2ND ST (SEAWAY DR TO NORTH END)
PROFILE PLAN

SCALE:	DESIGNED:	JOB #:
1=50/40	PJL	20100409-1
SHEET:	DRAWN:	SHEET
Plan	PJL	11 OF 15

NORTH

NORTH 2ND STREET - PROFILE "CC"



HORIZONTAL SCALE: 1"=50'
VERTICAL SCALE 1"=10'

PRELIMILARY

					N. 2ND STREET ROAD IMPROVEMENT PROJECT
					N.2ND ST (SEAWAY DR TO NORTH END)
05-07-14	INITIAL RELEASE	PJL			PROFILE PLAN
DATE:	DESCRIPTION:	BY:	AP:		

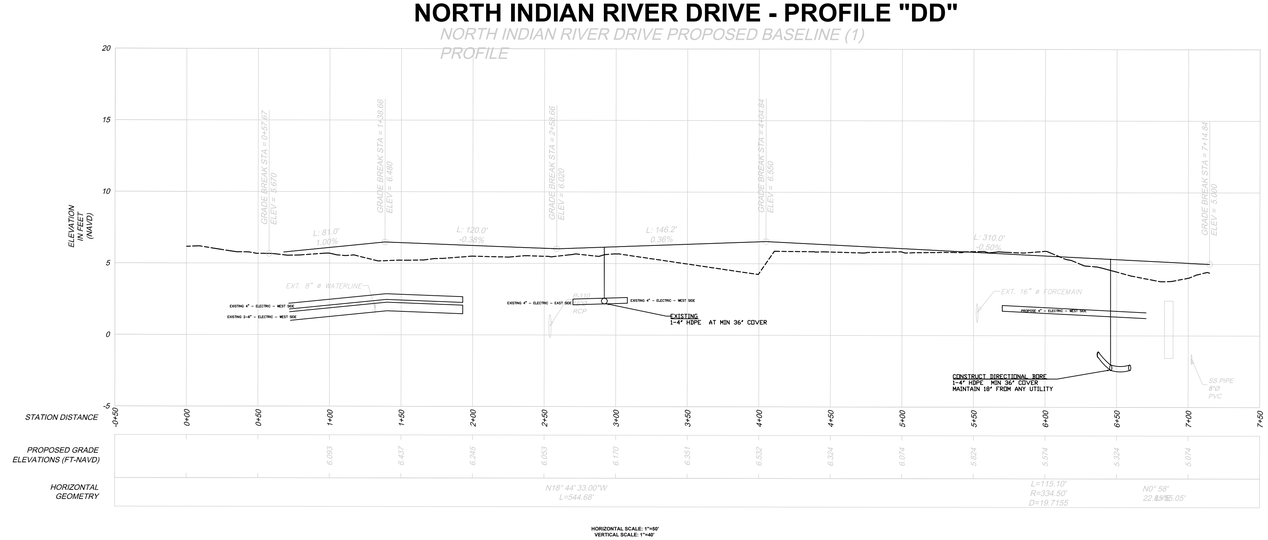
ELECTRIC ENGINEERING
1701 SOUTH 27TH STREET
P.O.Box 3191 (34982)
FT. PIERCE, FLORIDA 34947
(772) 465-1600 / FAX (772) 461-1938

