



# CONSTRUCTION PLANS FOR MAIN STREET AND ORANGE AVE MODERN ROUNDABOUT



## ROADWAY PLANS FINAL (100%) PLANS SUBMITTAL - (DRAFT)

### GOVERNING STANDARDS AND SPECIFICATIONS

FDOT STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, 2010  
 FDOT DESIGN STANDARDS, 2012  
 THE MANUAL OF UNIFORM MINIMUM STANDARDS FOR DESIGN, CONSTRUCTION,  
 AND MAINTENANCE FOR STREETS AND HIGHWAYS (FLORIDA GREEN BOOK), MAY 2007  
 CITY OF SARASOTA ENGINEERING DESIGN CRITERIA MANUAL, MARCH 2002  
 MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES, 2009 EDITION  
 AASHTO ROADWAY LIGHTING DESIGN GUIDE, 2005

**OWNER/CLIENT:**  
 City of Sarasota  
 Neighborhood and Development Services  
 1565 First Street  
 Sarasota, FL 34236  
 (941) 365-2200

**PROJECT MANAGER:**  
 ADEAS-Q  
 446 Second Street North, Suite 100  
 St. Petersburg, FL 33701  
 (813) 495-7382



**ROADWAY DESIGN ENGINEER:**  
 ESRP CORPORATION  
 4902 Eisenhower Blvd., Suite 250  
 Tampa, FL 33634  
 (813) 381-5017

**UTILITY/DRAINAGE ENGINEER:**  
 CAVOLI Engineering, Inc.  
 5824 Bee Ridge Road, #325  
 Sarasota, FL 34233  
 (941) 927-3647

**LANDSCAPE ARCHITECT:**  
 Kimley-Horn and Associates, Inc.  
 1777 Main Street, Suite 200  
 Sarasota, FL 34236  
 Phone: (941) 379-7600

**SURVEYOR:**  
 Sampey, Burchett, & Knight, Inc.  
 1588 Global Court  
 Sarasota, FL 34240  
 (941) 342-0349



LOCATION MAP

### INDEX OF SHEETS

SHEET	DESCRIPTION
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4	TYPICAL SECTIONS
5-5B	ROADWAY/ SITE GEOMETRY PLAN
6-6B	UTILITY ADJUSTMENT
7	UTILITY DETAILS
8-8C	CONSTRUCTION / PAVEMENT DETAILS
9	DRAINAGE DETAILS
10	EROSION AND SEDIMENT CONTROL
11-11A	SIGNING AND PAVEMENT MARKINGS
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13-13A	IRRIGATION PLAN
14-14A	LIGHTING
15-15B	MAINTENANCE OF TRAFFIC

"INVESTIGATE BEFORE YOU EXCAVATE"



CALL SUNSHINE @ 1-800-432-4770  
 FL. STATUTE 553.851 (1979) REQUIRES A  
 MIN. OF 2 DAYS AND MAX. OF 5  
 DAYS NOTICE BEFORE YOU EXCAVATE.

## GENERAL NOTES

1. THE SUBJECT PROJECT WILL BE OWNED BY:

THE CITY OF SARASOTA  
 NEIGHBORHOOD AND DEVELOPMENT SERVICES DEPARTMENT  
 1565 FIRST STREET, SARASOTA, FL 34236  
 PH. (941)365-2200.

2. ALL WORK SHALL BE DONE IN ACCORDANCE WITH THE CITY OF SARASOTA ENGINEERING DESIGN CRITERIA MANUAL (EDCM).

3. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING BOTH DRIVEWAY AND RIGHT OF WAY CONSTRUCTION PERMITS FROM THE CITY OF SARASOTA ENGINEERING DEPARTMENT PRIOR TO ANY CONSTRUCTION WITHIN THE RIGHT OF WAY.

4. THE WORK EMBRACED HEREIN, WITHIN THE RIGHT OF WAY, SHALL BE DONE IN ACCORDANCE WITH THE "SPECIAL PROVISIONS FOR CONSTRUCTION" OF THE CITY OF SARASOTA.

5. EXISTING TRAFFIC CONTROL SIGNS SHALL BE REMOVED, STORED, RELOCATED AND/OR DELIVERED TO CITY PUBLIC WORKS, AS DETERMINED BY THE CITY ENGINEER, AS PART OF THIS PROJECT.

6. CONSTRUCTION OF SITE IMPROVEMENTS SHALL COMMENCE WITHIN ONE YEAR OF CITY ENGINEER CERTIFICATION OR BECOME INVALID.

7. WATER DISTRIBUTION AND SANITARY SEWER COLLECTION SYSTEM CONSTRUCTION SHALL BE IN ACCORDANCE WITH CITY STANDARDS.

8. THE CONTRACTOR SHALL CONTACT "SUNSHINE STATE" ONE CALL, FP&L, AND ALL OTHER UTILITY COMPANIES PRIOR TO ANY WORK ON-SITE OR OFF-SITE SO THAT THE EXACT LOCATION OF ALL UTILITIES CAN BE DETERMINED.

9. LANDSCAPING, SEE LANDSCAPE PLAN BY REGISTERED LANDSCAPE ARCHITECT.

10. TO THE BEST OF OUR KNOWLEDGE AND BELIEF, THERE ARE NO WELLS LOCATED ON THE SUBJECT SITE.

11. TO THE BEST OF OUR KNOWLEDGE AND BELIEF, THERE ARE NO SEPTIC TANKS LOCATED ON THE SUBJECT SITE.

12. ALL AREAS DISTURBED BY CONSTRUCTION SHALL BE RESTORED TO EXISTING CONDITION, OR BETTER, TO THE SATISFACTION OF THE OWNER.

13. ALL FACILITIES CONTAINED HEREIN HAVE BEEN DESIGNED FOR HANDICAP ACCESSIBILITY IN ACCORDANCE WITH BOTH THE FLORIDA ACCESSIBILITY CODE 1997 EDITION AND THE AMERICANS WITH DISABILITIES ACT (ADA) STANDARDS.

14. THE PROJECT SHALL BE CONSTRUCTED IN ONE PHASE.

## PROJECT LAYOUT



NO.	DATE	REVISIONS	BY

APPROVED BY:  
 JASON COLLINS, PE  
 FLSB# 00044  
 REG. NO. 00044

SIGNATURE: \_\_\_\_\_  
 DATE: \_\_\_\_\_

PROJECT  
 LAYOUT AND  
 GENERAL  
 NOTES

MAIN STREET AND  
 ORANGE AVE  
 MODERN ROUNDABOUT

446 Second Street North,  
 Suite 100  
 St. Petersburg, FL 33701  
 Phone (813) 495-7382  
 Certif. of Auth. No. 29350

**ADEASQ**  
TRANSPORTATION ENGINEERING & PLANNING

PROJECT No. 120104 SCALE: SEE PLAN DRAWN BY: SRB

SHEET NUMBER  
 2

**GENERAL CONSTRUCTION NOTES**

1. ALL TACTILE SURFACES ON CURB CUT RAMPS SHALL CONFORM TO FDOT INDEX NO. 304.
2. SIGN POSTS SHALL BE 2"x 2" SQUARE BREAK-AWAY 14 GAUGE GALVANIZED STEEL WITH PUNCHED HOLES.
3. ALL ROADWAY AND DRAINAGE RELATED STRUCTURES SHALL BE 3,000 PSI CONCRETE.
4. ALL PAVEMENT MARKINGS, EXCEPT PARKING STALLS, SHALL BE ALKYD-BASED THERMOPLASTIC 90 MILS IN THICKNESS, AND CONFORM TO FDOT AND MUTCD STANDARDS IN INCLUDING HANDICAP ACCESS AND CROSSWALKS.
5. REPLACEMENT OF SIDEWALK AND CURB AND GUTTER SHALL ONLY LAG ITS REMOVAL BY A MAXIMUM OF TWO WEEKS TIME, UNLESS OTHERWISE AUTHORIZED BY THE CITY ENGINEER.

**PAVEMENT NOTES**

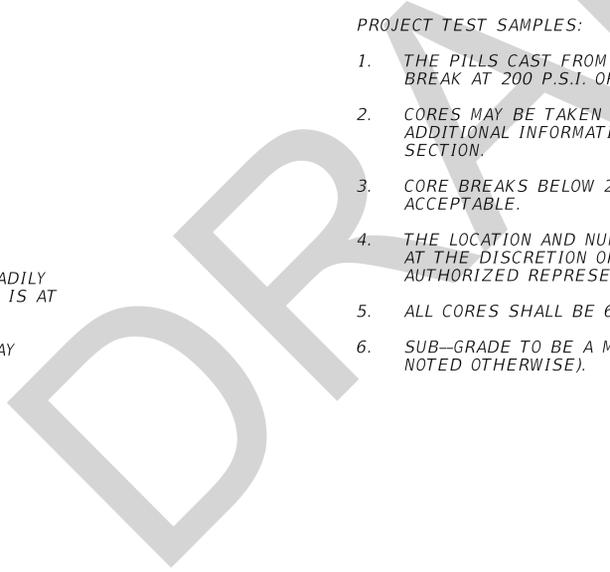
1. ASPHALTIC CONCRETE TYPES I/S: FDOT 2015 STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION.
2. ASPHALTIC CONCRETE TYPE II: FDOT 2015 STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION.
3. ASPHALTIC CONCRETE TYPE III: FDOT 2015 STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION.
4. SURFACE MATERIAL WILL BE CONSISTENT WITH EXISTING SURFACE OR BETTER.
5. LIMEROCK BASE COURSE: FDOT 2015 STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION.
6. SOIL - CEMENT BASE: FDOT 2015 STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION.
7. SHELL BASE: FDOT 2015 STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION.
8. CRUSHED CONCRETE: FDOT 2015 STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION.
9. STABILIZED SUB-GRADE: FDOT 2015 STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION.
10. SOFT, YIELDING OR SUPER-SATURATED MATERIAL, THAT WILL NOT BE READILY COMPACTED, SHALL BE CONSIDERED UNACCEPTABLE FOR BACKFILL. THIS IS AT THE DISCRETION OF THE FIELD ENGINEER.
11. CONCRETE GUTTERS: FDOT 2015 STANDARD SPECIFICATIONS FOR ROADWAY AND BRIDGE CONSTRUCTION.
12. PAVEMENT MARKINGS AND SIGNS SHALL BE IN ACCORDANCE WITH THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD) AND CITY OF SARASOTA STANDARDS.

**SIDEWALK NOTES**

1. ALL SIDEWALKS ARE TO BE 4"-3,000 P.S.I. CONCRETE, EXCEPT WHERE SIDEWALK BISECTS DRIVEWAY -6" MINIMUM THICKNESS. CLASS I CONCRETE REINFORCED WITH 6x6 #10 MESH.
2. THE CONCRETE SHALL BE GIVEN A BROOM FINISH. THE SURFACE VARIATIONS SHALL NOT BE MORE THAN 1/4 INCH UNDER A TEN -FOOT STRAIGHTEDGE, NOR MORE THAN 1/8 INCH ON A FIVE-FOOT TRANSVERSE SECTION. THE EDGE OF THE SIDEWALK SHALL BE CAREFULLY FINISHED WITH AN EDGING TOOL HAVING A RADIUS OF 1/2 INCH.
3. EXPANSION JOINTS BETWEEN THE SIDEWALK AND THE CURB OR DRIVEWAY AT FIXED OBJECTS AND SIDEWALK INTERSECTIONS SHALL BE 1/2 INCH JOINTS.
4. CONTRACTION JOINTS / OPEN TYPE JOINTS SHALL BE FORMED BY STAKING A METAL BULKHEAD IN PLACE AND DEPOSITING THE CONCRETE ON BOTH SIDES. AFTER THE CONCRETE HAS SET UP SUFFICIENTLY TO PRESERVE THE WIDTH AND SHAPE OF THE JOINT, THE BULKHEAD SHALL BE REMOVED.
5. SAWED JOINTS SHALL CONSIST OF A SLOT APPROXIMATELY 3/16 INCH WIDE AND NOT LESS THAN 1 1/2 INCHES DEEP CUT WITH A CONCRETE SAW AFTER THE CONCRETE HAS SET.
6. HANDICAP RAMPS SHALL MEET FLORIDA ACCESSABILITY CODE STANDARDS.

**PROJECT TEST SAMPLES:**

1. THE PILLS CAST FROM PROJECT OPERATIONS MUST BREAK AT 200 P.S.I. OR HIGHER AT 7 DAYS.
2. CORES MAY BE TAKEN AT 14 DAYS TO PROVIDE ADDITIONAL INFORMATION REGRADING SOIL -CEMENT SECTION.
3. CORE BREAKS BELOW 200 P.S.I. WILL NOT BE ACCEPTABLE.
4. THE LOCATION AND NUMBER OF CORES TAKEN WILL BE AT THE DISCRETION OF THE CITY ENGINEER OR HIS AUTHORIZED REPRESENTATIVE.
5. ALL CORES SHALL BE 6" IN DIAMETER.
6. SUB-GRADE TO BE A MINIMUM L.B.R. 40 (UNLESS NOTED OTHERWISE).



NO.	DATE	REVISIONS	BY

APPROVED BY:  
ALEJANDRO ANAYA, PE, PTOE  
FLORIDA  
REG. NO. 06883  
SIGNATURE  
DATE:

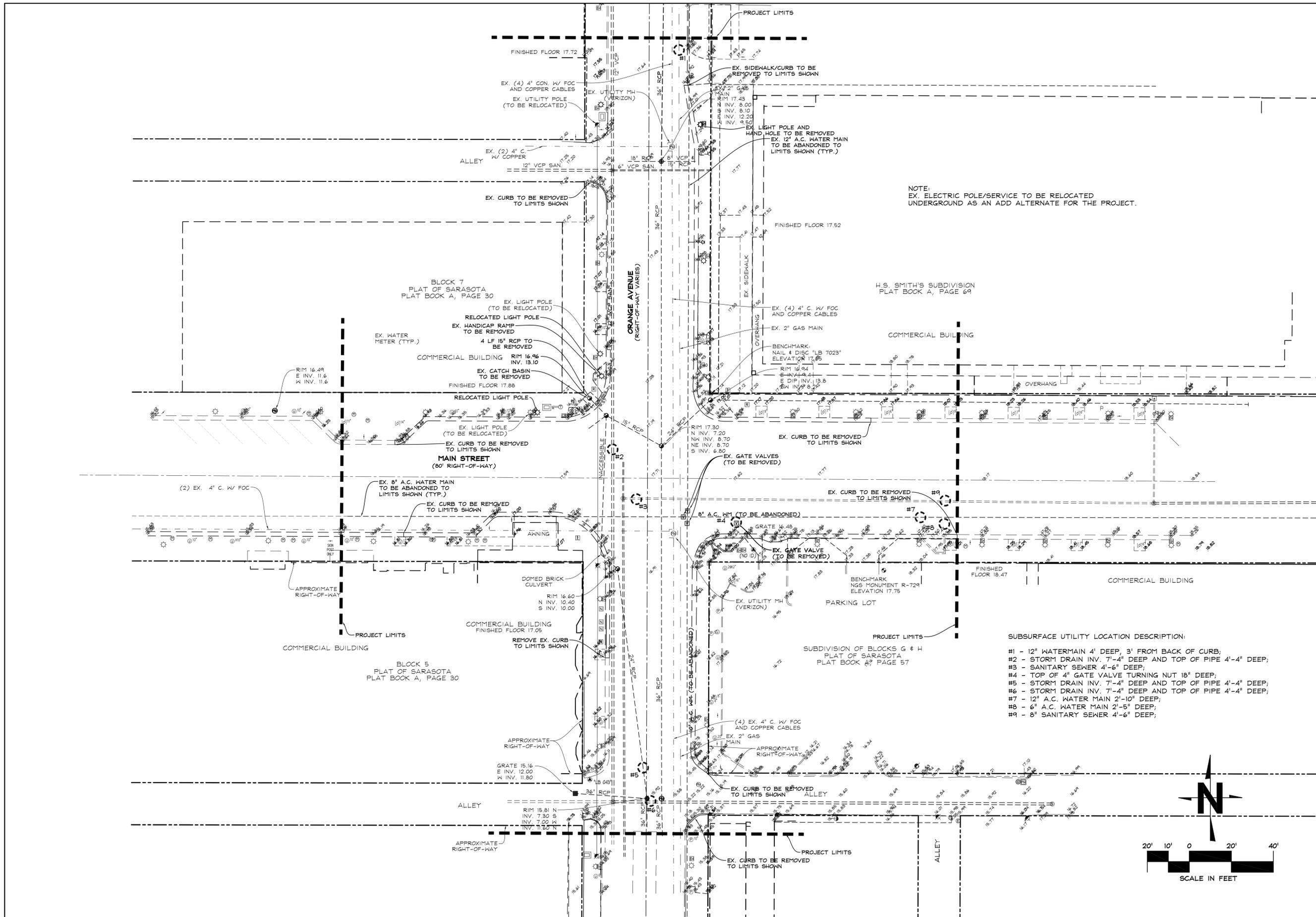
**CONSTRUCTION NOTES**

**MAIN STREET AND ORANGE AVE MODERN ROUNDABOUT**

4902 Eisenhower Blvd, Suite 250  
Tampa, Florida 333634  
Phone (813) 381-5017  
Fax (813) 381-7134  
Certificate of Auth. No. 29196

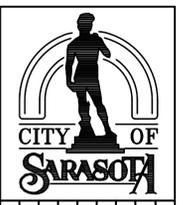
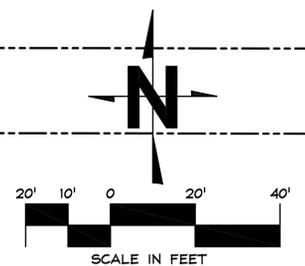
**ESRP CORPORATION**  
Engineering Science Research Planning  
PROJECT No. 120104  
SCALE: SEE PLAN  
DRAWN BY: BCI

SHEET NUMBER  
**2A**



NOTE:  
EX. ELECTRIC POLE/SERVICE TO BE RELOCATED UNDERGROUND AS AN ADD ALTERNATE FOR THE PROJECT.

- SUBSURFACE UTILITY LOCATION DESCRIPTION:
- #1 - 12" WATERMAIN 4' DEEP, 3' FROM BACK OF CURB;
  - #2 - STORM DRAIN INV. 7'-4" DEEP AND TOP OF PIPE 4'-4" DEEP;
  - #3 - SANITARY SEWER 4'-6" DEEP;
  - #4 - TOP OF 4" GATE VALVE TURNING NUT 18" DEEP;
  - #5 - STORM DRAIN INV. 7'-4" DEEP AND TOP OF PIPE 4'-4" DEEP;
  - #6 - STORM DRAIN INV. 7'-4" DEEP AND TOP OF PIPE 4'-4" DEEP;
  - #7 - 12" A.C. WATER MAIN 2'-10" DEEP;
  - #8 - 6" A.C. WATER MAIN 2'-5" DEEP;
  - #9 - 8" SANITARY SEWER 4'-6" DEEP;



NO.	DATE	REVISIONS	BY

APPROVED BY:  
JOHN P. CAROLI, P.E.  
FLORIDA REG. NO. 48892

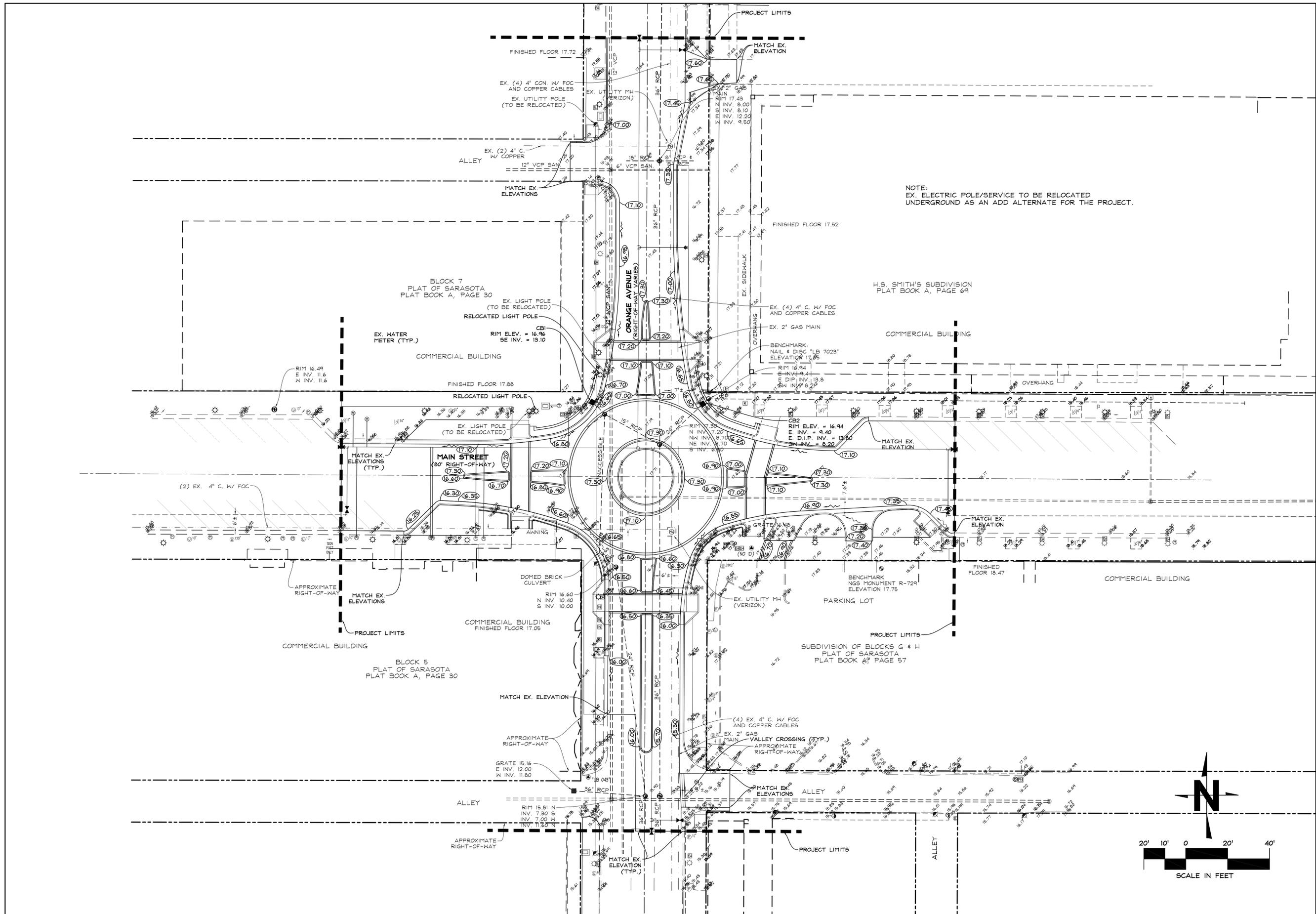
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DATE: \_\_\_\_\_

**EXISTING CONDITIONS/  
GRADING AND DRAINAGE  
PLAN**

**MAIN STREET AND  
ORANGE AVENUE  
MODERN ROUNDABOUT**

AVOLI Engineering, Inc.  
Consulting Civil Engineers  
FL Cert. of Auth. No. 8875  
5824 Bee Ridge Road, #325, Sarasota, FL 34233-5065  
email: info@avoliengineering.com

PROJECT No.: CTYS14 SCALE: 1" = 20'  
DRAWN BY: J.R.R.



NOTE:  
EX. ELECTRIC POLE/SERVICE TO BE RELOCATED UNDERGROUND AS AN ADD ALTERNATE FOR THE PROJECT.