VERIFY SCALE BAR IS EQUAL TO ONE INCH ON ORIGINAL DRAWING. ADJUST ALL SCALED DIMENSIONS ACCORDINGLY

SCALE:	DESIGNED:	JOB #:
1=50/40	PJL	20100409-1
SHEET:	DRAWN:	SHEET
Plan	PJL	12 OF 15

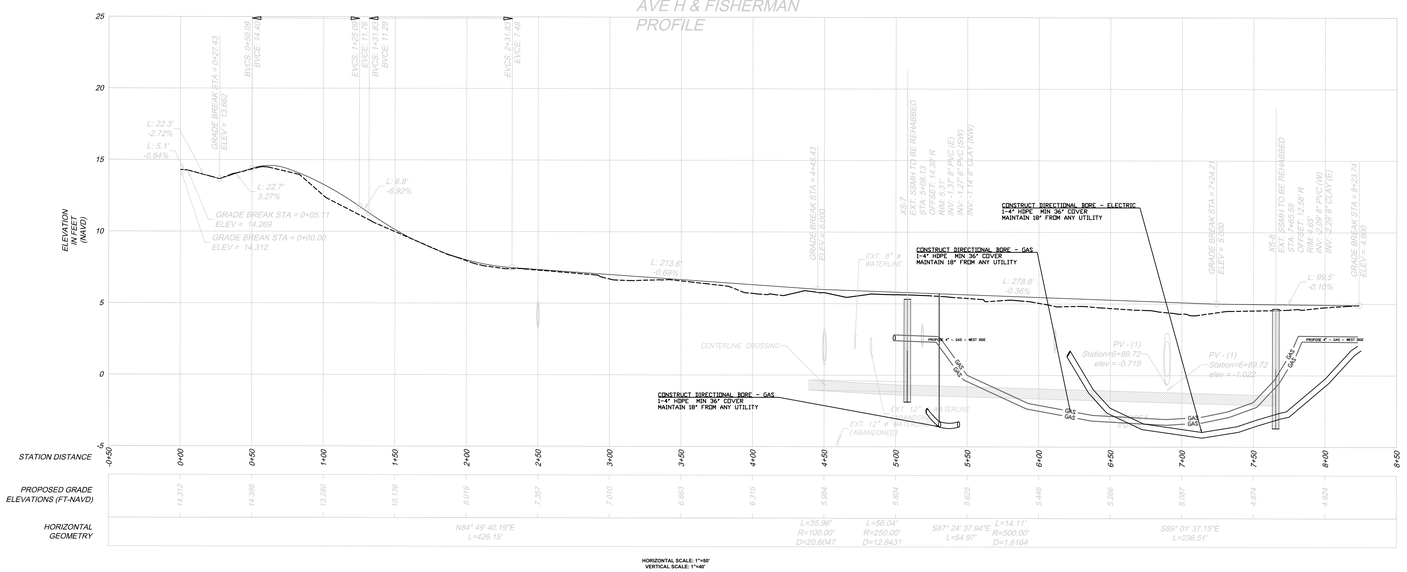
NORTH

NORTH INDIAN RIVER DRIVE - PROFILE "DD"



HORIZONTAL SCALE: 1"=100'
VERTICAL SCALE: 1"=40'

AVENUE H & FISHERMAN'S WHARF - PROFILE "EE"



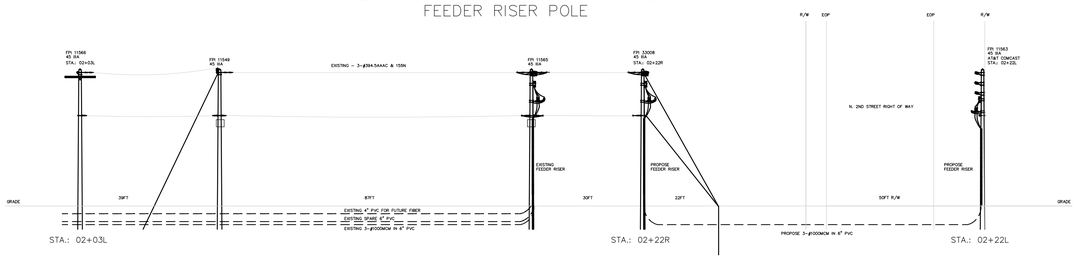
HORIZONTAL SCALE: 1"=50'
VERTICAL SCALE: 1"=40'

PRELIMILARY

09-07-14	INITIAL RELEASE	P.S.		N. 2ND STREET ROAD IMPROVEMENT PROJECT	
DATE:	DESCRIPTION:	BY:	AP:	N.2ND ST (SEAWAY DR TO NORTH END)	
				PROFILE PLAN	
ELECTRIC ENGINEERING 1701 SOUTH 37TH STREET P.O.Box 3191 (34950) FT. PIERCE, FLORIDA 34947 (772) 466-1600 / FAX (772) 461-1938		VERIFY SCALE BAR IS EQUAL TO ONE INCH ON ORIGINAL DRAWING. ADJUST ALL SCALED DIMENSIONS ACCORDINGLY		SCALE: 1= 50ME SHEET: Plan	DESIGNED: PJL DRAWN: PJL
					JOB #: 20100409-1 SHEET 13 OF 15

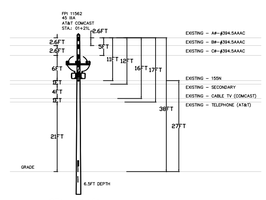
NORTH

WEST SIDE OF N. 2ND STREET (LOOKING SOUTH)
PROPOSE CROSSING CONVERSION WITH ADDITIONAL FEEDER RISER POLE



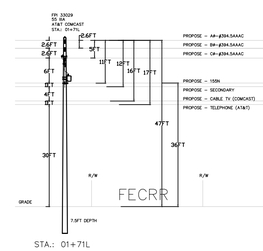
STA.: 02+03L STA.: 02+22R STA.: 02+22L

N. 2ND STREET (LOOKING WEST)
PROPOSE OVERHEAD FEEDER REBUILD
SEAWAY DRIVE TO FISHERMAN WHARF'S



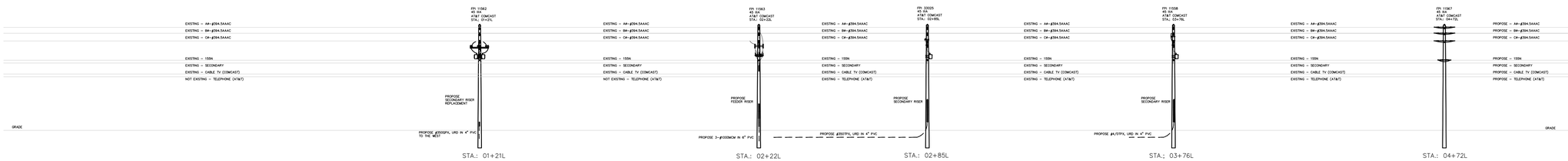
STA.: 01+21L

N. 2ND STREET (LOOKING WEST)
PROPOSE OVERHEAD FEEDER REBUILD
FISHERMAN WHARF'S TO NORTH END OF 2ND STREET



STA.: 01+71L

N. 2ND STREET (LOOKING WEST)
PROPOSE OVERHEAD FEEDER REBUILD
SEAWAY DRIVE TO FISHERMAN WHARF'S

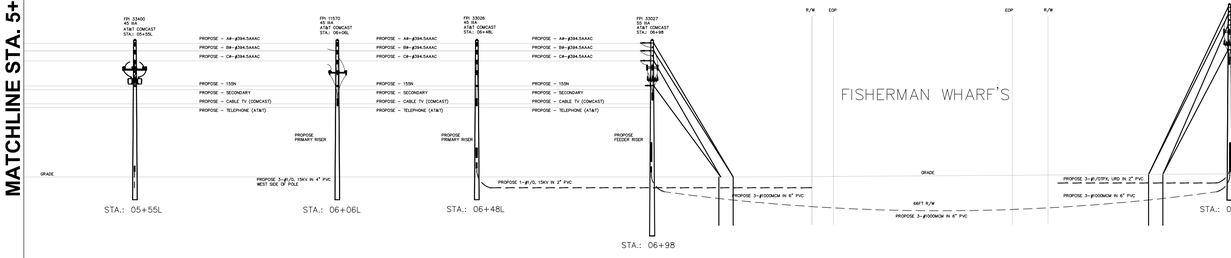


STA.: 01+21L STA.: 02+22L STA.: 02+85L STA.: 03+76L STA.: 04+72L

MATCHLINE STA. 5+22.00

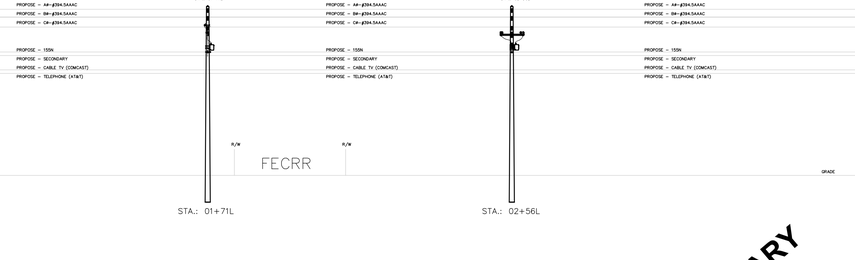
MATCHLINE STA. 3+55.00

N. 2ND STREET (LOOKING WEST)
PROPOSE OVERHEAD FEEDER REBUILD
SEAWAY DRIVE TO FISHERMAN WHARF'S



STA.: 05+55L STA.: 06+06L STA.: 06+48L STA.: 06+98 STA.: 00+66L

N. 2ND STREET (LOOKING WEST)
PROPOSE OVERHEAD FEEDER REBUILD
FISHERMAN WHARF'S TO NORTH END OF 2ND STREET