DATE	REVISIONS	BY

APPROVED BY:  
JOHN F. CAVOLI, P.E.  
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REG. NO. 48892  
SIGNATURE  
DATE:

**DRAINAGE AND GRADING PLAN**

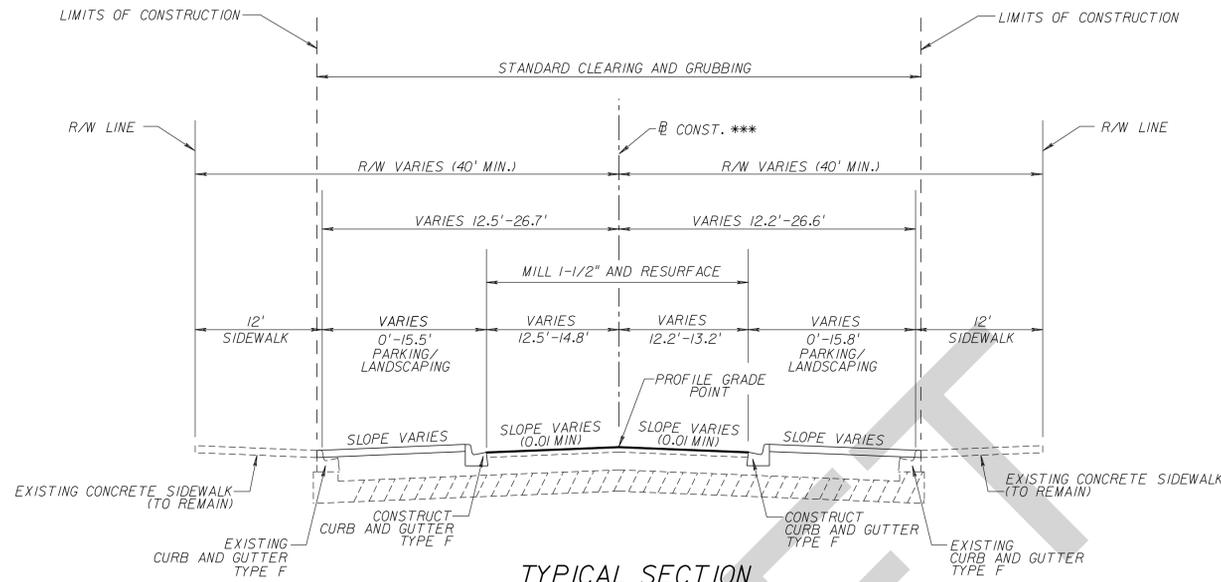
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email: info@cavolengr.com  
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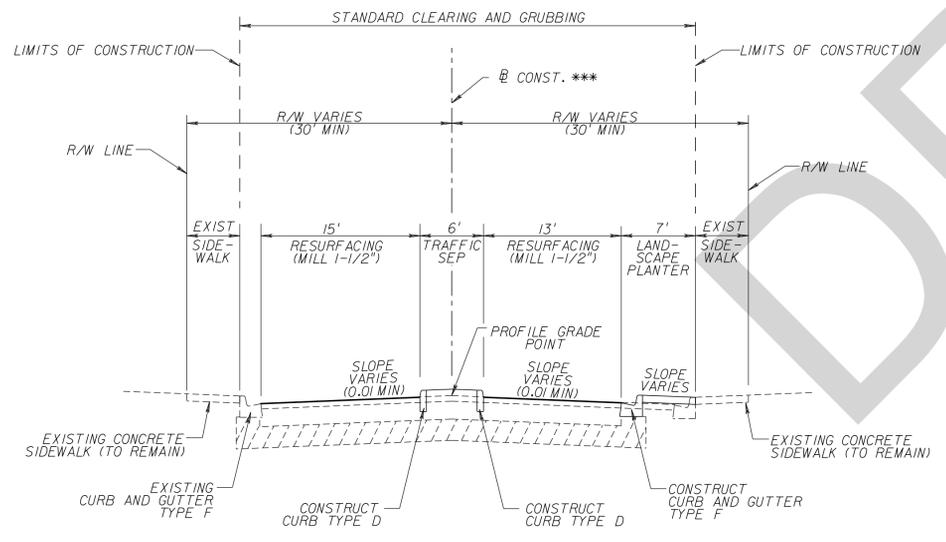
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SCALE: 1" = 20'  
DRAWN BY: J.R.R.

PLOTTED: \$DAYS

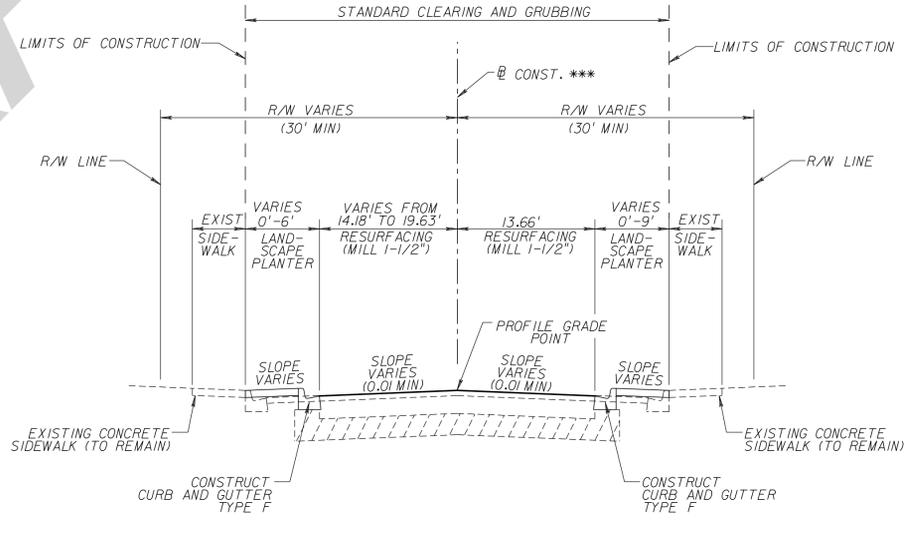
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**TYPICAL SECTION  
MAIN STREET**  
 STA. 18+49.00 TO STA. 19+29.80  
 STA. 20+52.64 TO STA. 21+42.00  
 MILL 1-1/2 " (AVERAGE)  
 RESURFACE 1-1/2 " ASPHALTIC CONCRETE WEARING SURFACE



**TYPICAL SECTION  
ORANGE AVENUE**  
 STA. 104+08.16 TO STA. 104+84.86  
 MILL 1-1/2 " (AVERAGE)  
 RESURFACE 1-1/2 " ASPHALTIC CONCRETE WEARING SURFACE



**TYPICAL SECTION  
ORANGE AVENUE**  
 STA. 106+14.21 TO STA. 107+36.99  
 MILL 1-1/2 " (AVERAGE)  
 RESURFACE 1-1/2 " ASPHALTIC CONCRETE WEARING SURFACE



NO.	DATE	REVISIONS	BY

APPROVED BY:  
ALEJANDRO ANAYA, PE, PTOE  
 FLORIDA  
 REG. NO. 86983  
 SIGNATURE  
 DATE:

TYPICAL SECTIONS

MAIN STREET AND ORANGE AVE  
 MODERN ROUNDABOUT

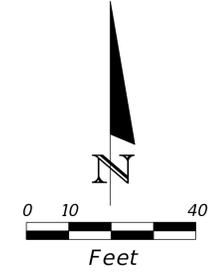
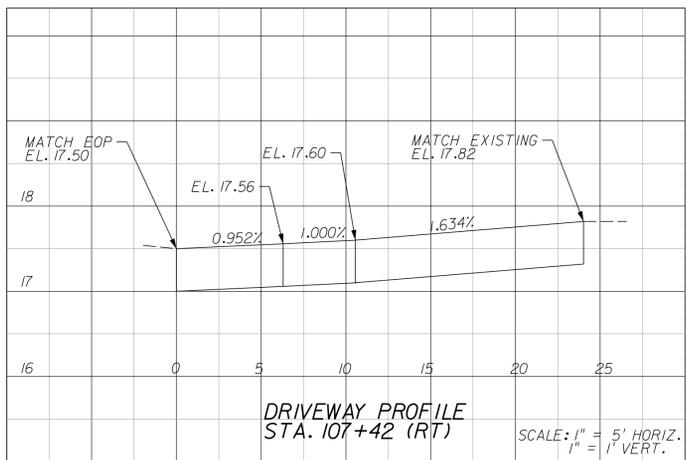
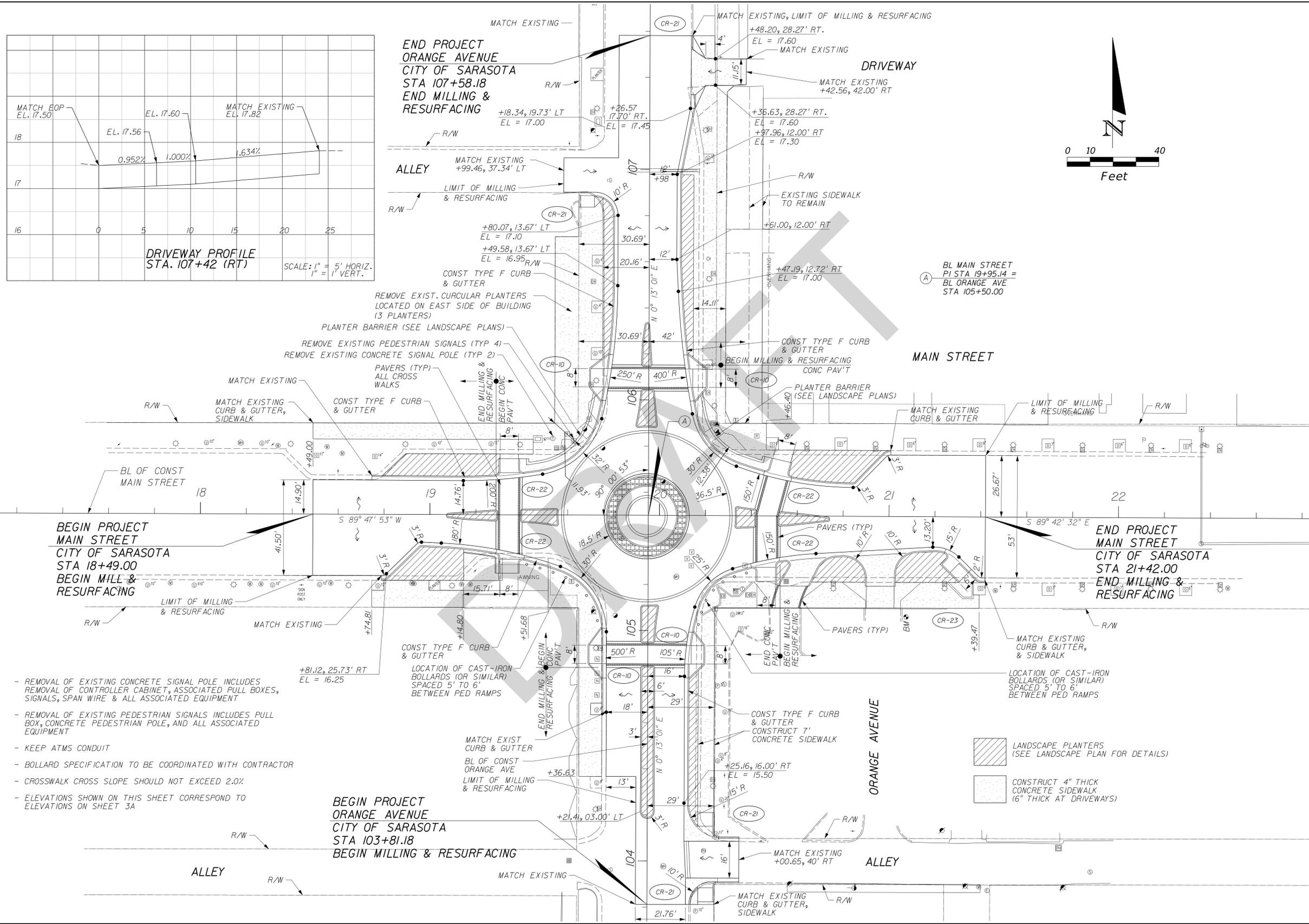
4902 Eisenhower Blvd, Suite 250  
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 Phone (813) 381-5017  
 Fax (813) 381-7134  
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**ESRP**  
 CORPORATION  
 Engineering Sciences Research Planning  
 PROJECT No. 120104  
 SCALE: SEE PLAN  
 DRAWN BY: BCI

SHEET NUMBER  
 4

PLOTTED: 8/24/15

FILENAME: SFILES



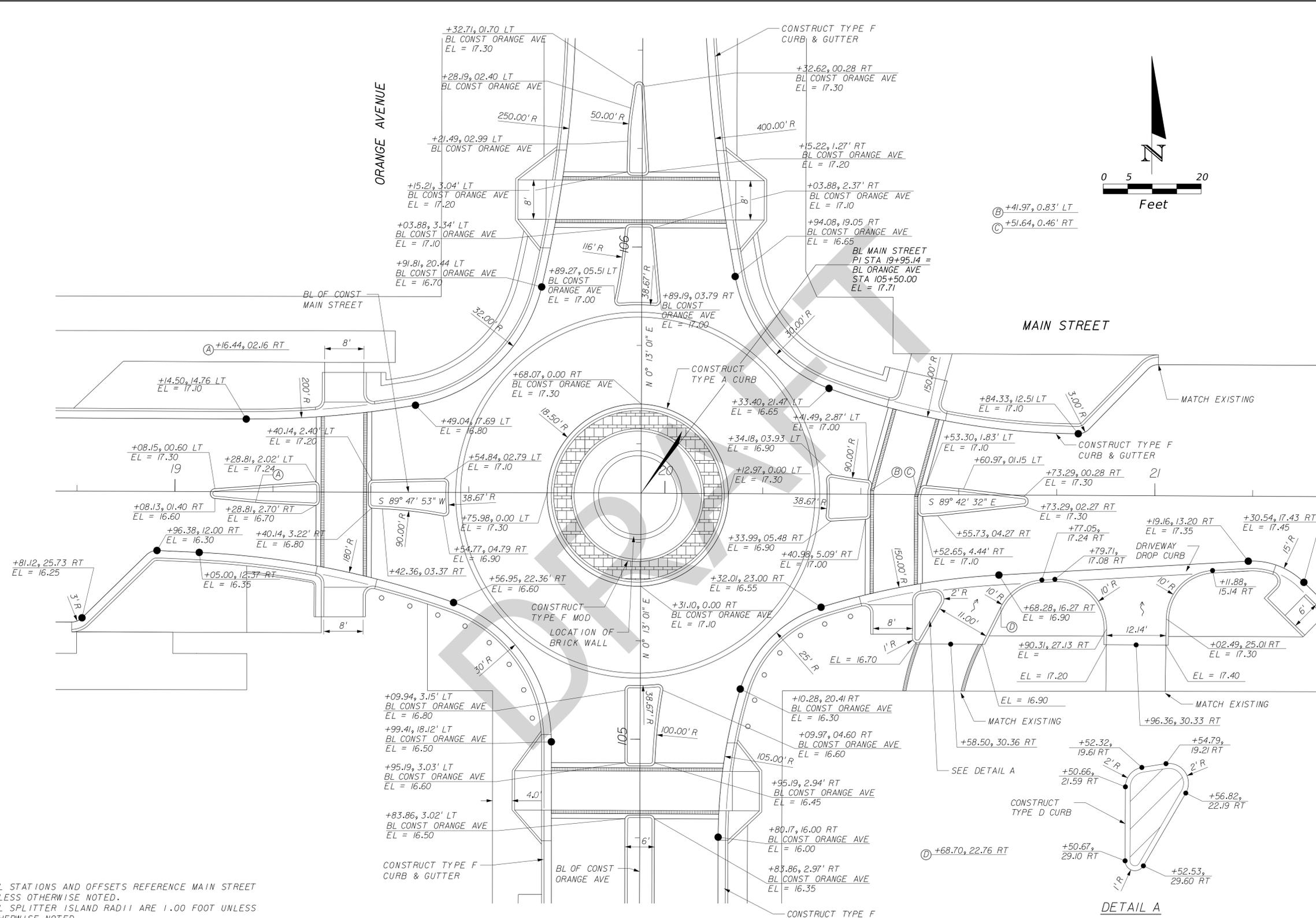
- REMOVAL OF EXISTING CONCRETE SIGNAL POLE INCLUDES REMOVAL OF CONTROLLER CABINET, ASSOCIATED PULL BOXES, SIGNALS, SPAN WIRE & ALL ASSOCIATED EQUIPMENT
- REMOVAL OF EXISTING PEDESTRIAN SIGNALS INCLUDES PULL BOX, CONCRETE PEDESTRIAN POLE, AND ALL ASSOCIATED EQUIPMENT
- KEEP ATMS CONDUIT
- BOLLARD SPECIFICATION TO BE COORDINATED WITH CONTRACTOR
- CROSSWALK CROSS SLOPE SHOULD NOT EXCEED 2.0%
- ELEVATIONS SHOWN ON THIS SHEET CORRESPOND TO ELEVATIONS ON SHEET 3A

**CITY OF SARASOTA**

<p>APPROVED BY: ALEJANDRO ANAYA, PE, PTOE FLORIDA REG. NO. 66983</p>	<p>DATE: _____</p> <p>BY: _____</p> <p>REVISIONS:</p> <p>DATE: _____</p>
<p><b>ROADWAY/SITE GEOMETRY</b></p>	
<p><b>MAIN STREET AND ORANGE AVE MODERN ROUNDABOUT</b></p>	
<p>4902 Eisenhower Blvd, Suite 250 Tampa, Florida 33634 Phone (813) 381-5017 Fax (813) 381-7134 Certificate of Auth. No. 29196</p>	
<p><b>ESRP CORPORATION</b> Engineering Sciences Research Planning</p>	
<p>PROJECT No. 120104</p>	<p>SCALE: SEE PLAN</p>
<p>DRAWN BY: BCI</p>	
<p>SHEET NUMBER</p> <p style="font-size: 24pt;">3</p>	

PLOTTED: 8/24/2015

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- NOTE:
1. ALL STATIONS AND OFFSETS REFERENCE MAIN STREET UNLESS OTHERWISE NOTED.
  2. ALL SPLITTER ISLAND RADII ARE 1.00 FOOT UNLESS OTHERWISE NOTED.
  3. ALL SPLITTER ISLAND CURBS ARE TYPE D UNLESS OTHERWISE NOTED.
  4. ALL DRIVEWAYS ARE 6" CONCRETE.
  5. ELEVATIONS SHOWN ON THIS SHEET CORRESPOND TO ELEVATIONS ON SHEET 3A



**CITY OF SARASOTA**

DATE	REVISIONS

APPROVED BY:  
ALEJANDRO ANAYA, PE, PTOE  
FLORIDA  
REG. NO. 66983

SIGNATURE  
DATE:

**INTERSECTION DETAILS**

**MAIN STREET AND ORANGE AVE  
MODERN ROUNDABOUT**

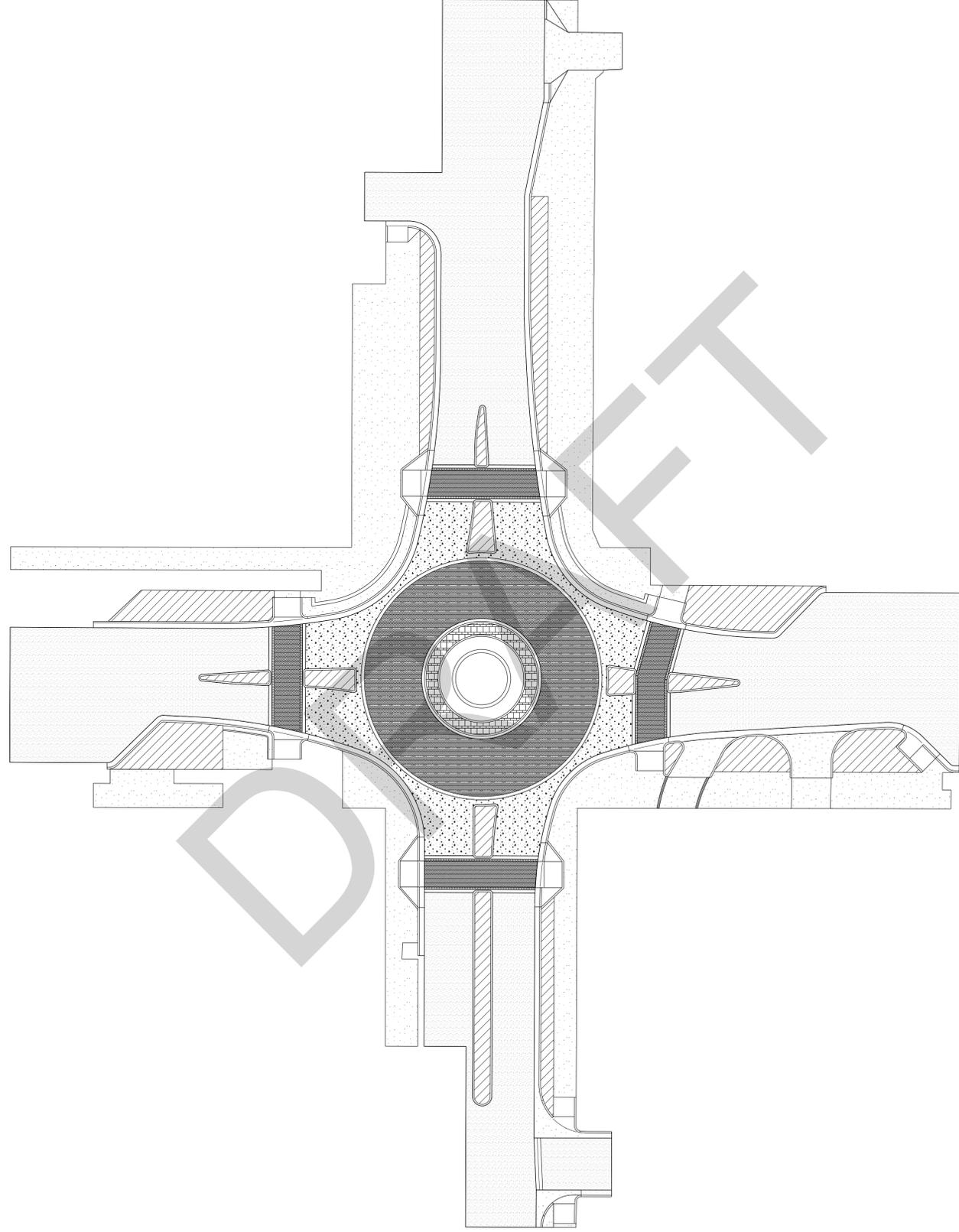
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**ESRP CORPORATION**  
Engineering Sciences Research Planning

PROJECT No. 120104    SCALE: SEE PLAN    DRAWN BY: BCI

SHEET NUMBER  
**5A**

-  ASPHALT
-  PAVERS
-  CONCRETE



SHEET NUMBER  
5B

**ESRP**  
 CORPORATION  
 Engineering Sciences Research Planning  
 4902 Eisenhower Blvd, Suite 250  
 Tampa, Florida 33634  
 Phone (813) 381-5017  
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PROJECT No. 120104 SCALE: SEE PLAN DRAWN BY: BCI

MAIN STREET AND  
 ORANGE AVE  
 MODERN ROUNDABOUT

ROADWAY  
 SURFACE  
 MATERIALS

APPROVED BY:  
 ALEJANDRO ANAYA, PE, PTOE  
 REG. NO. 66983  
 SIGNATURE  
 DATE:



REVISIONS	DATE	BY



NO.	DATE	REVISIONS	BY

APPROVED BY:  
JOHN F. CAVOLI, P.E.  
FLORIDA  
REG. NO. 48892

SIGNATURE  
DATE:

UTILITY  
ADJUSTMENT  
PLAN

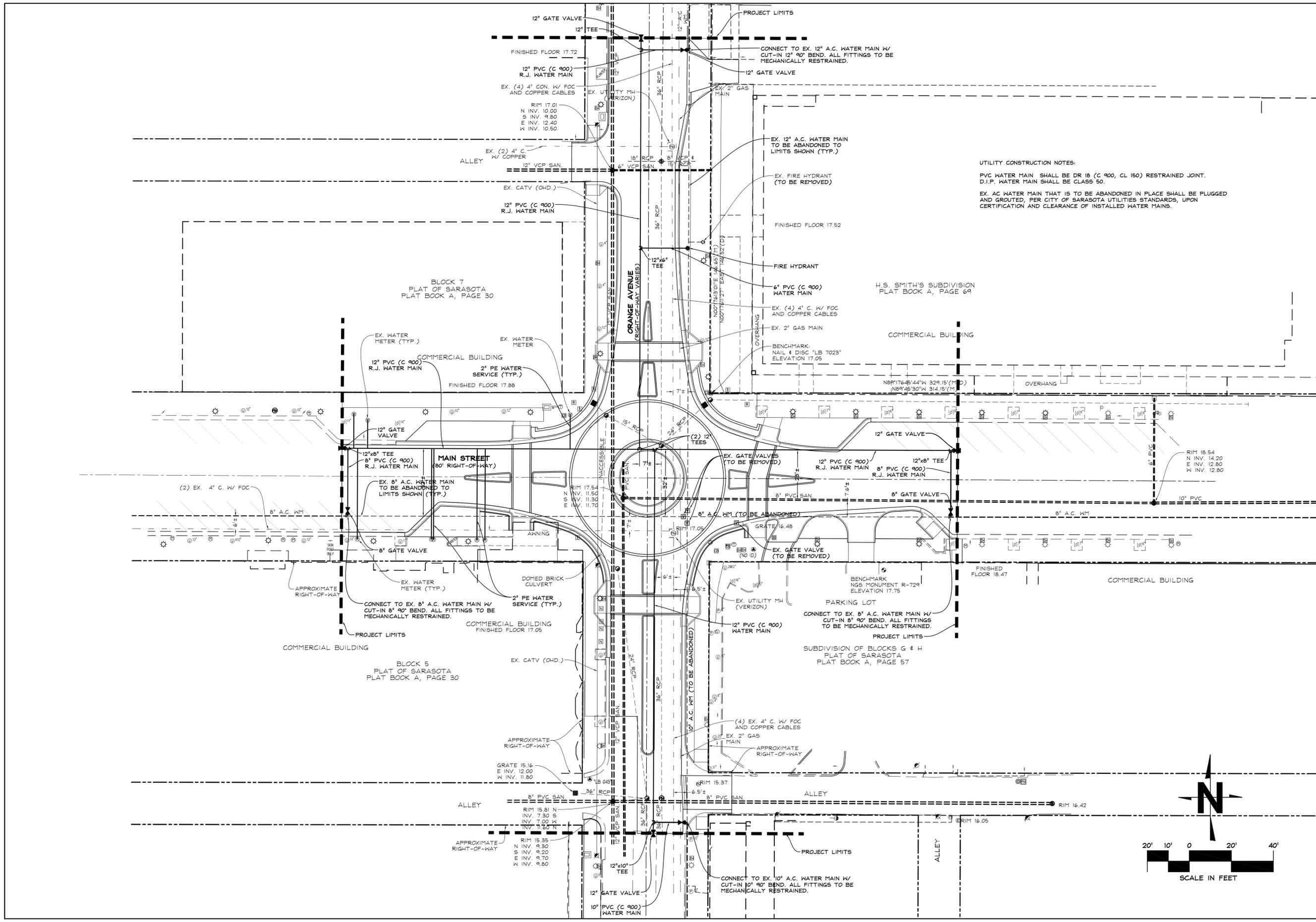
MAIN STREET AND  
ORANGE AVENUE  
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PROJECT No.: CTYS14  
SCALE: 1" = 20'

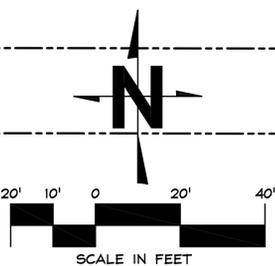
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5824 Bee Ridge Road, #325, Sarasota, FL 34233-5065  
email: info@avoliengineering.com  
Phone: (941) 927-3447  
Fax: (941) 927-3446

DRAWN BY:  
J.R.R.

SHEET No.  
6



UTILITY CONSTRUCTION NOTES:  
PVC WATER MAIN SHALL BE DR 18 (C 900, CL 150) RESTRAINED JOINT.  
D.I.P. WATER MAIN SHALL BE CLASS 50.  
EX. AC WATER MAIN THAT IS TO BE ABANDONED IN PLACE SHALL BE PLUGGED AND GROUTED, PER CITY OF SARASOTA UTILITIES STANDARDS, UPON CERTIFICATION AND CLEARANCE OF INSTALLED WATER MAINS.



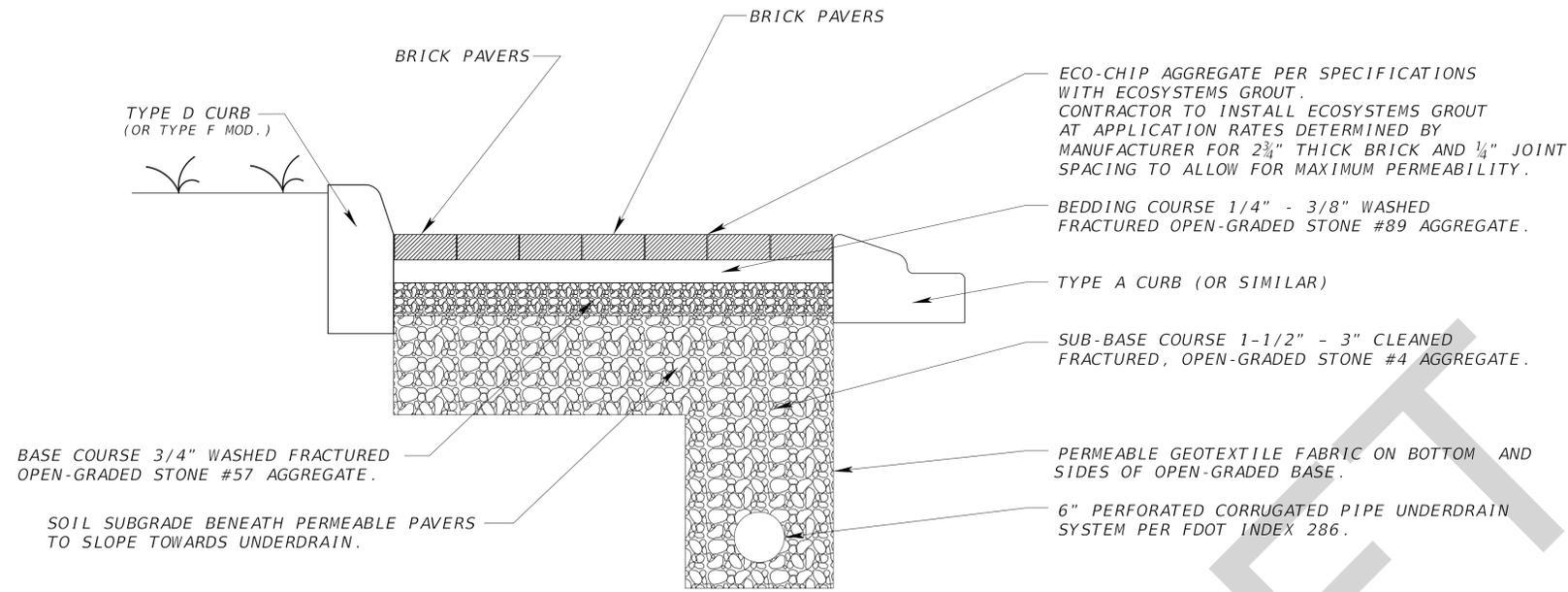






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**PERVIOUS PAVER DETAIL - TRUCK APRON (EXAMPLE)**  
 SECTION  
 N.T.S.  
 (ALTERNATE)

THIS PLAN SHEET DOES NOT CONTAIN SPECIFICATIONS. THE DETAIL SHOWN HERE IS A GENERAL DEPICTION OF THE CONFIGURATION NEEDED FOR PERVIOUS PAVERS ON THE APRON.

DRAFT



NO.	DATE	REVISIONS	BY

APPROVED BY:  
 ALEJANDRO ANAYA, PE, PTOE  
 REG. NO. 66083  
 SIGNATURE  
 DATE:

PAVER DETAIL  
 TRUCK APRON

MAIN STREET AND  
 ORANGE AVE  
 MODERN ROUNDABOUT

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 CORPORATION  
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 PROJECT No. 120104  
 SCALE: SEE PLAN  
 DRAWN BY: BCI

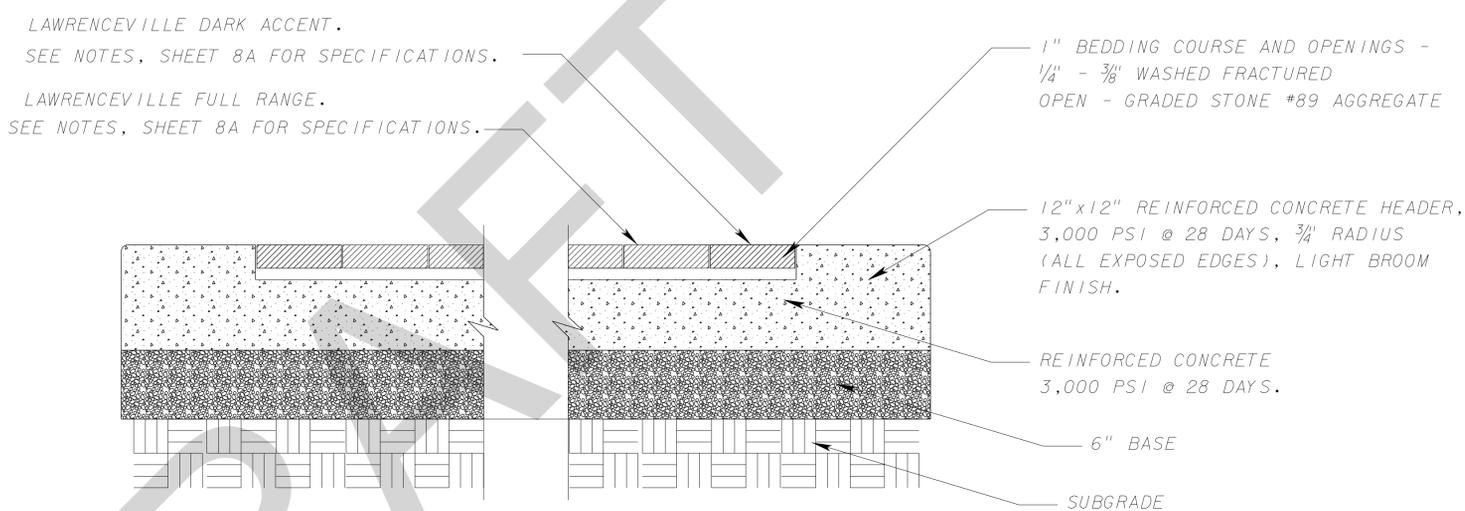
SHEET NUMBER  
 8

PLOTTED: 2/9/2015

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**BRICK PAVER NOTES:**

- 1. CITY STANDARD BRICK SPECIFICATIONS (BASE BID):
  - 1.A. ALL CLAY PAVING BRICKS CONSTRUCTION SHALL CONFORM TO THE REQUIREMENTS OF THESE SPECIAL PROVISIONS, AND PLACED IN CONFORMITY WITH THE LINES AND GRADES AS SHOWN ON THE PLANS.
  - 1.B. THE CONTRACTOR SHALL HAVE 24 MONTHS OF PREVIOUS CONTINUOUS EXPERIENCE IN THE INSTALLATION OF CLAY PAVING BRICKS IN THE STATE OF FLORIDA. THE CONTRACTOR SHALL HAVE COMPLETED THREE (3) SIMILAR SIZED PROJECTS WITHIN THE PAST TWELVE (12) MONTHS AND BE ABLE TO PROVIDE REFERENCES UPON REQUEST OF THE PROJECT ENGINEER.
  - 1.C. THE PAVING BRICKS SHALL BE WIRE CUT, CLAY FIRED PAVERS MEETING ASTM C-902-87. NOMINAL SIZE SHALL BE 2 1/4" THICKNESS AND APPROXIMATELY 7 1/2" x 3 3/4" TO MEET A 2:1 LENGTH TO WIDTH RATIO. BRICKS TO BE MANUFACTURED BY:
    - 1. BRICK AND TILE CORPORATION OF LAVREENCEVILLE, VA (COLOR: SHADE NO. 1-175 PS: FULL RANGE)
    - 2. BOREN CLAY PRODUCTS IF PLEASANT GRADEN, NC (COLOR: PLAZA BLEND)
    - 3. OR EQUAL
- 2. CONTRACTOR TO PROVIDE COLOR SAMPLES TO CITY FOR APPROVAL PRIOR TO ORDERING MATERIALS.
- 3. CONTRACTOR SHALL PROVIDE 10"x10" MOCKUP FOR APPROVAL BY CITY AND PROJECT LANDSCAPE ARCHITECT PRIOR TO CONSTRUCTION.
- 4. ALL HERRINGBONE PAVER FIELDS SHALL BE SURROUDED BY A SINGLE SOLDIER COURSE BORDER.
- 5. ALL PERMEABLE PAVER APPLICATIONS SHALL BE INSTALLED BY A MANUFACTURER CERTIFIED INSTALLER.
- 6. CONTRACTOR SHALL BE RESPONSIBLE FOR SUBGRADE PREPARATION FOR FULL EXFILTRATION AS DEFINED BY MANUFACTUROR.
- 7. ALL CRUSHED ANGULAR GRAVEL MIX SHALL CONTAIN NO FINES.
- 8. ALL PAVER FIELDS NOT ADJACENT TO CONCRETE CURBING OR BUILDING FACADES SHALL BE SURROUNDED BY A RIGID EDGE RESTRAINT PER MANUFACTURER'S RECOMMENDATIONS. (COST TO BE INCLUDED IN COST OF PAVER SYSTEM)



**TYPICAL PAVER DETAIL**  
CIRCULATORY ROADWAY AND CROSSWALK AREAS  
N.T.S.



NO.	DATE	REVISIONS	BY

APPROVED BY:  
ALEJANDRO ANAYA, PE, PTOE  
FLORIDA  
REG. NO. 66083  
SIGNATURE  
DATE:

BRICK PAVER NOTES AND DETAILS

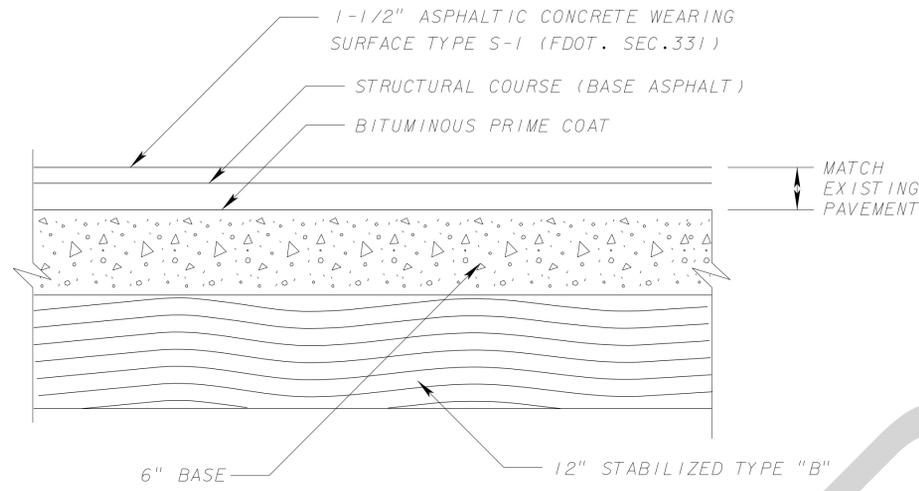
MAIN STREET AND ORANGE AVE MODERN ROUNDABOUT

4902 Eisenhower Blvd, Suite 250  
Tampa, Florida 33634  
Phone (813) 381-5017  
Fax (813) 381-7134  
Certificate of Auth. No. 29196

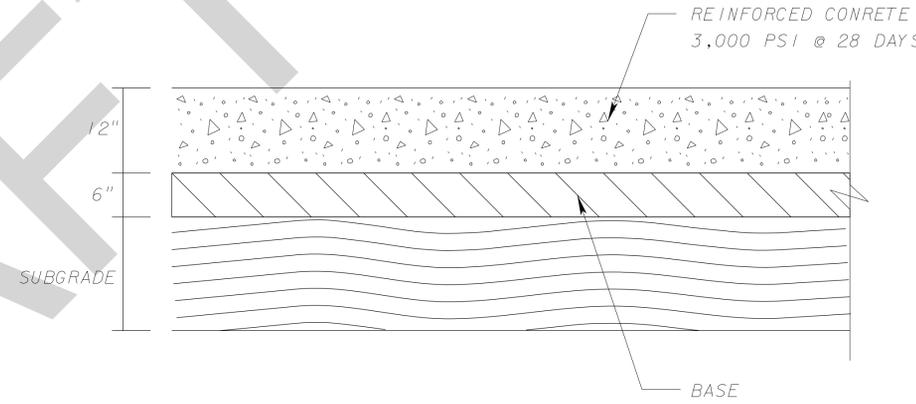
**ESRP**  
CORPORATION  
Engineering Sciences Research Planning  
PROJECT No. 120104 SCALE: SEE PLAN DRAWN BY: BCI

SHEET NUMBER  
8A





**ASPHALT PAVEMENT DETAIL**  
N.T.S.  
WHERE REQUIRED



**TYPICAL CONCRETE SECTION DETAIL**  
N.T.S.

NOTE: ALL PAVEMENT DESIGN SHOULD BE ACCORDING TO THE CITY OF SARASOTA ENGINEERING DESIGN CRITERIA MANUAL (EDCM)

DRAFT



NO.	DATE	REVISIONS	BY

APPROVED BY:  
ALEJANDRO ANAYA, PE, PTOE  
FLORIDA  
REG. NO. 66983  
SIGNATURE  
DATE:

ASPHALT  
PAVEMENT  
DETAILS

MAIN STREET AND  
ORANGE AVE  
MODERN ROUNDABOUT

4902 Eisenhower Blvd, Suite 250  
Tampa, Florida 33634  
Phone (813) 381-5017  
Fax (813) 381-7134  
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**ESRP**  
CORPORATION  
Engineering Sciences Research Planning  
PROJECT No. 120104 SCALE: SEE PLAN DRAWN BY: BCI

SHEET NUMBER  
8C





NO.	DATE	REVISIONS	BY

APPROVED BY:  
JOHN P. CAVOLI, P.E.  
FLORIDA  
REG. NO. 48882

SIGNATURE  
DATE:

**EROSION AND  
SEDIMENT  
CONTROL PLAN**

**MAIN STREET AND  
ORANGE AVENUE  
MODERN ROUNDABOUT**

(941) 921-3447  
Fax: (941) 921-3446  
email: info@cavoliengineering.com

**AVOLI Engineering, Inc.**  
Consulting Civil Engineers  
Fl. Cert. of Auth. No. 8875  
5824 Bee Ridge Road, #325, Sarasota, FL 34233-5065

PROJECT No. CTYS14  
SCALE: 1" = 30'  
DRAWN BY:  
J.R.R.

SHEET No.  
10

**EROSION CONTROL NOTES**

**GENERAL:**

- \*EROSION AND SEDIMENT CONTROL BEST MANAGEMENT PRACTICES SHALL BE IMPLEMENTED DURING CONSTRUCTION BY THE CONTRACTOR.
- \*SITE SPECIFIC BEST MANAGEMENT PRACTICES SHALL PREVENT SEDIMENT AND OTHER HARMFUL CONTAMINATES FROM ENTERING THE STORM WATER MANAGEMENT SYSTEM AND ADJACENT PROPERTIES.
- \*THE EFFECTIVENESS OF THE SEDIMENT AND EROSION CONTROL PRACTICES/BMP'S SHALL BE CHECKED DAILY DURING CONSTRUCTION BY THE CONTRACTOR.
- \*THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY SILTATION ENTERING THE STORM WATER MANAGEMENT SYSTEM AND/OR ANY ON-SITE OR OFF-SITE DRAINAGE AREAS.
- \*ALL SEDIMENT AND EROSION CONTROL MEASURES WILL BE VERIFIED AND INSPECTED PRIOR TO COMMENCEMENT OF CONSTRUCTION.
- \*ALL AREAS DISTURBED BY CONSTRUCTION SHALL BE RESTORED TO THE EXISTING CONDITION, OR BETTER, TO THE SATISFACTION OF THE OWNER.
- \*EROSION AND SEDIMENT CONTROL BMP'S IN ADDITION TO THOSE PRESENTED ON THE PLANS AND OUTLINED IN THE EROSION AND SEDIMENT CONTROL PLAN (ECP) AND STORMWATER POLLUTION PREVENTION PLAN (SWPPP) SHALL BE IMPLEMENTED AS NECESSARY TO PREVENT TURBID DISCHARGES FROM FLOWING ONTO ADJACENT PROPERTIES OR ROADWAYS, OFF SITE STORMWATER CONVEYANCES OR RECEIVING WATERS, OR ON SITE WETLANDS AND SURFACE WATERS. BMP'S SHALL BE DESIGNED, INSTALLED, AND MAINTAINED BY THE SITE OPERATOR TO ENSURE THAT OFF SITE SURFACE WATER QUALITY REMAINS CONSISTENT WITH STATE AND LOCAL REGULATIONS. (THE OPERATOR IS THE ENTITY THAT OWNS OR OPERATES THE CONSTRUCTION ACTIVITY AND HAS AUTHORITY TO CONTROL THOSE ACTIVITIES AT THE PROJECT NECESSARY TO ENSURE COMPLIANCE.)
- \*OFF SITE SURFACE WATER DISCHARGES, DISCHARGES TO THE MS4, OR DISCHARGES TO ONSITE WETLANDS OR SURFACE WATERS WITH TURBIDITY IN EXCESS OF 29 NEPHELOMETRIC TURBIDITY UNITS (NTUs) ABOVE BACKGROUND LEVEL SHALL BE IMMEDIATELY CORRECTED. SUCH INCIDENTS SHALL BE REPORTED TO WATER RESOURCES WITHIN 24 HOURS OF THE OCCURRENCE (PH: 941-861-5000; FAX: 941-861-0986). THE REPORT SHALL INCLUDE THE CAUSE OF THE DISCHARGE AND CORRECTIVE ACTIONS TAKEN.
- \*THE OPERATOR SHALL ENSURE THAT ADJACENT PROPERTIES ARE NOT IMPACTED BY WIND EROSION, OR EMISSIONS OF UNCONFINED PARTICULATE MATTER IN ACCORDANCE WITH RULE 62-296.320(4)(c)1., FLORIDA ADMINISTRATIVE CODE, BY TAKING APPROPRIATE MEASURES TO STABILIZE AFFECTED AREAS.
- \*FUEL AND OTHER PETROLEUM PRODUCT SPILLS THAT ENTER STORM WATER DRAINS OR WATER BODIES, OR FUEL AND OTHER PETROLEUM PRODUCT SPILLS THAT ARE IN EXCESS OF 25 GALLONS SHALL BE CONTAINED, CLEANED UP AND IMMEDIATELY REPORTED TO WATER RESOURCES (PH: 941-861-5000; FAX: 941-861-0986). SMALLER GROUND SURFACE SPILLS SHALL BE CLEANED UP AS SOON AS PRACTICAL.
- \*IF CONTAMINATED SOIL AND/OR GROUNDWATER IS DISCOVERED DURING DEVELOPMENT OF THE SITE, ALL ACTIVITY IN THE VICINITY OF THE CONTAMINATION SHALL IMMEDIATELY CEASE, AND WATER RESOURCES SHALL BE CONTACTED (PH: 941-861-5000; FAX: 941-861-0986).