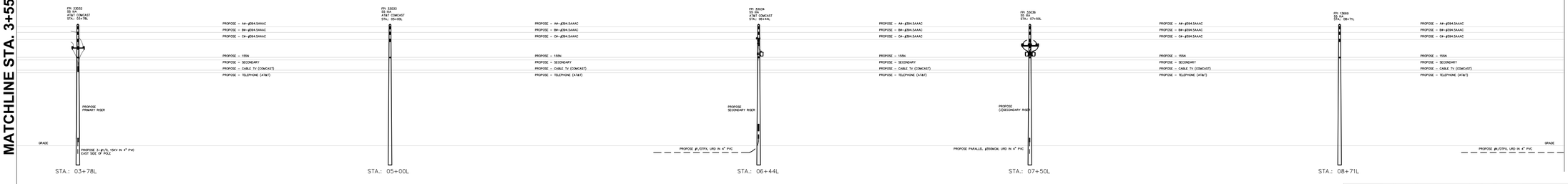


STA.: 01+71L STA.: 02+56L

MATCHLINE STA. 3+55.00

MATCHLINE STA. 9+59.00

N. 2ND STREET (LOOKING WEST)
PROPOSE OVERHEAD FEEDER REBUILD
FISHERMAN WHARF'S TO NORTH END OF 2ND STREET



STA.: 03+78L STA.: 05+00L STA.: 06+44L STA.: 07+50L STA.: 08+71L

PRELIMINARY

05-07-14	INITIAL RELEASE	P.S.		N. 2ND STREET ROAD IMPROVEMENT PROJECT
DATE:	DESCRIPTION:	BY:	AP:	N.2ND ST (SEAWAY DR TO NORTH END)

PROFILE PLAN

FORT PIERCE UTILITIES AUTHORITY

ELECTRIC ENGINEERING
1727 KINGS HIGHWAY
P.O.Box 3191 (34982)
FT. PIERCE, FLORIDA 34947
(772) 489-1600 / FAX (772) 461-1938

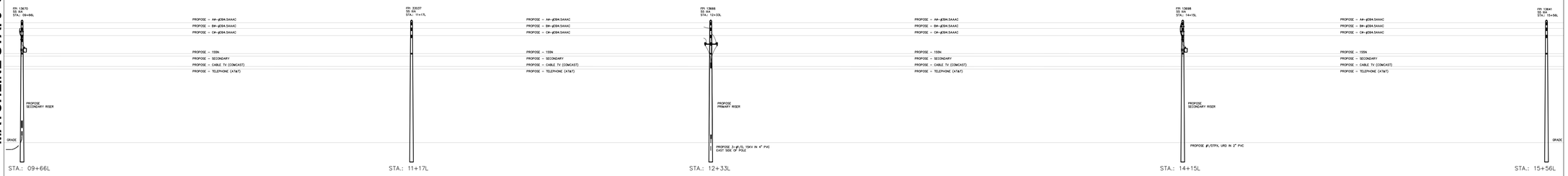
VERIFY SCALE BAR IS EQUAL TO 1" BEFORE USING ONE INCH ON ORIGINAL DRAWING. ADJUST ALL SCALED DIMENSIONS ACCORDINGLY

SCALE:	DESIGNED:	JOB #:
1=20	P.S.	20100409-1
SHEET:	DRAWN:	SHEET
Plan	P.S.	14 OF 15

NORTH

MATCHLINE STA. 9+59.00

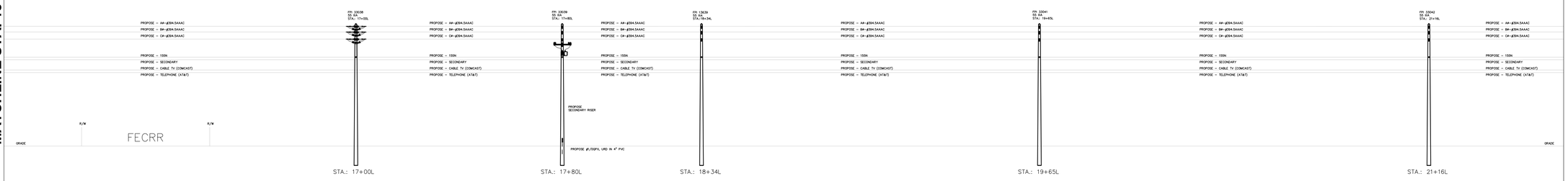
N. 2ND STREET (LOOKING WEST)
PROPOSE OVERHEAD FEEDER REBUILD
FISHERMAN WHARF'S TO NORTH END OF 2ND STREET