**SITE GRADING PRACTICES:**

- \*SEDIMENT AND EROSION CONTROL MEASURES SHALL BE IN PLACE PRIOR TO ANY EARTH MOVING ACTIVITIES.
- \*THE CONTRACTOR SHALL MINIMIZE IMPACT TO AREAS WHICH ARE TO REMAIN UNDISTURBED. ALL AREAS TO REMAIN SHALL BE PROTECTED ACCORDINGLY (TREE BARRICADES, ETC.).
- \*TEMPORARY DEWATERING BASINS SHALL BE CONSTRUCTED PRIOR TO STORM WATER MANAGEMENT LAKE EXCAVATION.
- \*STOCKPILED AREAS SUCH AS TOPSOIL SHALL BE PLACED AND PROTECTED SO AS TO LIMIT SEDIMENT RUNOFF. ANY STOCKPILED MATERIAL NOT USED WITHIN 30 DAYS SHALL BE STABILIZED.
- \*ORGANIC MATERIAL AND DEBRIS SHALL BE DISPOSED OF ACCORDINGLY.
- \*ALL SLOPES SHALL BE IN ACCORDANCE WITH THE PLANS AND STABILIZED IMMEDIATELY UPON COMPLETION OF FINAL GRADING.

**TEMPORARY DEWATERING BASINS (IF REQUIRED):**

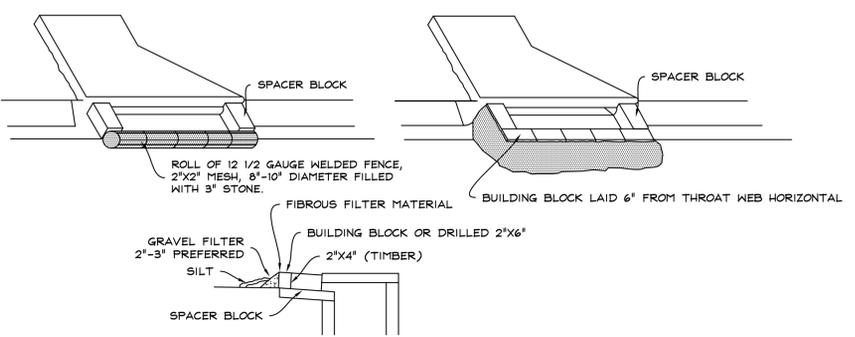
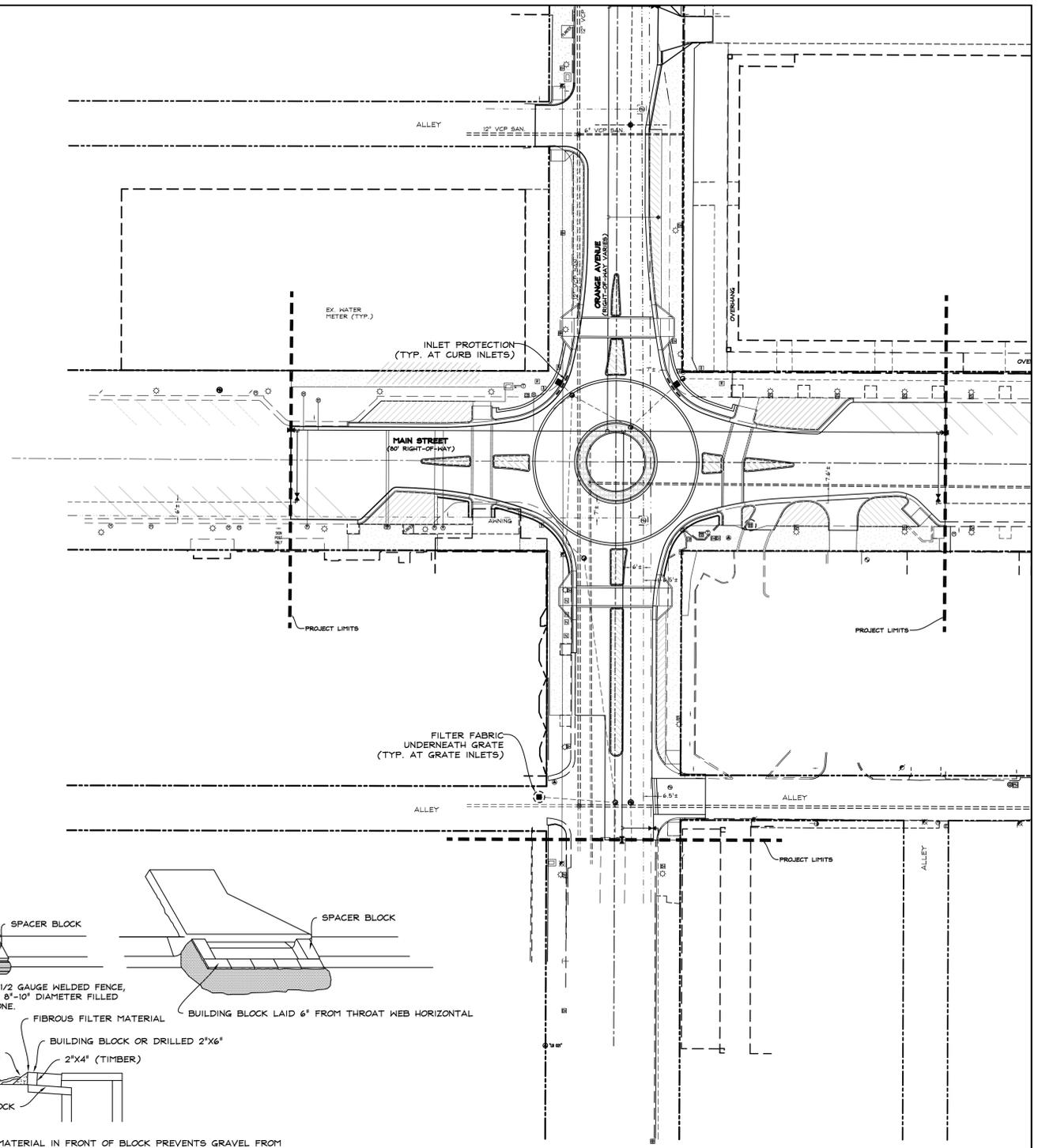
- \*DEWATERING BASINS SHALL BE PROVIDED TO ENSURE NO OFF-SITE DISCHARGE VIOLATE TURBIDITY STANDARDS.
- \*ALL TEMPORARY DEWATERING BASINS SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE PLANS.
- \*ALL BASIN SLOPES SHALL BE A MAXIMUM OF 4:1 HORIZONTAL TO VERTICAL.
- \*BASIN OUTFALL PIPE TO HAVE EITHER A RISER STRUCTURE WITH SKIMMER OR PROVIDE A MEANS OF FILTERING WATER PRIOR TO DISCHARGE.
- \*ALL EMBANKMENTS SHALL BE COMPACTED AND STABILIZED TO PREVENT BREACHING.
- \*DEWATERING SHALL NOT EXCEED 120 DAYS OR A WATER USE PERMIT MUST BE OBTAINED FROM THE SOUTHWEST FLORIDA WATER MANAGEMENT DISTRICT AND WILL NOT EXCEED A DEWATER RATE OF 6.68 FPS OR AS INDICATED BY THE DEWATER CALCULATION IN THE STORM WATER MANAGEMENT REPORT.
- \*FOR DEWATERING ACTIVITIES DURING EXCAVATION, A WATER USE PERMIT (WUP) MAY BE REQUIRED IF THE ANNUAL AVERAGE DEWATERING RATE IS EQUAL OR GREATER THAN 100,000 GPD, IF DEWATER RATE EXCEEDS 1,000,000 GPD, OR IF THE DEWATERING PUMP DISCHARGE PIPE IS 4-INCH OR GREATER IN DIAMETER. IF THE CONTRACTOR DEVIATES FROM THIS CRITERIA, THE CONTRACTOR MUST CHECK WITH SOUTHWEST FLORIDA WATER MANAGEMENT DISTRICT WATER USE PERMITTING DEPARTMENT TO DETERMINE IF A WATER USE PERMIT IS REQUIRED.

**MAINTENANCE OF SEDIMENT AND EROSION CONTROL PRACTICES:**

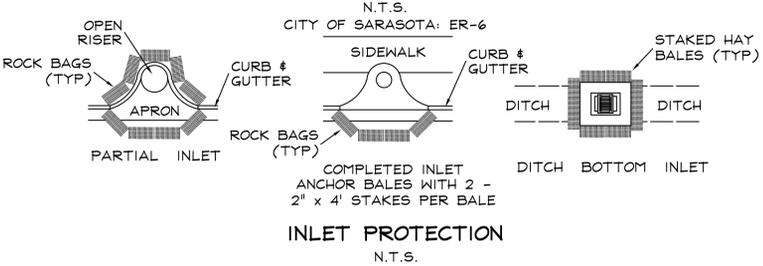
- \*ALL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE INSPECTED DAILY AND/OR AFTER ANY STORM EVENT FOR INTEGRITY AND REPAIRED AND/OR REPLACED ACCORDINGLY IF SIGNS OF FAILURE ARE OBSERVED.
- \*SEDIMENT SHALL BE REMOVED FROM ALL SUMP AREAS AS NECESSARY TO MAINTAIN REQUIRED VOLUMES.
- \*ALL SEDIMENT AND EROSION CONTROL MEASURES WILL REMAIN IN PLACE UNTIL ALL STABILIZATION HAS BEEN COMPLETED.
- \*ANY EROSION EXPERIENCED UPON REMOVAL OF SEDIMENT AND EROSION CONTROL MEASURES WILL BE STABILIZED IMMEDIATELY.

**SEQUENCING PLAN:**

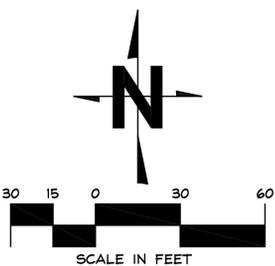
- \*SITE PERIMETER SILT FENCE TO BE INSTALLED PRIOR TO ANY EARTH MOVING ACTIVITIES.
- \*SILT FENCE IN ROADSIDE SLOPES TO BE INSTALLED PRIOR TO DEWATERING OR INITIATION OF ANY RIGHT-OF-WAY IMPROVEMENTS.
- \*AS INLETS WITH PIPING ARE CONSTRUCTED, INLET PROTECTION WILL BE INSTALLED.
- \*SEDIMENT AND EROSION CONTROL MEASURES WILL BE INSPECTED DAILY FOR PROPER OPERATION.
- \*STABILIZATION MEASURES WILL BE INITIATED IMMEDIATELY UPON COMPLETION OF FINAL GRADING.
- \*SEDIMENT AND EROSION CONTROL MEASURES WILL BE REMOVED ONLY UPON COMPLETION OF ALL STABILIZATION MEASURES.



FIBROUS FILTER MATERIAL IN FRONT OF BLOCK PREVENTS GRAVEL FROM WASHING INTO STRUCTURE.  
2"x4" BEHIND BLOCKS AND ACROSS THROAT HELPS KEEP BLOCK IN PLACE. PLACE IN OUTER HOLE OF SPACER BLOCK.  
**TEMPORARY SEDIMENT TRAP AT CURB INLET**

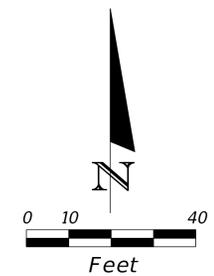
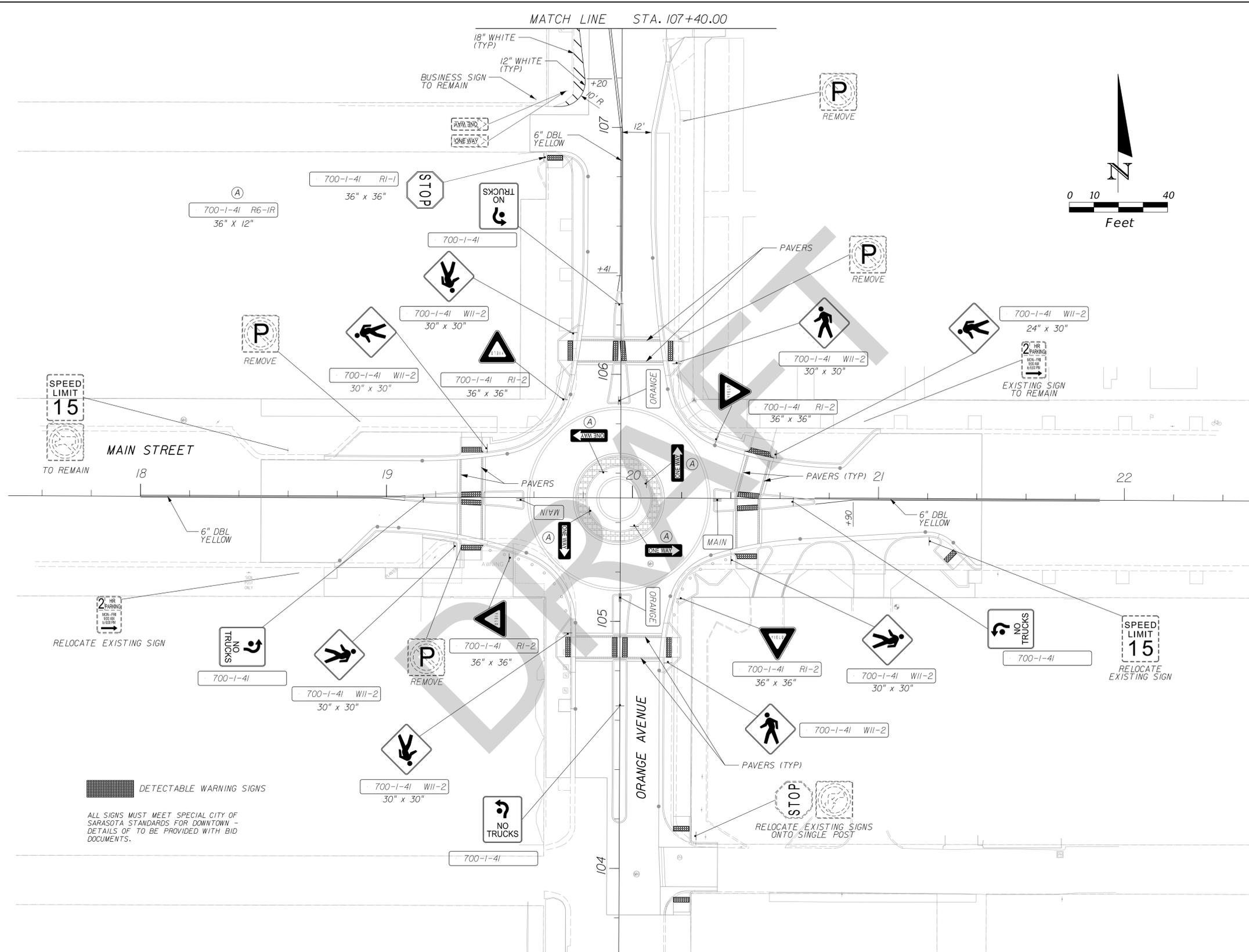


**INLET PROTECTION**  
N.T.S.



PLOTTED: \$DATES

FILENAME: \$FILES

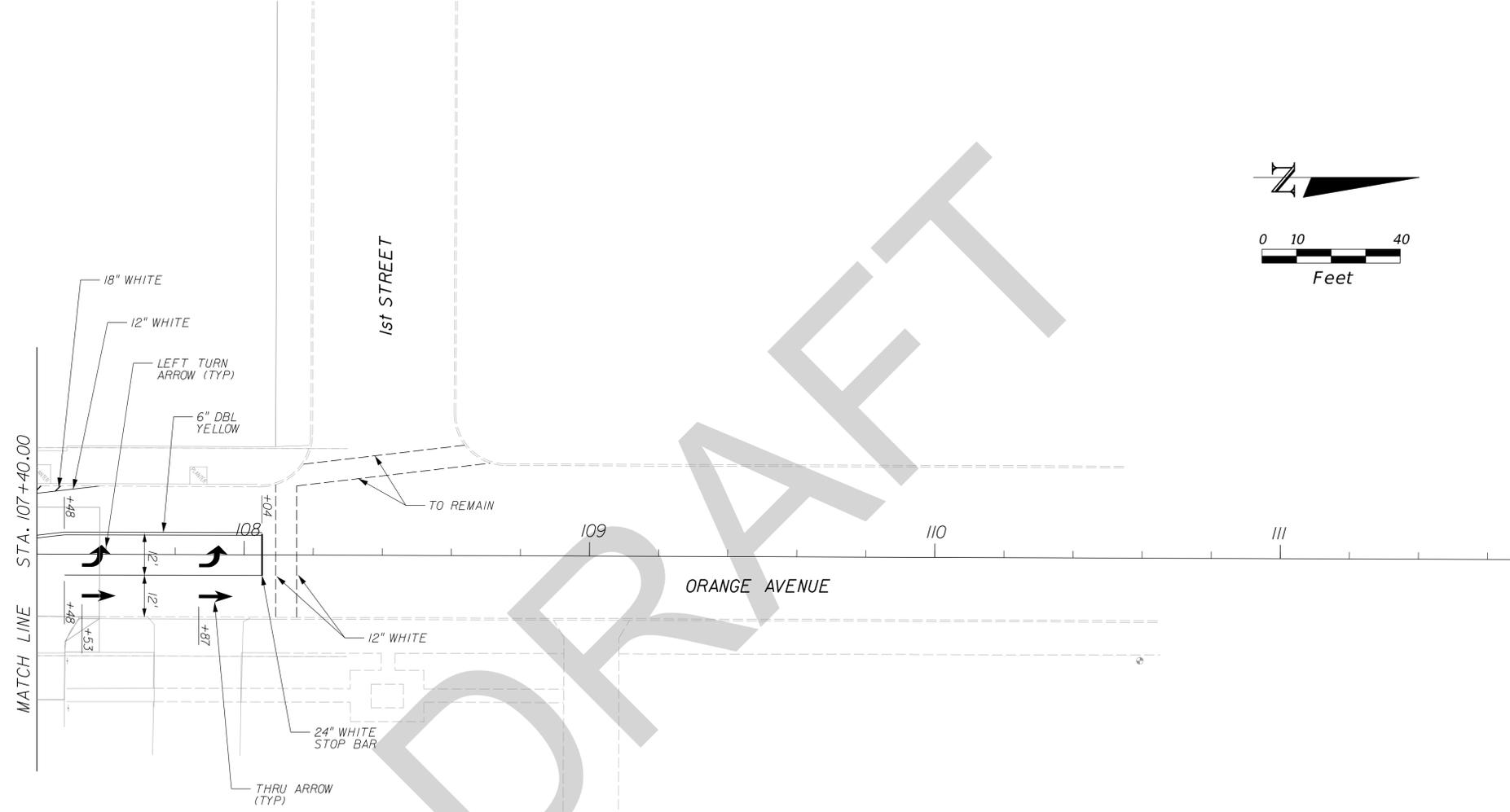


 DETECTABLE WARNING SIGNS  
 ALL SIGNS MUST MEET SPECIAL CITY OF SARASOTA STANDARDS FOR DOWNTOWN - DETAILS OF TO BE PROVIDED WITH BID DOCUMENTS.

 <b>CITY OF SARASOTA</b>	
APPROVED BY: ALEJANDRO ANAYA, PE, PTOE FLORIDA REG. NO. 86983	SIGNATURE DATE:
<b>SIGNING &amp; PAVEMENT MARKINGS</b>	
<b>MAIN STREET AND ORANGE AVE MODERN ROUNDABOUT</b>	
4902 Eisenhower Blvd, Suite 250 Tampa, Florida 33634 Phone (813) 381-5017 Fax (813) 381-7134 Certificate of Auth. No. 29196 <b>ESRP CORPORATION</b> Engineering Sciences Research Planning	
PROJECT No. 120104	SCALE: SEE PLAN    DRAWN BY: BCI
SHEET NUMBER <b>11</b>	

PLOTTED: \$DATES

FILENAME: \$FILES



NOTES:

EXISTING CONDITIONS NORTH OF STATION 107+40 ARE BASED ON FIELD MEASUREMENTS PERFORMED IN 2013. (SURVEY DATA WAS NOT AVAILABLE).

PAVEMENT MARKINGS SHOWN ON THIS SHEET ARE ONLY TO PROVIDE TRANSITION TO EXISTING CONDITIONS AT THE NORTH END OF THE PROJECT.



NO.	DATE	REVISIONS	BY

APPROVED BY:  
ALEJANDRO ANAYA, PE, PTOE  
FLORIDA  
REG. NO. 66983

SIGNATURE  
DATE:

SIGNING & PAVEMENT MARKINGS

MAIN STREET AND ORANGE AVE MODERN ROUNDABOUT

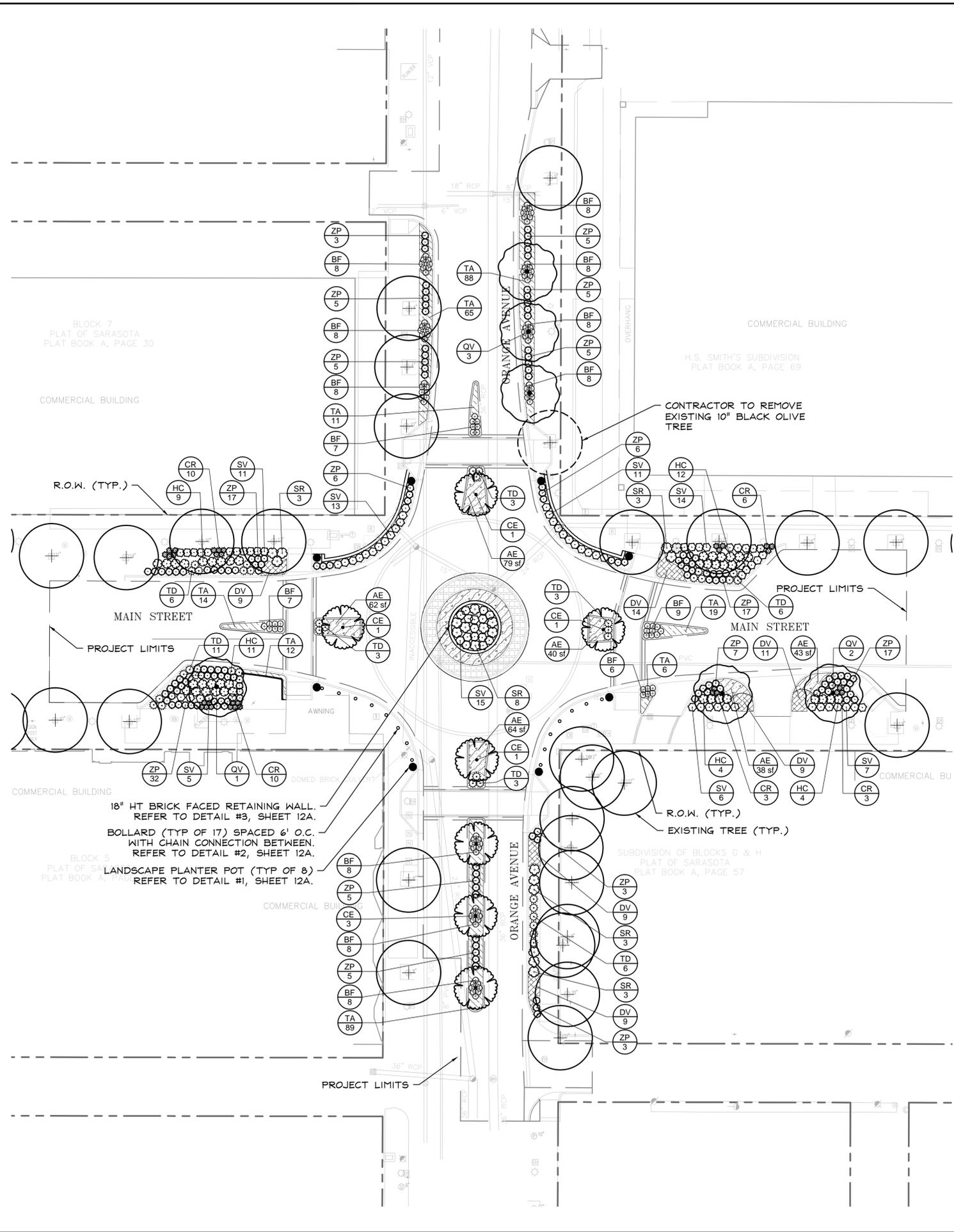
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Tampa, Florida 33634  
Phone (813) 381-5017  
Fax (813) 381-7134  
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**ESRP**  
CORPORATION  
Engineering Sciences Research Planning

PROJECT No. 120104 SCALE: SEE PLAN DRAWN BY: BCI

SHEET NUMBER 11A

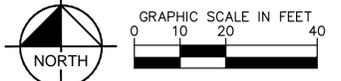
Plotted By: Claflores, Chris Sheet: Main Street & Orange Roundabout Layout: 12 LANDSCAPE PLAN April 09, 2015 03:36:42pm K:\SAR\JRG\148197000 - srg main - orange roundabout\CADD\plansheets\100 - LANDSCAPE PLAN.dwg  
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### PLANT SCHEDULE

TREES	CODE	QTY	BOTANICAL NAME	COMMON NAME	CONT.	GAL	SIZE
	CE	1	CONOCARPUS ERECTUS SERICEUS	SILVER BUTTON WOOD	F.6.	3' GAL MIN, STD	14' HT MIN, 8.5' CLR MIN
	QV	6	QUERCUS VIRGINIANA 'SKY CLIMBER'	SKY CLIMBER SOUTHERN LIVE OAK	F.6.	6' GAL	22' HT OA, 10' CLEAR
	ET	31	SPP. VARIES	EXISTING TREE	-	EXISTING	EXISTING
SHRUBS	CODE	QTY	BOTANICAL NAME	COMMON NAME	CONT.	SPACING	SIZE
	BF	104	BULBINE FRUTESCENS	STALKED BULBINE	1 GAL	SEE PLAN	12" FULL
	CR	37	CORDYLINE TERMINALIS 'RED SISTER'	RED SISTER TI PLANT	7 GAL	SEE PLAN	36" HT MIN
	HC	46	HAMELIA PATENS 'COMPACTA'	DWARF FIREBUSH	7 GAL	SEE PLAN	24" HT MIN
	SV	12	SHEFFLERA ARBORICOLA 'VARIEGATA'	DWARF VARIEGATED SHEFFLERA	7 GAL	SEE PLAN	30" HT MIN
	SR	20	STRELITZIA REGINAE	DWARF BIRD OF PARADISE	7 GAL	SEE PLAN	30" HT MIN
	TD	47	TRIPSAGUM DACTYLOIDES NANA	DWARF FAKAHATCHEE GRASS	3 GAL	SEE PLAN	18" FULL
	ZP	175	ZAMIA PUMILA	COONTIE	3 GAL	SEE PLAN	14" FULL
GROUND COVERS	CODE	QTY	BOTANICAL NAME	COMMON NAME	CONT.	SIZE	SPACING
	DV	61	DIANELLA TASHMANICA 'VARIEGATA'	FLAX LILY	3 GAL	18" FULL	24" o.c.
	TA	304	TRACHELOSPERMUM ASIATICUM 'ASIATIC'	ASIATIC JASMINE	1 GAL	12" SPRED FULL	18" o.c.
SOD/SEED	CODE	QTY	BOTANICAL NAME	COMMON NAME	CONT.	SIZE	SPACING
	AE	344 SF	ARACHIS GLABRATA 'ECOTURF'	PERENNIAL PEANUT	SOD		

- NOTES:**
- ALL PLANT SPECIFICATIONS IN THE PLANT SCHEDULE SHALL BE CONSIDERED THE MINIMUM ALLOWABLE SPECIFICATIONS. CONTRACTOR SHALL PROVIDE PLANT MATERIALS AN UPSIZE AS NECESSARY TO MEET THE MOST STRINGENT SPECIFICATION.
  - SEE SHEET 12C FOR LANDSCAPE DETAILS.
  - ALL EXISTING TREES TO REMAIN UNLESS OTHERWISE NOTED ON PLANS.
  - ALL TREES SHALL BE PRUNED TO PROVIDE 8.5' CLEARANCE ABOVE ASPHALT ROADWAY AT A MINIMUM. CITY SHALL BE RESPONSIBLE FOR MAINTAINING THIS MINIMUM CLEARANCE IN PERPETUITY.



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 SUNSHINE STATE ONE CALL OF FLORIDA, INC.

**CITY OF SARASOTA**

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**Kimley-Horn**

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 1777 MAIN STREET, SUITE 200, SARASOTA, FL 34236  
 PHONE: 941-379-7600  
 WWW.KIMLEY-HORN.COM CA 00000696

---

LICENSED PROFESSIONAL  
 CHRISTOPHER D. CIANFAGLIONE  
 FLORIDA LICENSE NUMBER  
 PLA # 6667207  
 DATE: 4/9/2015

---

KHA PROJECT  
 148197000  
 DATE  
 MARCH 2015  
 SCALE  
 AS SHOWN  
 DESIGNED BY  
 CDC  
 DRAWN BY  
 EMD  
 CHECKED BY  
 CMH

---

**LANDSCAPE PLAN**

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MAIN STREET AND ORANGE AVENUE ROUNDABOUT  
 PREPARED FOR  
 CITY OF SARASOTA  
 SARASOTA, FLORIDA

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SHEET NUMBER  
**12**

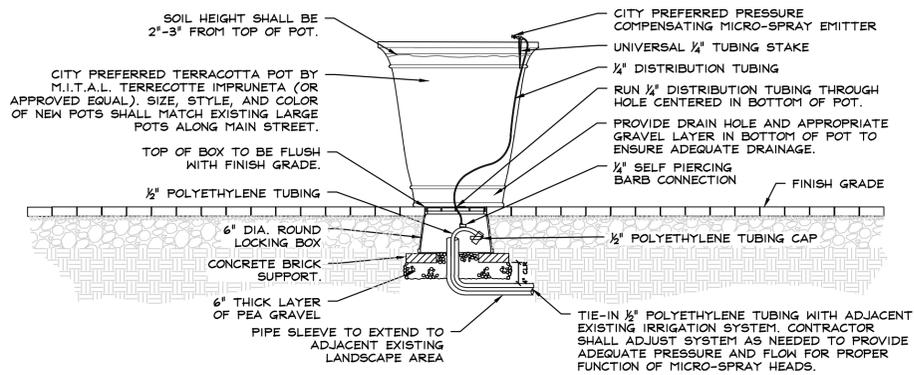
BY  
 DATE  
 REVISIONS  
 DRAFT 100%

Plotted By: Cianfaglione, Chris Sheet Set: Main Street & Orange Roundabout Layout: 12A LANDSCAPE DETAILS April 09, 2015 03:16:21pm K:\SAR\_LURC\148197000 - srg main-orange roundabout\CADD\plansheets\1100 - LANDSCAPE PLAN.dwg  
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**PLANTING SPECIFICATIONS FOR TERRACOTTA POTS**

THE FOLLOWING SPECIFICATIONS SHALL APPLY TO EACH OF THE TEN (10) TOTAL PROPOSED POTS:

- EACH POT SHALL CONTAIN ONE (1) WINDMILL PALM (TRACHYCARPUS FORTUNEI). PALM SIZE SHALL BE A 10 GAL. MIN., 3'-4' HEIGHT x 3' SPREAD MIN.
- EACH POT SHALL CONTAIN A MINIMUM OF SIX (6) SEASONAL ANNUAL PLANTS. ANNUAL SIZE SHALL BE A 6" POT MIN. CONTRACTOR TO PROVIDE ADEQUATE ANNUALS TO FILL TERRACOTTA POT GIVING A FULL AND COMPLETE LOOK. COORDINATE WITH CITY FOR FINAL PLANT SPECIES.
- CONTRACTOR SHALL COORDINATE FINAL VALVE BOX/POT LOCATION WITH CITY AND PROJECT LANDSCAPE ARCHITECT PRIOR TO INSTALLATION.
- PLANTING MEDIUM SHALL BE A HIGH-QUALITY POTTING MIX APPROPRIATE FOR PROPOSED PLANT SPECIES AND REGULAR WATERING. SUBMIT SAMPLE TO CITY FOR APPROVAL PRIOR TO CONSTRUCTION.
- CONTRACTOR SHALL PROVIDE DRAIN HOLE AND APPROPRIATE GRAVEL LAYER IN BOTTOM OF POT TO ENSURE ADEQUATE DRAINAGE.



1 TERRACOTTA PLANTER POT SECTION NTS

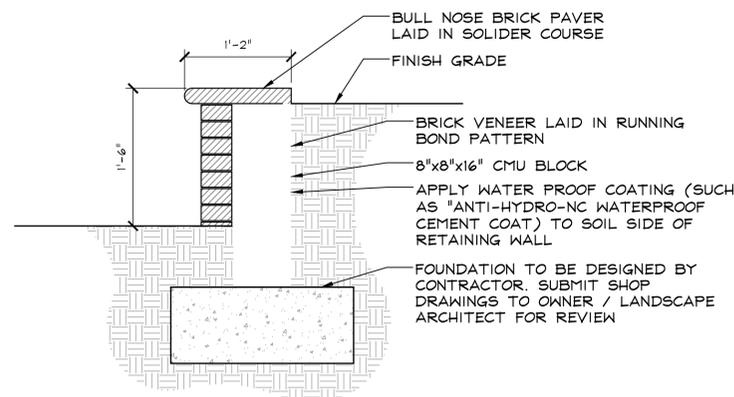


MANUFACTURER: RELIANCE FOUNDRY  
 MODEL: R-7539 FLUTED DUCTILE IRON BOLLARD  
 FINISH: BLACK

INSTALLATION: BOLLARD TO BE INSTALLED OVER 4 1/2" O.D. PIPE FILLED WITH CONCRETE AS PER MANUFACTURERS RECOMMENDATIONS, REFER TO "SECURITY POST COVER" MOUNT.

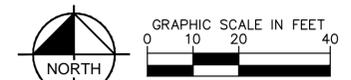
- NOTES:
- BOLLARDS SHALL INCLUDE BOLLARD CHAIN EYES, BOLLARD CHAIN AND BOLLARD CHAIN QUICK LINK CONNECTORS (BLACK POWDER COAT FINISH)
  - CONTRACTOR TO PROVIDE SHOP DRAWINGS AND SIGNED AND SEALED STRUCTURAL DRAWINGS FOR FOUNDATION DETAILS FOR REVIEW AND APPROVAL PRIOR TO CONSTRUCTION.
  - COORDINATE FINAL PRODUCT SELECTION WITH OWNER PRIOR TO CONSTRUCTION.

2 FLUTED DUCTILE IRON BOLLARD SECTION NTS



NOTE: DETAIL IS DESIGN INTENT IN NATURE AND SHALL MATCH FIVE POINTS ROUNDABOUT IN MATERIAL AND DESIGN. CONTRACTOR TO PROVIDE SIGNED AND SEALED STRUCTURAL SHOP DRAWINGS FOR REVIEW AND APPROVAL PRIOR TO CONSTRUCTION.

3 18" BRICK VENEER RETAINING WALL SECTION NTS



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 SUNSHINE STATE ONE CALL OF FLORIDA, INC.



No.	REVISIONS	DATE	BY
	DRAFT 100%		

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 1777 MAIN STREET, SUITE 200, SARASOTA, FL 34236  
 PHONE: 941-379-7600  
 WWW.KIMLEY-HORN.COM CA 00000696

LICENSED PROFESSIONAL  
 CHRISTOPHER D. CIANFAGLIONE  
 FLORIDA LICENSE NUMBER PLA # 6667207  
 DATE: 4/9/2015

KHA PROJECT	148197000
DATE	MARCH 2015
SCALE	AS SHOWN
DESIGNED BY	KHA
DRAWN BY	EMD
CHECKED BY	CMH

LANDSCAPE DETAILS

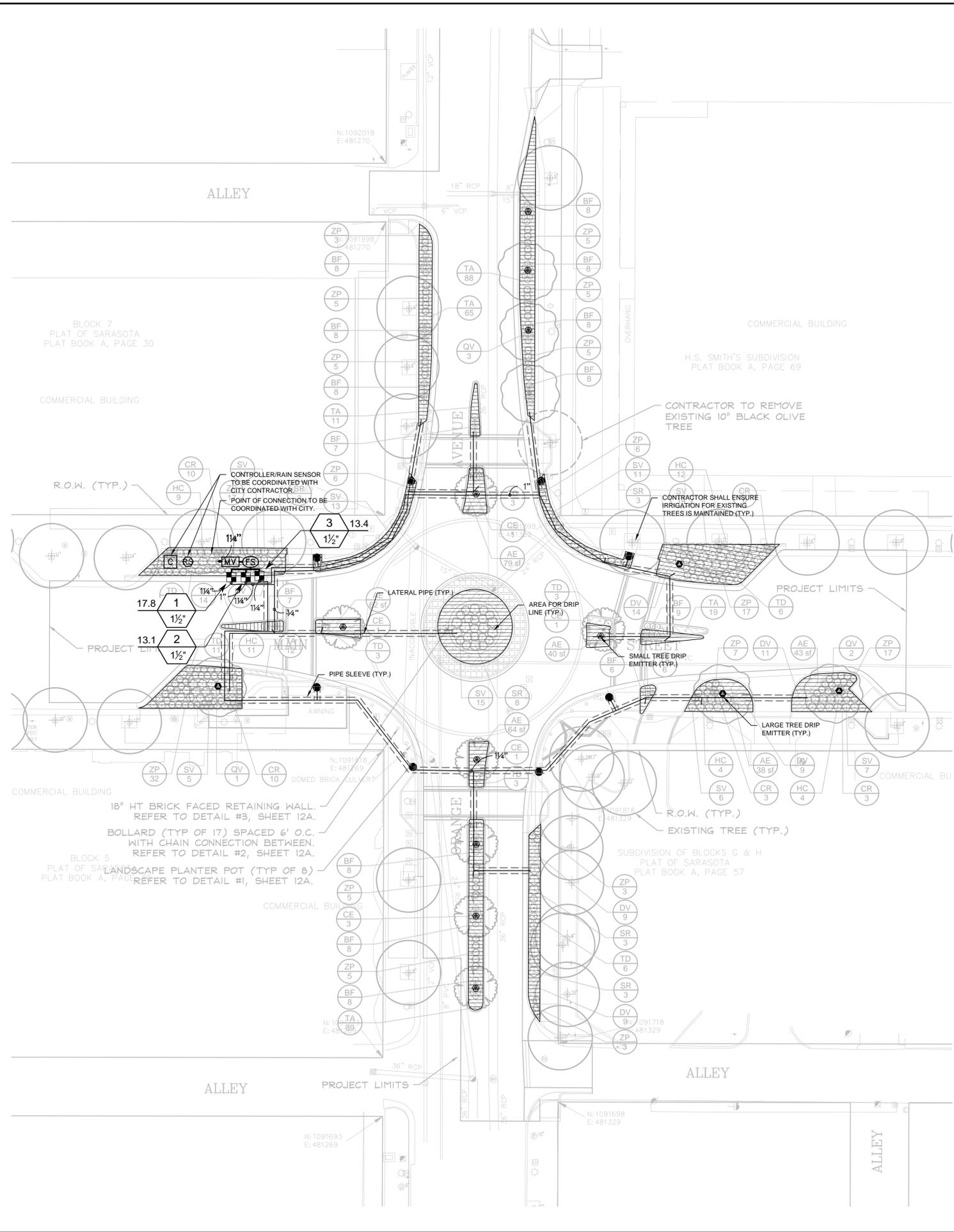
MAIN STREET AND ORANGE AVENUE ROUNDABOUT PREPARED FOR CITY OF SARASOTA FLORIDA SARASOTA

SHEET NUMBER 12A





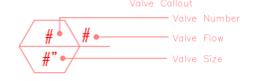
Plotted By: Christopher D. Cianflone, Chris Street, Set: Main Street & Orange Roundabout - Layout: 13 IRRIGATION PLAN - April 09, 2015 03:16:47pm K:\SAR\_JRS\148197000 - srg main-orange roundabout\CADD\plansheets\IR\_PLANSHEET13.dwg  
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### IRRIGATION SCHEDULE

SYMBOL	MANUFACTURER/MODEL/DESCRIPTION	QTY
■	RAIN BIRD XCZ-150-PRB-COM HIGH FLOW CONTROL ZONE KIT, FOR LARGE COMMERCIAL DRIP ZONES. 1-1/2\"/>	3
⊕	RAIN BIRD MDCFCAP DRILINE FLUSH VALVE PURPLE CAP IN COMPRESSION FITTING COUPLER. FOR NON-POTABLE WATER USE.	3
Ⓐ	RAIN BIRD ARV050 1/2\"/>	3
⊙	LARGE TREE DRIP RING EMITTERS CONTRACTOR TO PROVIDE FOUR (4) RAINBIRD PC DIFF SINGLE OUTLET, PRESSURE COMPENSATING DRIP EMITTERS WITH SELF-PIERCING BARB INLET AND DIFFUSER CAP. FLOW RATE: 24GPH-ORANGE.	4
⊗	SMALL TREE/ PALM DRIP EMITTER CONTRACTOR TO PROVIDE TWO (2) RAINBIRD PC DIFF SINGLE OUTLET, PRESSURE COMPENSATING DRIP EMITTERS WITH SELF-PIERCING BARB INLET AND DIFFUSER CAP. FLOW RATE: 24GPH-ORANGE.	10
▨	AREA TO RECEIVE DRILINE RAIN BIRD XFS-P-09-18 (18) XFS SUB-SURFACE PRESSURE COMPENSATING LANDSCAPE DRILINE W/COPPER SHIELD TECHNOLOGY. 0.9GPH EMITTERS AT 18.0\"/>	4,352 S.F.

SYMBOL	MANUFACTURER/MODEL/DESCRIPTION	QTY
MV	RAIN BIRD PEB MASTER VALVE 1\"/>	1
C	RAIN BIRD TBOS4CMUS AND TBOSFTUS BATTERY-OPERATED CONTROLLER, 4 STATION, WITH TBOSFTUS FIELD TRANSMITTER	1
⊕	RAIN BIRD RSD-CEX RAIN SENSING DEVICE, CONDUIT MOUNT. WITH THREADED ADAPTER, EXTENSION WIRE.	1
---	IRRIGATION LATERAL LINE: PVC CLASS 200 SDR 21 PVC CLASS 200 IRRIGATION PIPE. ONLY LATERAL TRANSITION PIPE SIZES 1\"/>	889.3 L.F.
---	IRRIGATION MAINLINE: PVC CLASS 200 SDR 21 PVC CLASS 200 IRRIGATION PIPE.	32.8 L.F.
---	PIPE SLEEVE: PVC SCHEDULE 40 TYPICAL PIPE SLEEVE FOR IRRIGATION PIPE. PIPE SLEEVE SIZE SHALL ALLOW FOR IRRIGATION PIPING AND THEIR RELATED COUPLINGS TO EASILY SLIDE THROUGH SLEEVING MATERIAL. EXTEND SLEEVES 18 INCHES BEYOND EDGES OF PAVING FOR CONSTRUCTION.	465.7 L.F.



### VALVE SCHEDULE

NUMBER	MODEL	SIZE	TYPE	PSI	PSI @ POC	GPM	PRECIP
1	RAIN BIRD XCZ-150-PRB-COM	1-1/2"	AREA FOR DRILINE	28.61	34.79	17.81	0.69 in/h
2	RAIN BIRD XCZ-150-PRB-COM	1-1/2"	AREA FOR DRILINE	24.36	29.36	13.09	0.69 in/h
3	RAIN BIRD XCZ-150-PRB-COM	1-1/2"	AREA FOR DRILINE	23.55	28.75	13.40	0.69 in/h

NOTE:  
1. CONTRACTOR TO RETAIN EXISTING IRRIGATION TO ALL EXISTING TREES ON SITE.

### CRITICAL ANALYSIS

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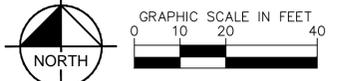
P.O.C. NUMBER: 01  
Water Source Information:

FLOW AVAILABLE  
Water Meter Size: 3/4"  
Flow Available: 22.50 gpm

PRESSURE AVAILABLE  
Static Pressure at POC: 50.00 psi  
Elevation Change: 5.00 ft  
Service Line Size: 1 1/4"  
Length of Service Line: 20.00 ft  
Pressure Available: 47.00 psi

DESIGN ANALYSIS  
Maximum Station Flow: 17.81 gpm  
Flow Available at POC: 22.50 gpm  
Residual Flow Available: 4.69 gpm

Pressure Req. at Critical Station: 26.61 psi  
Loss for Fittings: 0.03 psi  
Loss for Main Line: 0.30 psi  
Loss for POC to Valve Elevation: 0.00 psi  
Loss for Backflow: 0.00 psi  
Loss for Master Valve: 2.66 psi  
Loss for Water Meter: 5.19 psi  
Critical Station Pressure at POC: 34.79 psi  
Pressure Available: 47.00 psi  
Residual Pressure Available: 12.21 psi



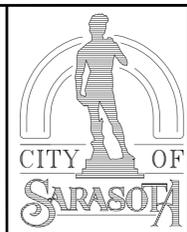
CALL 2 WORKING DAYS BEFORE YOU DIG

IT'S THE LAW! DIAL 811

Know what's below. Call before you dig

811

SUNSHINE STATE ONE CALL OF FLORIDA, INC.