MATCHLINE STA. 15+66.00

MATCHLINE STA. 15+66.00

N. 2ND STREET (LOOKING WEST)
PROPOSE OVERHEAD FEEDER REBUILD
FISHERMAN WHARF'S TO NORTH END OF 2ND STREET



MATCHLINE STA. 21+68.00

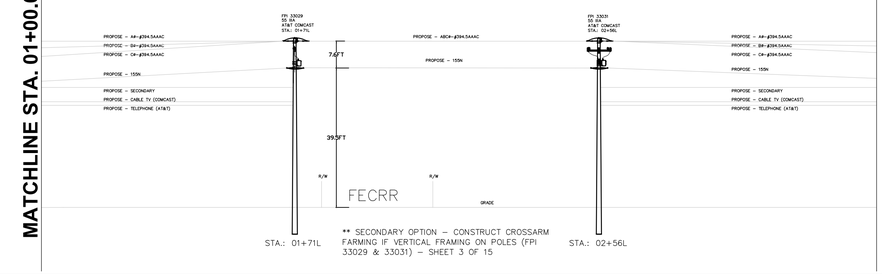
MATCHLINE STA. 21+68.00

N. 2ND STREET (LOOKING WEST)
PROPOSE OVERHEAD FEEDER REBUILD
FISHERMAN WHARF'S TO NORTH END OF 2ND STREET



MATCHLINE STA. 01+00.00

N. 2ND STREET (LOOKING WEST)
PROPOSE OVERHEAD FEEDER REBUILD
FISHERMAN WHARF'S TO NORTH END OF 2ND STREET

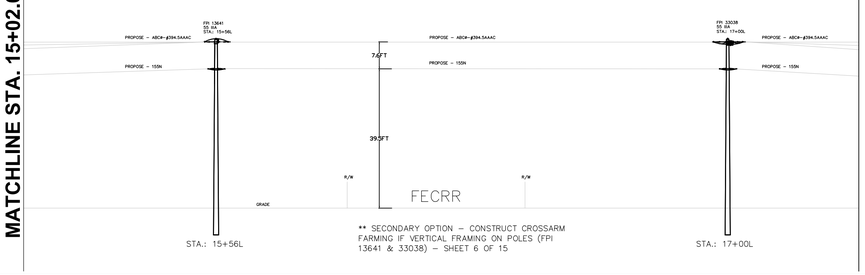


** SECONDARY OPTION – CONSTRUCT CROSSARM FARMING IF VERTICAL FRAMING ON POLES (FPI 33029 & 33031) – SHEET 3 OF 15

MATCHLINE STA. 03+34.00

MATCHLINE STA. 15+02.00

N. 2ND STREET (LOOKING WEST)
PROPOSE OVERHEAD FEEDER REBUILD
FISHERMAN WHARF'S TO NORTH END OF 2ND STREET



** SECONDARY OPTION – CONSTRUCT CROSSARM FARMING IF VERTICAL FRAMING ON POLES (FPI 13641 & 33038) – SHEET 6 OF 15

MATCHLINE STA. 17+37.00

PRELIMILARY

					N. 2ND STREET ROAD IMPROVEMENT PROJECT
					N.2ND ST.(SEAWAY DR TO NORTH END)
05-07-14	INITIAL RELEASE	P.JL			PROFILE PLAN
DATE:	DESCRIPTION:	BY:	AP:		

ELECTRIC ENGINEERING
1701 SOUTH 37TH STREET
P.O.Box 3191 (34982)
FT. PIERCE, FLORIDA 34947
(772) 466-1600 / FAX (772) 461-1938

VERIFY SCALE BAR IS EQUAL TO ONE INCH ON ORIGINAL DRAWING ADJUST ALL SCALED DIMENSIONS ACCORDINGLY

SCALE:	DESIGNED:	JOB #:
1=20	PJL	20100409-1
SHEET:	DRAWN:	SHEET
Plan	PJL	15 OF 15