No.	REVISIONS	DATE	BY

DRAFT 100%

**Kimley-Horn**

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WWW.KIMLEY-HORN.COM CA 00000696

LICENSED PROFESSIONAL	CHRISTOPHER D. CIANFLONE	FLORIDA LICENSE NUMBER	PLA # 6667207
KHA PROJECT	148197000	DATE	MARCH 2015
SCALE	AS SHOWN	DESIGNED BY	KHA
DRAWN BY	EMD	CHECKED BY	CMH
		DATE:	4/9/2015

### IRRIGATION PLAN

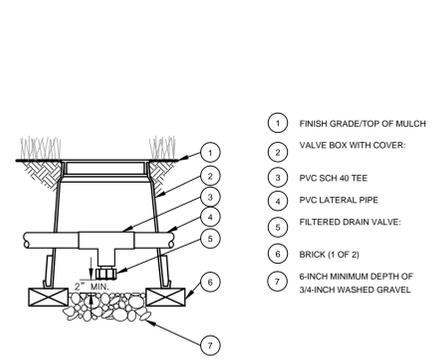
MAIN STREET AND ORANGE AVENUE ROUNDABOUT PREPARED FOR CITY OF SARASOTA

SARASOTA FLORIDA

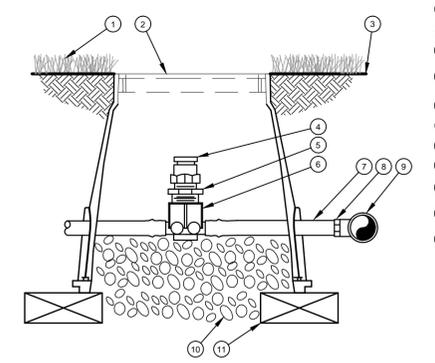
Plotted By: Clariflores, Chris Street Set: Main Street & Orange Roundabout Layout: 13A IRRIGATION NOTES AND DETAILS - April 09, 2015 03:16:54pm K:\SAR-URG\148197000 - sra main - orange roundabout\CADD\plansheets\IP\_PLANSHEETS.dwg  
 This document, together with the concepts and designs presented herein, is intended only for the specific purpose and client for which it was prepared. Reuse of and improper reliance on this document without written authorization and adaptation by Kimley-Horn and Associates, Inc. shall be without liability to Kimley-Horn and Associates, Inc.

**GENERAL IRRIGATION SPECIFICATIONS AND NOTES**

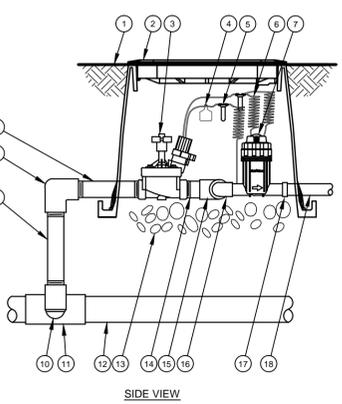
- THE SYSTEM SHALL BE DESIGNED TO PROVIDE 100% COVERAGE. ANY CHANGES MADE IN THE LAYOUT DUE TO FIELD CONDITIONS SHALL BE IN ACCORDANCE WITH THESE STANDARDS.
- VERIFY LOCATIONS OF ALL UNDERGROUND UTILITIES PRIOR TO INSTALLATION OF IRRIGATION SYSTEM. ALL UTILITIES AND STRUCTURES MAY NOT BE SHOWN ON THESE PLANS-CONTRACTOR SHALL FIELD VERIFY.
- CONTRACTOR TO FIELD VERIFY ALL POINT OF CONNECTION SOURCE INFORMATION INCLUDING PSI AND GPM PRIOR TO CONSTRUCTION.
- INSTALLATION OF WORK SHALL BE COORDINATED WITH OTHER CONTRACTORS IN SUCH A MANNER AS TO ALLOW FOR A SPEEDY AND ORDERLY COMPLETION OF ALL WORK ON-SITE.
- IRRIGATION DESIGN IS SCHEMATIC ONLY. FULL AND COMPLETE SHOP DRAWINGS SHALL BE SUBMITTED FOR REVIEW BY THE OWNER'S REPRESENTATIVE.
- CONTRACTOR SHALL COORDINATE WITH THE PLANTING PLAN FOR PLANTER BED AND TREE LOCATIONS TO ENSURE ALL PLANT MATERIAL IS COVERED BY 100% HEAD-TO-HEAD IRRIGATION.
- CONTRACTOR SHALL PROVIDE "AS-BUILT" DRAWINGS OF THE FINAL INSTALLATION TO OWNER AT SUBSTANTIAL COMPLETION BEFORE RECEIVING FINAL PAYMENT.
- IRRIGATION CONTRACTOR TO PROVIDE POWER SUPPLY TO ELECTRIC CONTROLLERS.
- IRRIGATION CONTRACTOR SHALL SECURE ANY AND ALL NECESSARY PERMITS FOR THE WORK PRIOR TO COMMENCEMENT OF HIS OPERATIONS ON-SITE. COPIES OF THE PERMITS SHALL BE SENT TO THE OWNER/GENERAL CONTRACTOR. WORK IN THE R.O.W. SHALL CONFORM TO THE STANDARDS AND SPECIFICATIONS OF LOCAL AND/OR STATE JURISDICTION.
- IRRIGATION SYSTEM SHALL NOT BE INSTALLED THROUGH PRESERVED PLANT COMMUNITIES OR WITHIN WETLANDS OR THEIR ASSOCIATED BUFFERS.
- LOCATE ALL IRRIGATION LINES WITHIN LANDSCAPED AREAS WHENEVER POSSIBLE. ALL LINES UNDER PAVEMENT MUST BE SLEEVED. ALL VALVES SHALL BE LOCATED WITHIN LANDSCAPED AREAS, AS SPECIFIED.
- MAINLINE SHALL NOT BE LOCATED WITHOUT PRIOR APPROVAL OF THE OWNER'S REPRESENTATIVE.
- CONTRACTOR TO COORDINATE LOCATION OF ALL METERS AND BACKFLOW ASSEMBLIES WITH PROJECT OWNER.
- THE IRRIGATION CONTRACTOR SHALL BE DIRECTLY RESPONSIBLE FOR SLEEVING AND DIRECTIONAL BORES.
- ALL SLEEVES UTILIZED BY THE IRRIGATION CONTRACTOR WHETHER INSTALLED BY HIM OR NOT, SHALL BE LOCATED ON THE "AS-BUILT" DRAWINGS. THE DEPTH BELOW FINISH GRADE TO THE NEAREST FOOT OF EACH END OF THE SLEEVE SHALL BE NOTED AT EACH SLEEVE LOCATION ON THE "AS-BUILT" DRAWINGS. ALL SLEEVES ON PLAN FOR WALL PENETRATIONS AND UNDER SIDEWALKS SHALL BE SIZED TWO PIPE SIZES GREATER THAN THE PIPE IT CARRIES.
- ALL PRESSURIZED MAINLINES AND LATERALS UNDER PAVEMENT SHALL BE WITHIN SLEEVES AS NOTED. WHERE ELECTRIC OR HYDRAULIC VALVE CONTROL LINES PASS THROUGH A SLEEVE WITH OTHER MAIN OR LATERAL LINES THEY SHALL BE CONTAINED WITHIN A SEPARATE, SMALLER CONDUIT.
- SLEEVES UNDER EXISTING PAVEMENT MUST BE DIRECTIONAL BORE. OPEN CUT IS NOT AN OPTION.
- NUMBER THE TOP OF ALL VALVE BOX LIDS WITH MINIMUM 1" HEIGHT BLACK LETTERS TO CORRESPOND TO AUTOMATIC AND GATE VALVE DESIGNATIONS. ALL HOSE BIBB VALVE BOXES SHALL BE LABELED IN A SIMILAR MANNER WITH THE DESIGNATION "HE" LETTER OUTSIDE OF TIME CLOCK CABINETS TO CORRESPOND WITH IRRIGATION CLOCK PROGRAM DESIGNATION.
- THE IRRIGATION CONTRACTOR SHALL INSTALL A COLOR CODED METAL DETECTABLE MARKING TAPE WHICH CLEARLY NOTES: "CAUTION: IRRIGATION LINE BURIED BELOW." THE TAPE SHALL BE INSTALLED THE FULL LENGTH OF THE IRRIGATION MAINLINE.
- ALL VALVES, SPLICES WITHIN CONTROL LINES, AND QUICK COUPLERS SHALL BE LOCATED WITHIN NDS VALVE BOXES AS FOLLOWS:  
 - RECTANGULAR 12"x17" HEAVY DUTY BOX. (PURPLE COVER FOR REUSE TO BE PROVIDED WHERE APPROPRIATE).
- ALL UNSIZED PIPE SHALL BE 3/4" UNLESS OTHERWISE NOTED ON PLAN. SEE LATERAL PIPE SIZING REQUIREMENTS.
- EACH TREE AND PALM (AS SHOWN ON THE PLANS) SHALL HAVE TWO (2) FLOOD BUBBLERS. SUCH HEADS SHALL BE ON MINIMUM 5'-0" LENGTH OF FLEXIBLE PIPE TO ALLOW ITS POSITIONING AT THE TREE. LOCATE BUBBLER ON THE UPHILL SIDE OF TREES ON ALL SLOPES.
- ALL IRRIGATION HEADS/DRIPLINE TUBING SHALL BE LOCATED ONE (1) FOOT FROM BACK OF CURB WHEN NEXT TO A ROADWAY. (THIS SHALL NOT INCLUDE PARKING AREAS OR DRIVE AISLES).
- LOCATE ALL VALVES IN PLANTING BEDS WITH A MINIMUM OF 3'-0" FROM BACK OF CURB OR EDGE OF PAVEMENT, UNLESS OTHERWISE NOTED. PIPE SIZES ON EITHER SIDE OF SECTION VALVES CONNECTING MAINLINE TO SECTION LATERAL SHALL BE ONE (1) PIPE SIZE LARGER THAN VALVE SIZE. WHERE MAINLINES RUN PARALLEL TO PAVEMENT OR CURBING, THE MAINLINE SHALL BE OFFSET 2'-0" FROM THE EDGE OF PAVEMENT OR CURB.
- IRRIGATION ZONES SHALL BE SEPARATED FOR HIGH AND LOW WATER USE REQUIREMENTS AND OPERATED ON DIFFERENT WATERING CYCLES. BUBBLERS, DRIPLINE, AND SPRAY HEADS SHALL BE SEPARATED ON DIFFERENT VALVES. AT NO TIME SHALL MULTIPLE IRRIGATION HEAD TYPES BE LOCATED ON THE SAME VALVE.
- ALL DRIPLINE ZONES SHALL BE INSTALLED WITH A FLUSH VALVE AND AIR RELIEF VALVE. IN THE EVENT THAT A DRIPLINE ZONE HAS MORE THAN ONE HIGH OR LOW POINT, MORE THAN ONE AIR RELIEF VALVE OR FLUSH VALVE WILL BE REQUIRED FOR THAT ZONE. DRIPLINE SHALL PROVIDE 0.9 GPH EMITTERS, 18" O.C. WITH 18" LINE SPACING AT A MINIMUM.
- IRRIGATION CONTRACTOR TO COORDINATE WITH OWNER FOR FINAL CONTROLLER AND RAIN SENSOR LOCATIONS. THE CONTROLLER SHALL BE PLACED IN A LOCKING CABINET APPROPRIATE FOR ITS LOCATION. (INDOOR VS. OUTDOOR USE)
- LOCATE THE AUTOMATIC RAIN SENSOR SHUTOFF DEVICE IN AN AREA THAT IS UNOBSTRUCTED BY TREES, ROOF OVERHANGS, OR ANY OTHER OVERHEAD OBJECT. THE SENSOR SHALL NOT BE PLACED WITHIN THE SPRAY ZONE OF ANY SPRINKLER HEAD, INCLUDING OFF-SITE IRRIGATION. CONTRACTOR SHALL LOCATE SENSOR WITHIN CLOSE PROXIMITY TO THE IRRIGATION CONTROLLER.
- CONTRACTOR SHALL PERFORM HYDRO-TESTING OF MAIN LINES.  
 HYDRO-TESTING TO BE PERFORMED AS LISTED:  
 THE CONTRACTOR SHALL NOTIFY THE OWNER'S REPRESENTATIVE FORTY EIGHT (48) HOURS IN ADVANCE OF TESTING. PRIOR TO BACKFILLING, CONTRACTOR SHALL FILL PIPING WITH WATER, IN THE PRESENCE OF THE OWNER'S REPRESENTATIVE, TAKING CARE TO PURGE THE AIR FROM IT. A SMALL, HIGH PRESSURE PUMP OR OTHER MEANS OF MAINTAINING A CONTINUOUS WATER SUPPLY SHALL BE CONNECTED TO THE PIPING AND SET SO AS TO MAINTAIN 125 PSI FOR TWO (2) HOURS WITHOUT INTERRUPTION. CONTRACTOR SHALL MAKE ANY NECESSARY CORRECTIONS AND RETEST THE SYSTEM UNTIL THE OWNER'S REPRESENTATIVE IS SATISFIED THAT THE SYSTEM IS REASONABLY SOUND.
- ALL WIRING FOR CONNECTION OF THE VALVES TO THE CONTROLLER SHALL FOLLOW MANUFACTURER'S SPECIFICATIONS. IF REQUIRED, ALL WIRING FOR A TWO WIRE PATH SHALL BE WITH RED/BLUE TWISTED PAIR 14 AWG. ELECTRIC CONTROL LINES FROM THE DECODER TO THE SOLENOID VALVES SHALL BE TWISTED PAIR 18 AWG. ALL DECODERS SHALL BE GROUNDED EVERY 1,000 L.F. OR EVERY 10 DEVICES. ALL WIRE SHALL BE FURNISHED IN MINIMUM 2,500' REELS AND SPLICING SHALL BE MINIMIZED. BURY SPLICING KIT. ALL 24 VOLT WIRING SHALL BE DONE IN ACCORDANCE WITH EXISTING CODES. SPLICING SHALL BE IN VALVE BOXES OR CONTROLLERS ONLY. IRRIGATION SYSTEM CONTROL SHALL BE TWO WIRE PATH. CONTRACTOR SHALL FOLLOW ALL MANUFACTURER'S REQUIREMENTS FOR THIS INSTALLATION. TWO WIRE SYSTEM SHALL HAVE 2-WAY COMMUNICATIONS FIELD PROGRAMMABILITY, STATION SPECIFICATIONS AND INTEGRATED SURGE PROTECTION.
- ALL CONTROL WIRE SHALL BE INSTALLED IN A 1 1/2" ELECTRICAL CONDUIT.
- CONTRACTOR TO MINIMIZE IRRIGATION OVERTHROW TO IMPERVIOUS AND NATURAL AREAS THROUGH FIELD ADJUSTMENTS TO INDIVIDUAL HEADS.
- ALL UNIMPROVED AREAS DISTURBED DURING CONSTRUCTION SHALL BE RESTORED TO THEIR ORIGINAL CONDITION BY THE CONTRACTOR.
- INSTALL ALL BACKFLOW PREVENTION DEVICES AND ALL PIPING BETWEEN THE POINT OF CONNECTION AND THE BACKFLOW PREVENTER AS PER LOCAL CODES. FINAL LOCATION SHALL BE DETERMINED BY THE OWNER'S AUTHORIZED REPRESENTATIVE.



**Drain Valve**  
SECTION NTS



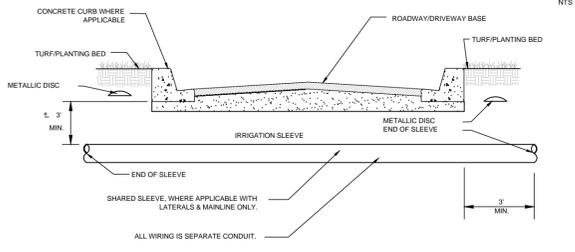
**Air Relief Valve in Dripline**  
SECTION NTS



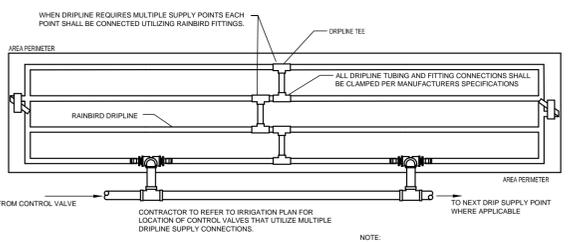
**SIDE VIEW**

- FINISH GRADE/TOP OF MULCH
- VALVE BOX WITH COVER
- REMOTE CONTROL VALVE
- ID TAG
- WATERPROOF CONNECTION
- 30-INCH LINEAR LENGTH OF WIRE, COILED
- PRESSURE REGULATING QUICK CHECK BASKET FILTER
- PVC SCH 80 NIPPLE (LENGTH AS REQUIRED)
- PVC SCH 40 ELL
- PVC SCH 80 NIPPLE (2-INCH LENGTH, HIDDEN) AND PVC SCH 40 ELL
- PVC SCH 40 TEE OR ELL
- MAINLINE PIPE
- 3-INCH MINIMUM DEPTH OF 3/4-INCH WASHED GRAVEL
- PVC SCH 80 NIPPLE, CLOSE
- PVC SCH 40 TEE
- PVC SCH 40 ELL
- PVC SCH 40 FEMALE ADAPTOR
- LATERAL PIPE

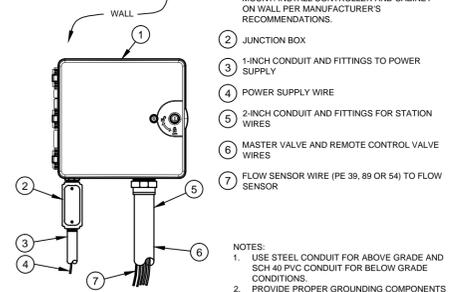
**Drip Zone Valve Kit**



**Typical Sleeving**  
SECTION NTS



**Typical Dripline**  
SECTION NTS

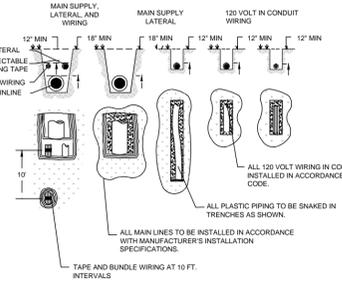


**Typical Controller**  
SECTION NTS

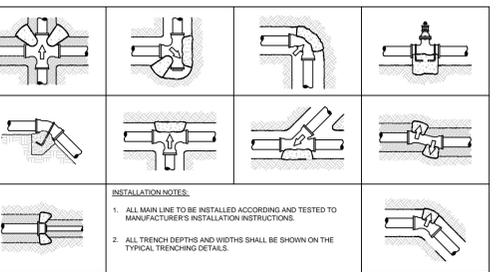
**LATERAL PIPE SIZING REQUIREMENTS**

FLOW RANGE	MINIMUM PIPE SIZE
1 TO 10 GPM	3/4"
11 TO 20 GPM	1"
21 TO 30 GPM	1-1/4"
31 TO 40 GPM	1-1/2"
41 TO 60 GPM	2"
51 TO 90 GPM	2-1/2"
91 TO 100 GPM	3"

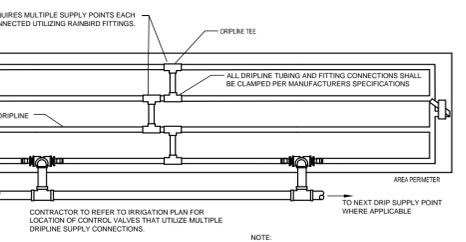
PIPE SIZES ILLUSTRATED IN THE ABOVE CHART ARE MINIMUM ACCEPTABLE SIZES. CONTRACTOR SHALL FIELD SIZE ALL LATERAL PIPING TO KEEP ALL FRICTION LOSS VELOCITIES BELOW 5.0 FPS.



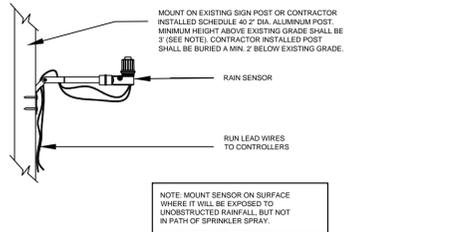
**Typical Trenching**  
SECTION NTS



**Typical Thrust Block**  
SECTION NTS



**Typical Control Valve**  
SECTION NTS



**RAIN SENSOR DETAIL**  
SECTION NTS



No.	REVISIONS	DATE	BY

**Kimley-Horn**  
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 1777 MAIN STREET, SUITE 200, SARASOTA, FL 34236  
 PHONE: 941-379-7600  
 WWW.KIMLEY-HORN.COM CA 00000696

KHA PROJECT	DATE	SCALE	DESIGNED BY	DRAWN BY	CHECKED BY
148197000	MARCH 2015	AS SHOWN	KHA	EMD	CWH

LICENSED PROFESSIONAL  
 CHRISTOPHER D. CIANFAGLIONE  
 FLORIDA LICENSE NUMBER PLA # 6667207  
 DATE: 4/9/2015

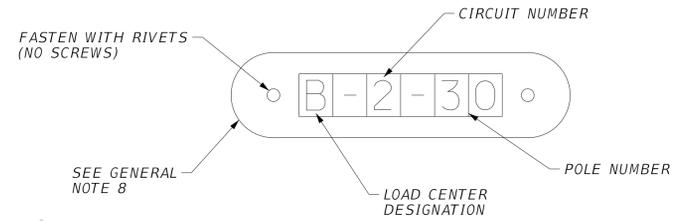
**IRRIGATION NOTES AND DETAILS**

MAIN STREET AND ORANGE AVENUE  
 ROUNDABOUT  
 PREPARED FOR  
 CITY OF SARASOTA  
 SARASOTA, FLORIDA

LIGHTING GENERAL NOTES

1. SPARE CONDUIT AT PAVEMENT CROSSINGS SHALL BE CAPPED AT BOTH ENDS.
2. PRIOR TO ANY EQUIPMENT ORDER, THE CONTRACTOR SHALL SUBMIT FOR APPROVAL EQUIPMENT SPECIFICATION OR DESIGN DATA FOR ALL MATERIAL PROPOSED FOR THE PROJECT. SEVEN (7) COPIES OF SHOP DRAWINGS AND DESIGN DATA FOR ROADWAY LIGHTING EQUIPMENT SHALL BE SUBMITTED TO THE ENGINEER OF RECORD IN ACCORDANCE WITH THE SPECIFICATIONS.
3. THE LOCATIONS OF EXISTING UTILITIES ARE SHOWN AS NOTICE TO THE CONTRACTOR THAT UNDERGROUND UTILITIES EXIST. THE CONTRACTOR SHALL NOTIFY THE UTILITY COMPANY OWNERS FOR LOCATION AND STAKING OF UNDERGROUND FACILITIES BEFORE EXCAVATING.
4. STATE OF FLORIDA STATUTE 556.105 (2008) REQUIRES THAT BEFORE EXCAVATING, NOTICE BE GIVEN TO THE UTILITY OWNER A MINIMUM OF TWO (2) FULL BUSINESS DAYS AND A MAXIMUM OF FIVE (5) FULL BUSINESS DAYS. NOT ALL UTILITY COMPANIES ARE MEMBERS OF "SUNSHINE" 1-800-432-4770.
5. THE LOCATION OF THE POLES, CONDUCTORS, CONDUITS, JUNCTION BOXES AND SERVICE POLES ARE DIAGRAMMATIC ONLY AND MAY BE SHIFTED BY THE CITY'S ENGINEER TO ACCOMMODATE LOCAL CONDITIONS AND EXISTING UTILITY LOCATIONS.
6. LIGHT POLES, LUMINARIES, AND BASES SHALL BE FABRICATED IN ACCORDANCE WITH AASHTO'S "STANDARD SPECIFICATIONS FOR STRUCTURAL SUPPORTS FOR HIGHWAY SIGNS, LUMINARIES, AND TRAFFIC SIGNALS", AND SHALL HAVE BEEN TESTED BY F.H.W.A. APPROVED METHODS (1994 EDITION). CERTIFICATION FOR TESTS SHALL BE SUBMITTED WITH THE SHOP DRAWINGS.
7. ALL ELECTRICAL WORK SHALL MEET ALL REQUIREMENTS OF THE LATEST EDITIONS OF THE NATIONAL ELECTRICAL CODE, THE NATIONAL ELECTRICAL SAFETY CODE, AND THE STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION. ALL COMPONENTS SHALL BE PROPERLY GROUNDED AND BONDED PER THE NATIONAL ELECTRICAL CODE REQUIREMENTS.
8. THE CONTRACTOR SHALL FURNISH AND INSTALL AN ALUMINUM IDENTIFICATION TAG ON EACH ROADWAY LIGHTING STANDARD. TAGS SHALL BE 2" X 8" IN SIZE WITH BLACK LETTERS ON YELLOW BACKGROUND, ATTACHED WITH RIVETS (NO SCREWS). NUMBERS SHALL BE AS SHOWN ON THE PLAN SHEET, POLE IDENTIFICATION TAG DETAIL. COST OF TAGS SHALL BE INCLUDED IN THE BID ITEMS FOR LIGHT POLE COMPLETE. BOTTOM OF THE TAG SHALL BE 60 INCHES ABOVE THE FINISHED GRADE.
9. THE CONTRACTOR SHALL NOTIFY FLORIDA POWER & LIGHT AT LEAST 48 HOURS PRIOR TO ANY INSTALLATION THAT IS WITHIN 10 FEET OF ENERGIZED ELECTRICAL CONDUCTORS. CONTRACTOR SHALL ALSO COMPLY WITH OSHA RULE (29 CFR PART 1926) "CRANES AND DERRICKS IN CONSTRUCTION." FLORIDA POWER & LIGHT, AT ITS OPTION, SHALL ASSIST THE CONTRACTOR, COVER UP ENERGIZED CONDUCTORS AT INSTALLATION SITE, OR TAKE OTHER SAFETY PRECAUTIONS AS NECESSARY. EXTREME CAUTION SHALL BE EXERCISED AT ALL TIMES IN PERFORMANCE OF WORK AROUND THE PRIMARY HIGH VOLTAGE COMPONENTS.
10. PULLING INSTRUCTIONS: CONNECT PULLING DEVICES TO COPPER WIRE AND NOT TO JACKET AND MEET MANUFACTURER'S REQUIREMENTS. USE PULLING COMPOUND PER MANUFACTURER'S REQUIREMENTS. ALL BENDS SHALL NOT BE LESS THAN RECOMMENDED BY THE NATIONAL ELECTRICAL CODE OR NATIONAL ELECTRICAL SAFETY CODE FOR CABLE USED.
11. THE CONTRACTOR SHALL STAKE ALL POLE LOCATIONS AND REQUEST UTILITY COMPANIES TO LOCATE AND STAKE UNDERGROUND UTILITIES PRIOR TO EXCAVATING.
12. ALL CONDUITS UNDER ROADWAY (AND/OR SIDEWALK) SHALL BE INSTALLED PRIOR TO INSTALLATION OF ROADWAY BASE AND SURFACE (OR CONCRETE). EXCEPT WHERE OTHERWISE SPECIFIED IN THE PLANS.
13. DIRECTIONAL BORE OPERATIONS IF USED SHALL MEET THE REQUIREMENTS OF F.D.O.T.'S UTILITY ACCOMMODATION GUIDE (LATEST EDITION).
14. AT LOCATIONS WHERE UNDERGROUND UTILITIES ARE IN CLOSE PROXIMITY TO THE LIGHTING POLE FOUNDATIONS OR CONDUIT RUN, AS DETERMINED BY THE CONTRACTOR, THE CONTRACTOR WILL HAND DIG THE FIRST 4 FEET OF THE HOLE FOR THE POLE FOUNDATION AND CONDUIT RUN.
15. ALL CONDUIT TRENCHES SHALL BE BACKFILLED COMPLETELY TO PROVIDE SAFE CROSSING BY THE END OF EACH WORKING DAY OR WHENEVER THE WORK ZONE BECOMES INACTIVE. THE CONTRACTOR SHALL NOT OPEN ANY AREA THAT CAN NOT BE BACKFILLED IN THE SAME WORK PERIOD.
16. ALL EXCESS DIRT AND DEBRIS EXCAVATED FROM POLE FOUNDATIONS SHALL BE REMOVED DAILY TO AREAS APPROVED BY THE ENGINEER AND PAID FOR UNDER PAY ITEM 715-511-115.
17. THE LIGHTING SYSTEM WILL BE MAINTAINED BY THE CITY OF SARASOTA UPON FINAL ACCEPTANCE. THE CONTRACTOR SHALL SUBMIT THE AS-BUILT PLANS TO THE ENGINEER, PRIOR TO FINAL ACCEPTANCE.
18. THE CONTRACTOR SHALL NOTIFY THE CITY OF SARASOTA TRAFFIC DEPARTMENT BEFORE ANY TRENCHING OR DIGGING AT ALL SIGNALIZED INTERSECTIONS SO THAT ALL UNDERGROUND LOOP LEAD-INS AND ELECTRICAL CABLES CAN BE IDENTIFIED AND MARKED APPROPRIATELY.
19. ALL EXISTING ROADWAY LIGHTING WITHIN THE PROJECT LIMITS SHALL REMAIN UNLESS OTHERWISE NOTED.
20. ALL EXISTING UTILITIES ARE TO REMAIN IN PLACE UNLESS OTHERWISE NOTED.
21. POLES LABELED AS "TO BE REMOVED AND INSTALLED" WILL BE REMOVED TO PROTECT THEM FROM DAMAGE DUE TO CONSTRUCTION AND THEN INSTALLED AT THE SAME LOCATION. FOUNDATION WILL REMAIN IN PLACE UNLESS OTHERWISE NOTED. POWER DOWN CIRCUIT AT LOAD CENTER, DISCONNECT POLE FROM CIRCUIT(S) AND CAREFULLY REMOVE POLE. PROTECT POLE COMPONENTS FROM DAMAGE AND CAP ANY BARE WIRES. STORE POLE COMPONENTS IN A SAFE PLACE. WHILE POLES ARE DOWN, CLEAN LIGHT FIXTURE COMPONENTS AND REPLACE ANY DAMAGED BULBS OR BALLASTS. THIS WORK WILL BE INCLUDED IN THE PAYMENT OF THE REMOVE/INSTALL POLE.
22. REPLACE ANY POLE COMPONENT DAMAGED BY CONSTRUCTION. APPROVAL OF THE REPLACEMENT COMPONENTS BY THE CITY OF SARASOTA IS NEEDED BEFORE INSTALLATION.

POLE IDENTIFICATION TAG DETAIL



LEGEND

SYMBOLS	DESCRIPTION
	NEW OR RELOCATED LIGHT POLE. SYMBOL INCLUDES POLE, LUMINAIRE, FOUNDATION, PCDS, RECEPTACLE AND CONCRETE SLAB (IF NEEDED). PCDS TO BE PAID FOR SEPARATELY.
	EXISTING LIGHT FIXTURE TO REMAIN UNLESS OTHERWISE NOTED.
	EXISTING LIGHT FIXTURE TO BE REMOVED OR REMOVED-AND-INSTALLED AT THE SAME LOCATION. SEE NOTE 21.
	NEW CONDUIT AND CONDUCTORS: SHOULD MATCH EXISTING CONDUITS AND CONDUCTORS.
	PULL BOX - SIZE SHALL BE 13"W X 12"H X 24"L. FOR SPECIFICATIONS SEE SECTION 635 OF STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION.
	EXISTING DISTRIBUTION POINT. FOR REQUIREMENTS SEE INDEX NO. 17504 OF DESIGN STANDARDS.



DATE	REVISIONS	BY

APPROVED BY:  
ALEJANDRO ANAYA, PE, PTOE  
FLORIDA  
REG. NO. 06083  
SIGNATURE  
DATE:

LIGHTING GENERAL NOTES

MAIN STREET AND ORANGE AVE MODERN ROUNDABOUT

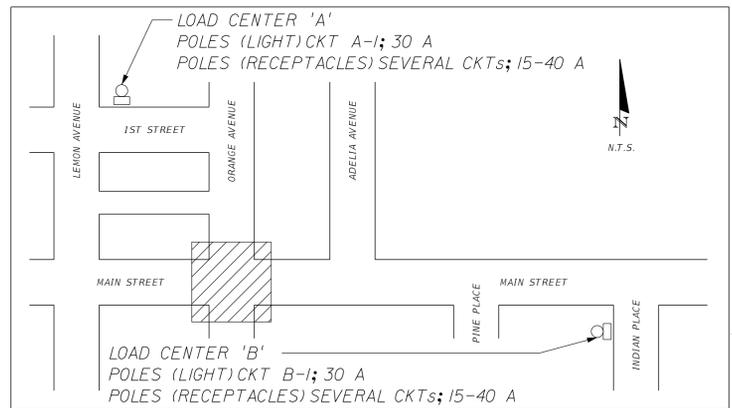
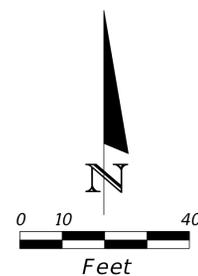
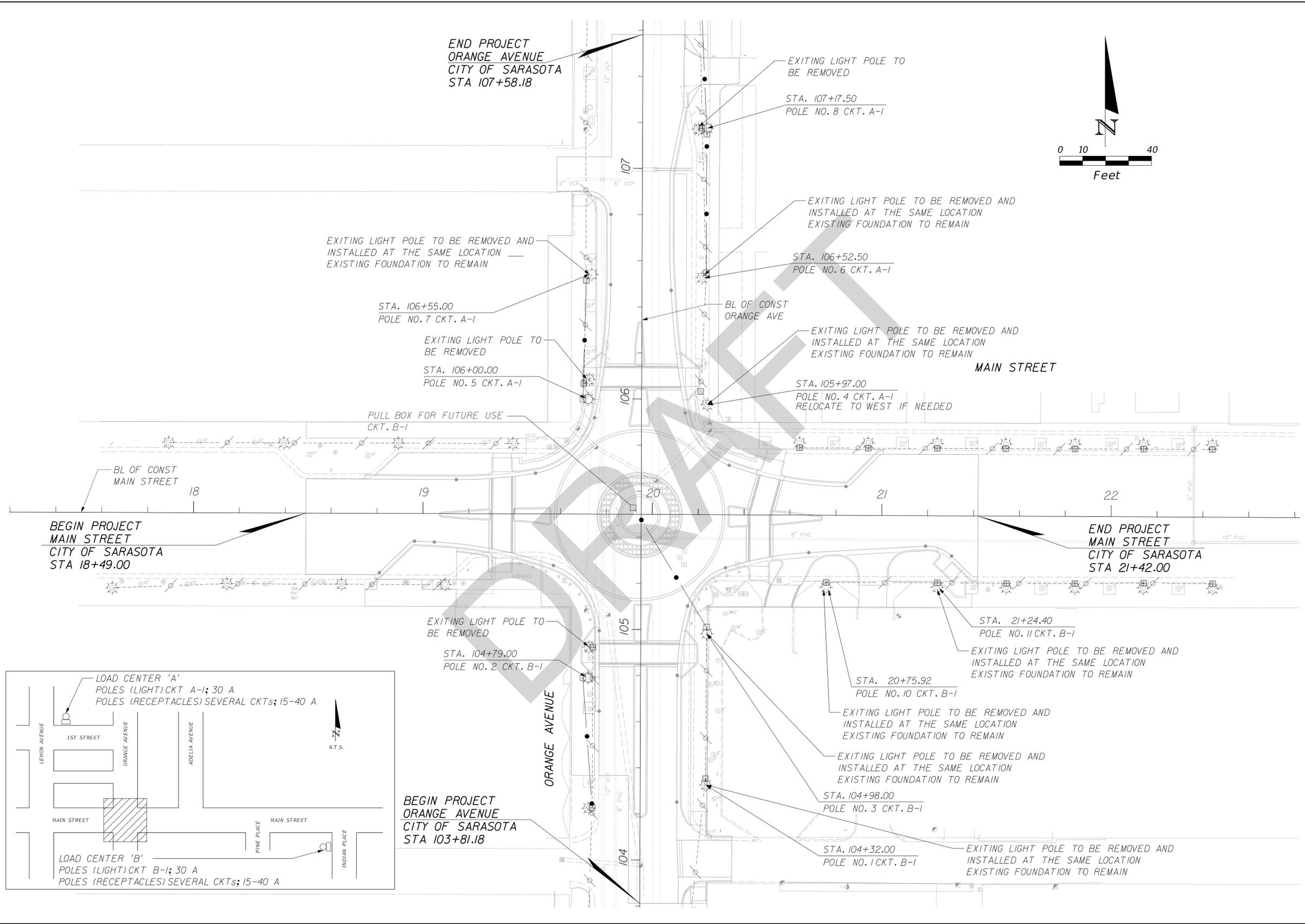
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PROJECT No. 120104  
SCALE: SEE PLAN  
DRAWN BY: BCI

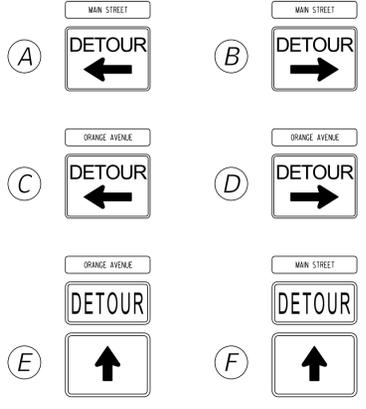
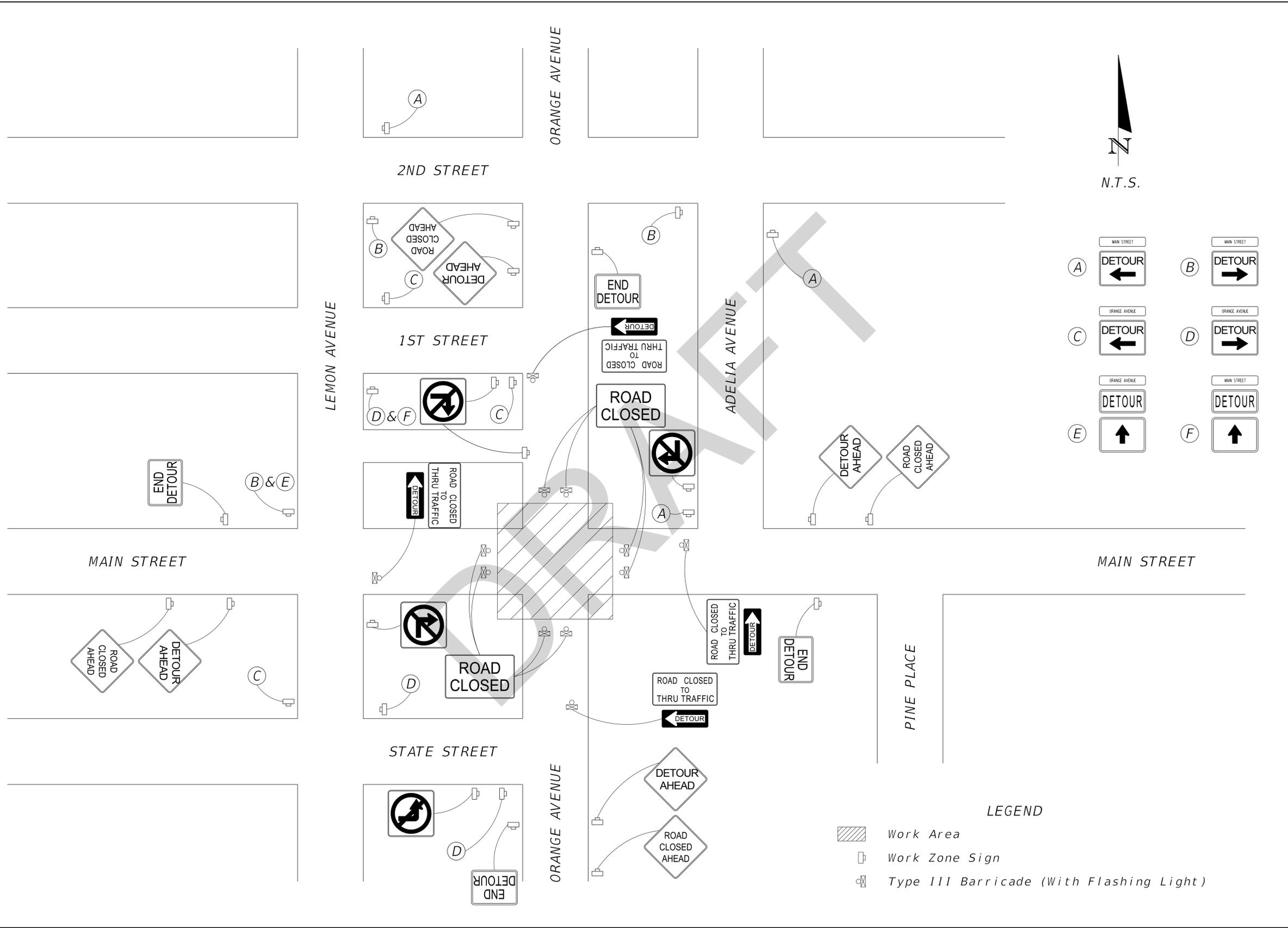
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14

FILENAME: \$FILES

PLOTTED: \$DATES



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<b>LIGHTING PLAN</b>	
<b>MAIN STREET AND ORANGE AVE MODERN ROUNDABOUT</b>	
4902 Eisenhower Blvd, Suite 250 Tampa, Florida 33634 Phone (813) 381-5017 Fax (813) 381-7134 Certificate of Auth. No. 29196 <b>ESRP CORPORATION</b> Engineering Sciences Research Planning	
PROJECT No. 120104	SCALE: SEE PLAN
DRAWN BY: BCI	BY:
SHEET NUMBER <b>14A</b>	REVISIONS DATE



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**ESRP**  
CORPORATION  
Engineering Sciences Research Planning

APPROVED BY:  
ALEJANDRO ANAYA, PE, PTOE  
FLORIDA  
REG. NO. 86883

DATE: \_\_\_\_\_  
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PROJECT No. 120104 | SCALE: SEE PLAN | DRAWN BY: BCI

MAINTENANCE OF TRAFFIC DETOUR DETAIL

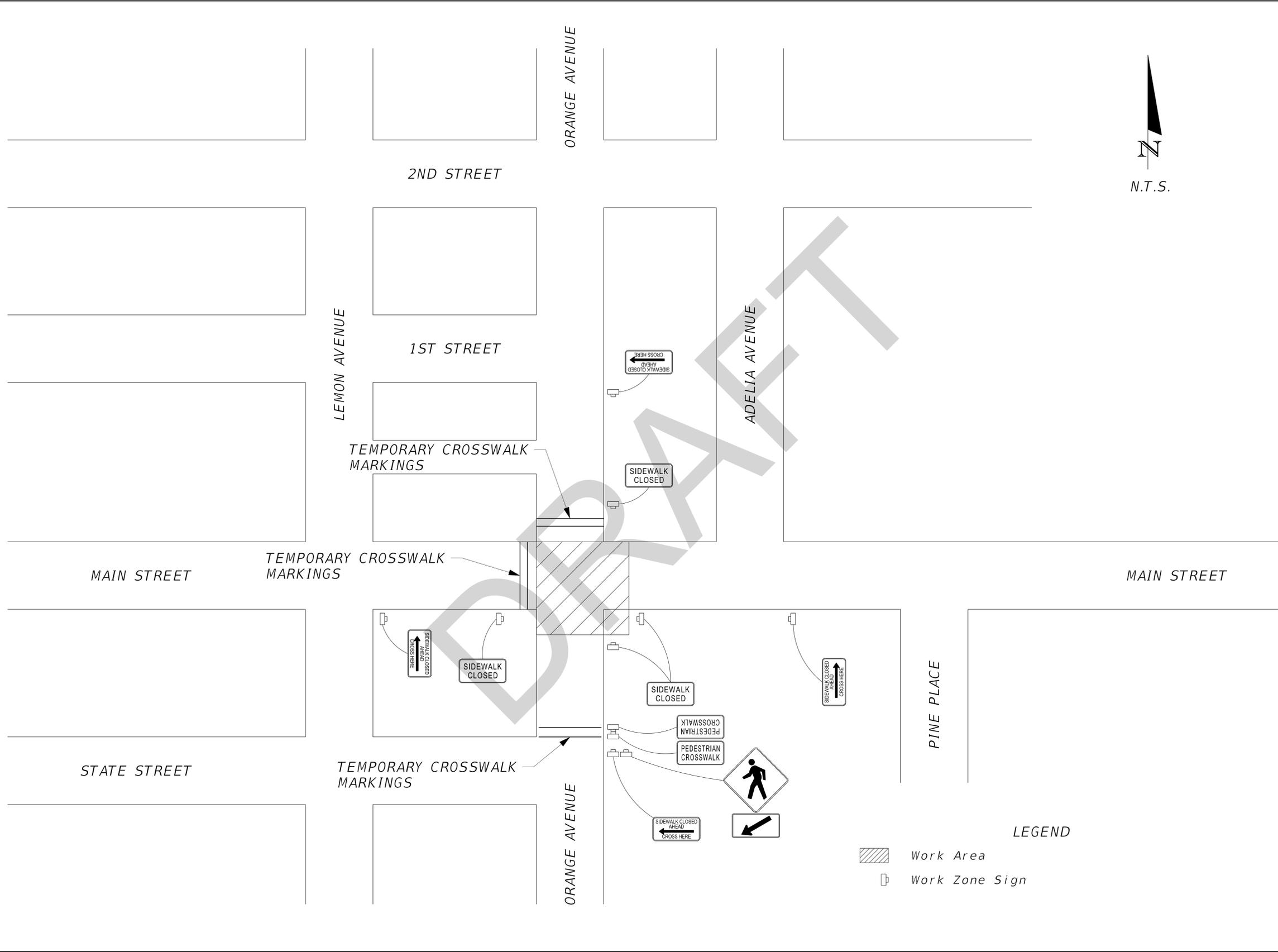
MAIN STREET AND ORANGE AVE MODERN ROUNDABOUT

CITY OF SARASOTA

REVISIONS

NO.	DATE	REVISIONS	BY

SHEET NUMBER 15



NO.	DATE	REVISIONS	BY

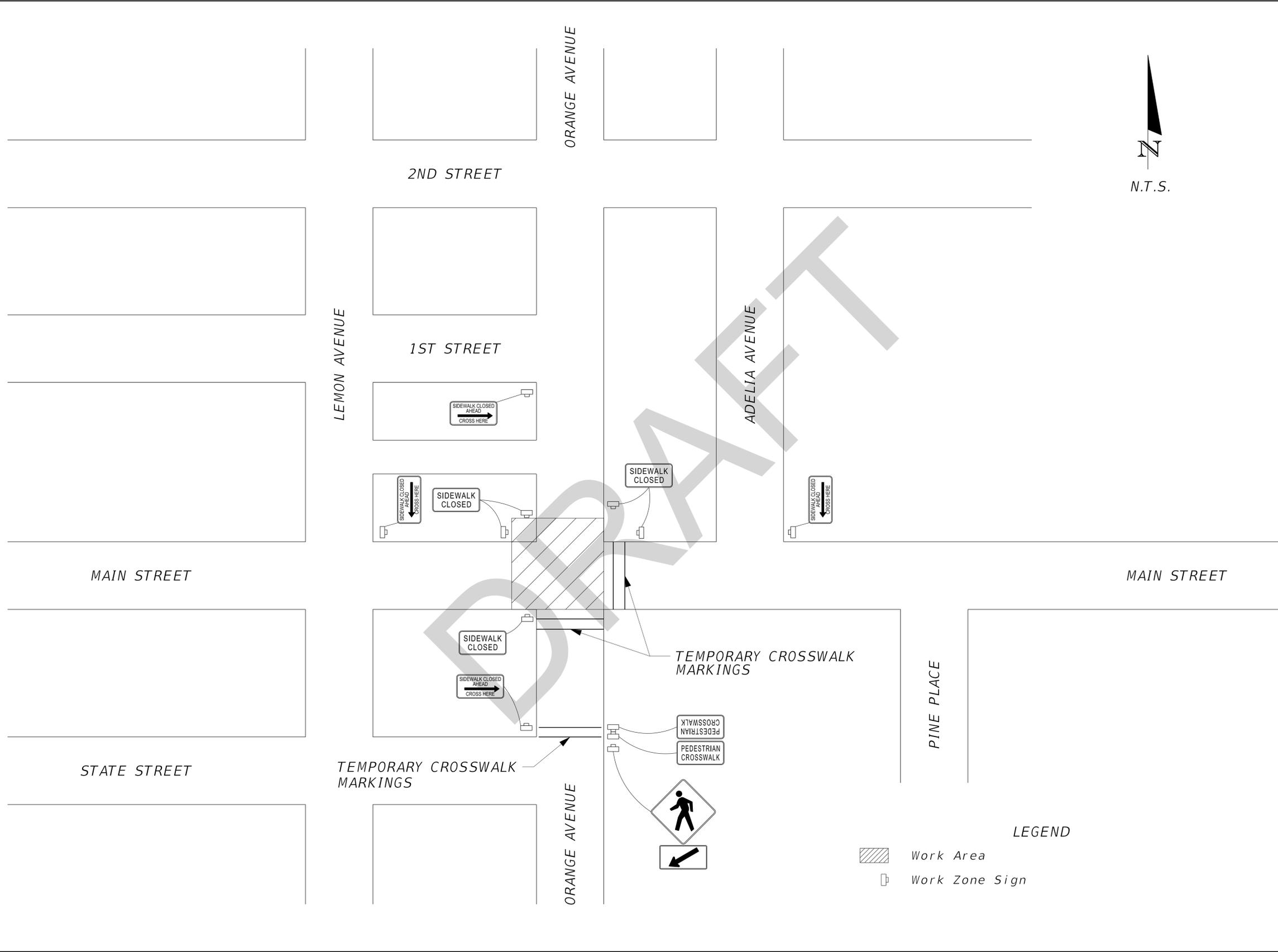
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FLORIDA  
REG. NO. 66983  
SIGNATURE  
DATE:

**MAINTENANCE OF TRAFFIC PEDESTRIAN DETOUR DETAIL PHASE I**

**MAIN STREET AND ORANGE AVE MODERN ROUNDABOUT**

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PROJECT No. 120104 SCALE: SEE PLAN DRAWN BY: BCI

SHEET NUMBER  
**15A**



NO.	DATE	REVISIONS	BY

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FLORIDA  
REG. NO. 66983  
SIGNATURE  
DATE:

**MAINTENANCE  
OF TRAFFIC  
PEDESTRIAN  
DETOUR DETAIL  
PHASE II**

**MAIN STREET AND  
ORANGE AVE  
MODERN ROUNDABOUT**

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**ESRP**  
CORPORATION  
Engineering Sciences Research Planning

PROJECT No. 120104 SCALE: SEE PLAN DRAWN BY: BCI  
SHEET NUMBER  
15B

Panel		Served From		Manufacturer		S.Q.D.		Cat #	
XPNW		CB - NW		S.Q.D.		Q012L125		Q012L125	
Mounted SURFACE		Volts 240		Phase 1		Wire 3		M.L.O Buss 125_Amps	
M.C.B. Amps									
CKT	Serves	VA	Amps	CB	VA	Amps	Serves	CKT	A
1	PBA-W-SIDE	2700	22.5	30	40	27.5	B300	2	
3	PBA-E-SIDE	2700	22.5	30	40	27.5	B300	4	
5	PBC-W-SIDE	1800	15.0	20	20	12.5	B1500	6	
7	PBC-E-SIDE	1800	15.0	20	20	12.5	B1500	8	
9								10	
11								12	

General Ltg. Load	0100%	0%		Feeder Load	96.9 Amps
Contin. Ltg. Load	0100%	0125%	23250	Use	125 Amp Service
Receptacle Load	0100%	0%			
A/C Load	0100%	0%			
Elec. Heat Load	0100%	0%		Feeder	3 #1/0 THWN C.1 1/4"
Other Loads	0100%	0%			# 6GND
Total Demand			23250		

Panel		Served From		Manufacturer		S.Q.D.		Cat #	
XPSW		CB - SW		S.Q.D.		Q012L125		Q012L125	
Mounted SURFACE		Volts 240		Phase 1		Wire 3		M.L.O Buss 125_Amps	
M.C.B. Amps									
CKT	Serves	VA	Amps	CB	VA	Amps	Serves	CKT	A
1	PBE-W-SIDE	6600	20.0	30	40	30.0	B600	2	
3	PBE-E-SIDE	1200	20.0	30	40	30.0	B1200	4	
5	PBG-W-SIDE	1500	17.5	30	20	12.5	B900	6	
7	PBG-E-SIDE	1500	17.5	30	20	12.5	B900	8	
9								10	
11								12	

General Ltg. Load	0100%	0%		Total Amps	
Contin. Ltg. Load	0100%	0125%	24375	Feeder Load	101.6 Amps
Receptacle Load	0100%	0%		Use	125 Amp Service
A/C Load	0100%	0%			
Elec. Heat Load	0100%	0%		Feeder	3 #1/0 THWN C.1 1/4"
Other Loads	0100%	0%			# 6GND
Total Demand			24375		

Panel		Served From		Manufacturer		S.Q.D.		Cat #	
XPNE		CB - NW		S.Q.D.		Q012L125		Q012L125	
Mounted SURFACE		Volts 240		Phase 1		Wire 3		M.L.O Buss 125_Amps	
M.C.B. Amps									
CKT	Serves	VA	Amps	CB	VA	Amps	Serves	CKT	A
1	PBJ-W-SIDE	1800	15.0	20	20	15.0	B1800	2	
3	PBJ-E-SIDE	1800	15.0	20	20	15.0	B1800	4	
5	PBL-W-SIDE	1800	15.0	20	20	15.0	B1800	6	
7	PBL-E-SIDE	1800	15.0	20	20	15.0	B1800	8	
9								10	
11								12	

General Ltg. Load	0100%	0%		Total Amps	
Contin. Ltg. Load	0100%	0125%	13500	Feeder Load	56.3 Amps
Receptacle Load	0100%	0%		Use	100 Amp Service
A/C Load	0100%	0%			
Elec. Heat Load	0100%	0%		Feeder	3 #3 THWN C.1 1/4"
Other Loads	0100%	0%			# 6GND
Total Demand			13500		

Panel		Served From		Manufacturer		S.Q.D.		Cat #	
XPSE		CB - NW		S.Q.D.		Q012L125		Q012L125	
Mounted SURFACE		Volts 240		Phase 1		Wire 3		M.L.O Buss 125_Amps	
M.C.B. Amps									
CKT	Serves	VA	Amps	CB	VA	Amps	Serves	CKT	A
1	PBM-W-SIDE	2100	17.5	30	30	22.5	B2100	2	
3	PBM-E-SIDE	2100	17.5	30	30	22.5	B2100	4	
5	PBP-W-SIDE	1500	12.5	30	20	12.5	B1500	6	
7	PBP-E-SIDE	1500	12.5	30	20	12.5	B1500	8	
9								10	
11								12	

General Ltg. Load	0100%	0%		Total Amps	
Contin. Ltg. Load	0100%	0125%	15375	Feeder Load	64.1 Amps
Receptacle Load	0100%	0%		Use	100 Amp Service
A/C Load	0100%	0%			
Elec. Heat Load	0100%	0%		Feeder	3 #3 THWN C.1 1/4"
Other Loads	0100%	0%			# 6GND
Total Demand			15375		

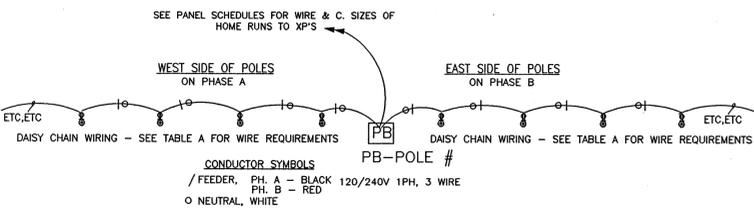
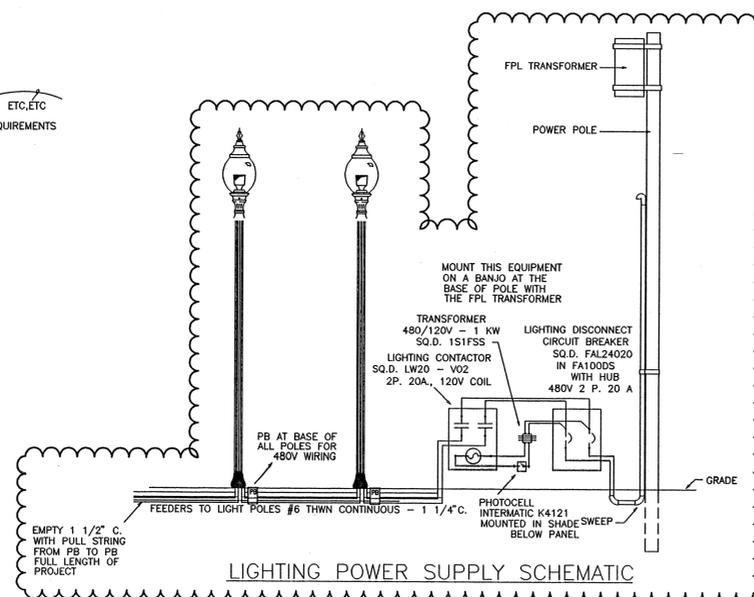


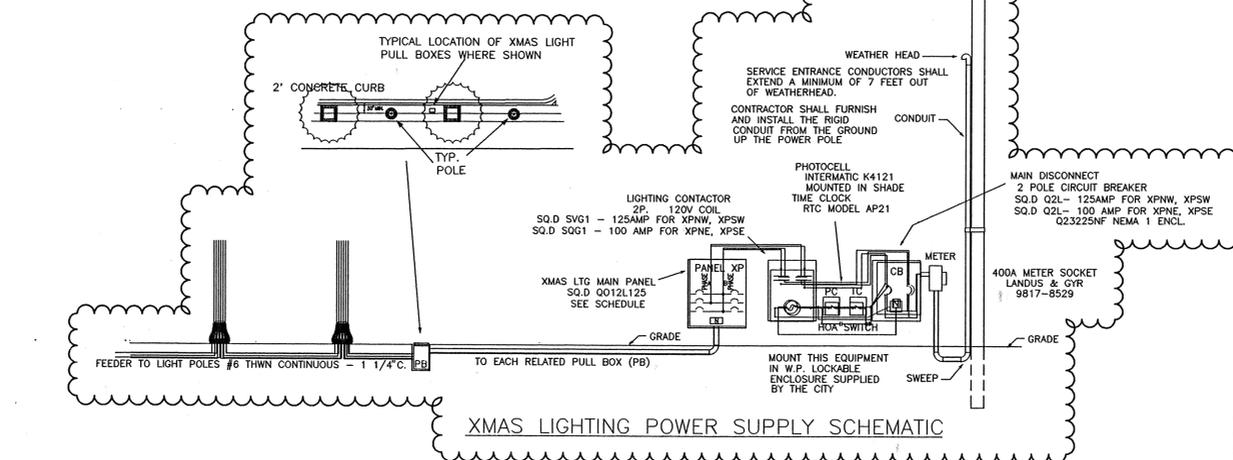
TABLE A - FEEDERS FOR XMAS LIGHTS

XPB LOCATION	FED FROM	# OF POLES	POLE NO. S FROM	POLE NO. E TO	WIRE SIZE	C.	DELETED POLES
A 9-10	XPNW	9	1	9	#6	1 1/4"	
B 29-30		9	20	29	#6		#17 AND #24
C 46-47		6	41	46	#6		
D 57-58		5	53	57	#6		
E 8-9	XPSW	8	1	8	#6		
F 28-29		11	17	28	#6		#22
G 47-48		7	41	47	#6		#31
H 58-59		5	54	58	#6		
J 6-7	XPNE	6	1	6	#6		
K 18-19		6	13	18	#6		
L 30-31		6	19	24	#6		
M 7-8	XPSE	7	1	7	#6		
N 23-24		9	15	23	#6		
P 36-37		5	32	36	#6		

- NOTES:
- CONDUIT CANNOT BE RUN WITHIN 4'-0" OF BACK OF CURB.
  - TEMPORARY STREET LIGHTING TO BE PROVIDED BY THE CITY.
  - CONTRACTOR SHALL ONLY BE RESPONSIBLE FOR CLEAN-UP OF DEBRIS CREATED BY HIMSELF.
- STREET LIGHT SUPPLIED & STORED BY THE CITY. COMPLETE WITH 20A DUPLEX RECEPTACLE. CONTRACTOR TO MOVE TO SITE AND INSTALL.



LIGHTING POWER SUPPLY SCHEMATIC



XMAS LIGHTING POWER SUPPLY SCHEMATIC

LEGEND

- PB PULL BOX FOR XMAS LTG DISTRIBUTION
- D EXISTING FPL POLE WITH 120/240V TRANSFORMER
- XPSE POLE SELECTED FOR 120/240V POWER SOURCE SHOWN WITH XP DISTRIBUTION PANEL AS DESIGNATED
- FPL POLE WITH 480V 2 WIRE POWER FOR UNMETERED STREET LIGHTING
- 408V STREET LIGHT WIRING
- 120/240V RECEPTACLE POWER WIRING
- DIRECTION BORE UNDER ROADWAY
- PB PULL BOX
- HH HAND HOLE
- SE29 LIGHT POLE WITH NUMBER DESIGNATION

LUMINAIRE:

- MODEL: LAG1-YA-PF
- 50 WATT
  - 70 WATT
  - 100 WATT
  - 175 WATT
  - 250 WATT
  - 400 WATT
  - METAL HALIDE LAMP
  - HIGH PRESSURE SODIUM

DIFFUSER:

- PATTERNED POLYCARBONATE
- ACRYLIC
- GLASS
- UVH INHIBITORS

PRISMATIC GLASS REFRACTOR:

- TYPE III
- TYPE IV

ORNAMENTAL FINIAL:

- YES
- BRASS
- ORNAMENTAL
- NO

ARM BRACKETS:

- SINGLE
- DOUBLE
- TRIPLE
- QUAD

HOUSE SHIELD:

- 90 DEG.
- 135 DEG.
- 180 DEG.

INTERNAL LOUVER:

- YES
- NO

POLE:

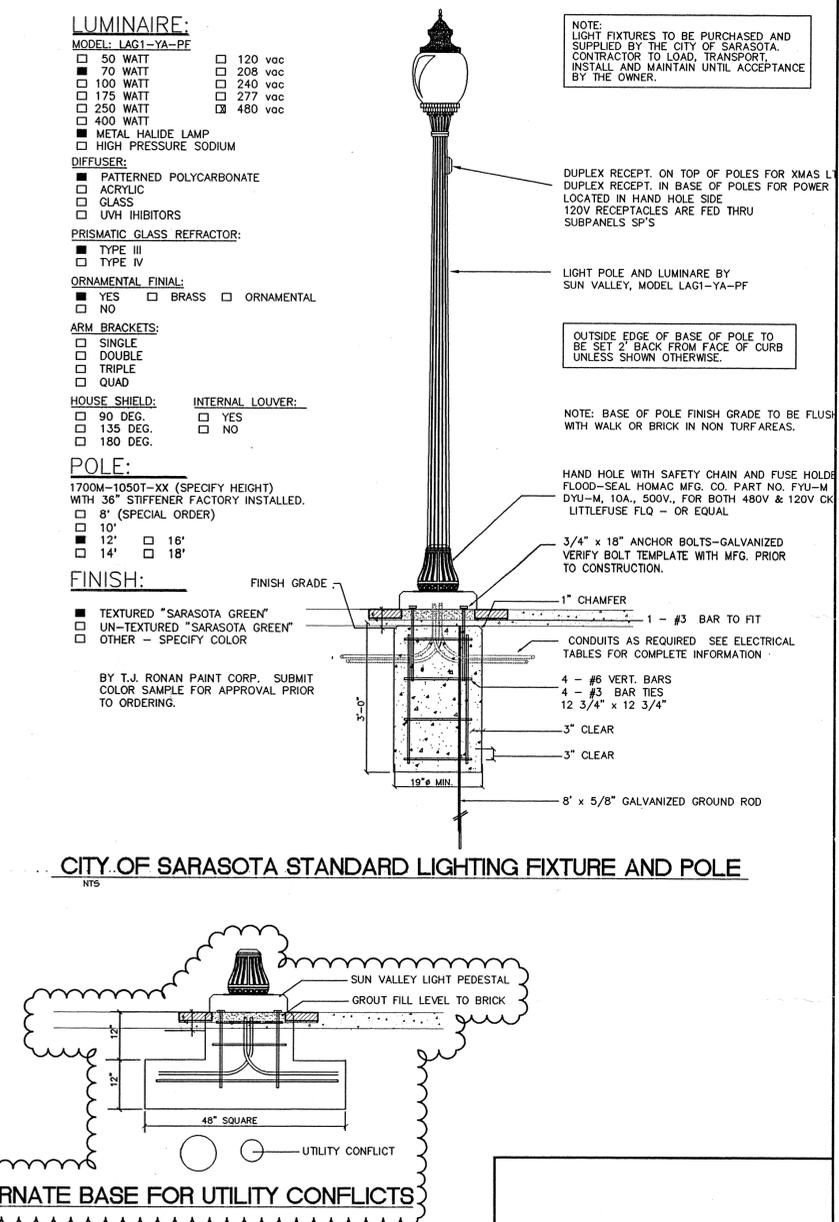
- 1700M-1050T-XX (SPECIFY HEIGHT) WITH 36" STIFFENER FACTORY INSTALLED.
- 8' (SPECIAL ORDER)
  - 10'
  - 12'
  - 14'
  - 16'

FINISH:

- TEXTURED "SARASOTA GREEN"
- UN-TEXTURED "SARASOTA GREEN"
- OTHER - SPECIFY COLOR

BY T.J. RONAN PAINT CORP. SUBMIT COLOR SAMPLE FOR APPROVAL PRIOR TO ORDERING.

CITY OF SARASOTA STANDARD LIGHTING FIXTURE AND POLE



ALTERNATE BASE FOR UTILITY CONFLICTS

NO.	REVISION	DATE	BY
1	Rev. Lighting Power Supply Schematic as per Add. 1	05/30/02	FBW
2	Rev. Table A as per Addendum I	05/30/02	FBW
3	Rev. Xmas Lighting Power Supply Schematic as per Addendum I	05/30/02	FBW
4	Rev. Alternate Base for Utility Conflicts as per Add. 1	05/30/02	FBW
5	Rev. Switchgear Equipment to be manufactured by Square D or equal as per Addendum I	05/30/02	FBW

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**dwja** LANDSCAPE ARCHITECTS  
**DAVID W. JOHNSTON ASSOCIATES**  
 1491 SECOND STREET SUITE B • SARASOTA, FL 34236 • (941) 366-3153

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**Kimley-Horn and Associates, Inc.**  
 2700 BOBCAT VILLAGE CENTER ROAD, SUITE 100 NORTH PORT, FLORIDA 34288  
 TEL (941) 423-4343 FAX (941) 429-8108

Design By: DWJ, INC. Drawn By: FBW Checked By: FBW Project No.: 0113  
 CADD File: WD-LIGHTING Plot Index: Date: 07/01/02 SCALE: 1" = 20'

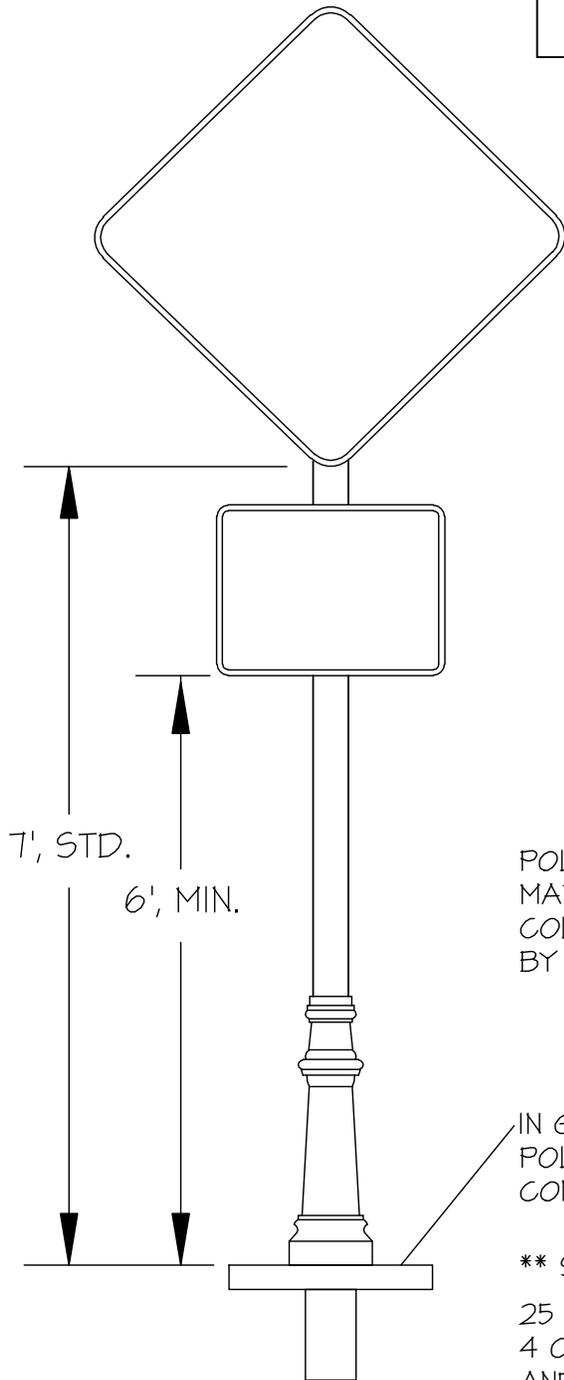
FOR: CITY OF SARASOTA PUBLIC WORKS  
 UPPER MAIN STREETScape

DESC: LIGHTING DETAILS

L-25

3" ROUND POLE, BASE, SIGN BRACKETS, AND DECORATIVE BACKING AS MANUFACTURED BY:

BROWARD CASTING FOUNDRY, INC.  
2240 SW 34TH STREET  
FORT LAUDERDALE, FL. 33132  
(954) 584-6400



36" PEDSTRIAN CROSSING SIGN (W11-2)  
SUPPLIED BY THE CONTRACTOR. SIGN TO BE  
MOUNTED TO ALLOW 7' CLEARANCE TO THE  
BOTTOM OF THE SIGN.

24" X 18" ARROW SIGN (W16-7P)  
SUPPLIED BY THE CONTRACTOR. SIGN  
TO BE MOUNTED TO ALLOW 4' MINIMUM  
CLEARANCE TO THE BOTTOM OF THE  
SIGN.

\* ALL SIGNS AND POSTS ARE TO BE  
PROVIDED BY THE CONTRACTOR.

POLE AND BASE COLOR TO  
MATCH STREET LIGHT POLES.  
COLOR SAMPLE TO BE APPROVED  
BY LANDSCAPE ARCHITECT

IN GROUND DIRECT BURY  
POLE AND PRECAST  
CONCRETE SUPPORT

\*\* SEE TRAFFIC CONTROL PLAN / DETAILS  
25 SIGN POST LOCATIONS (MAIN AND 5 POINTS).  
4 OF THE 25 SIGNS ARE IN THE ROUNDABOUT,  
AND SHOULD BE MODIFIED TO BE 1' SHORTER  
THAN THE REST OF THE SIGNS.

# PED X-ING SIGN DETAIL

1/2" = 1' - 0"