# CORNERSTONE CHARTER ACADEMY CONSTRUCTION PLANS CITY OF BELLE ISLE, FLORIDA

### **APPLICANT/ OWNER:**

**CORNERSTONE CHARTER ACADEMY, INC.** 

906 WALTHAM AVE.

CITY OF BELLE ISLE, FL 32809

407-608-7171

RENEE PANCOAST, Ed.D

rpancoast@cornerstonecharter.com

GEOTECHNICAL **ECS FLORIDA. LLC** 

**2815 DIRECTORS ROW #500, ENGINEER:** 

> **ORLANDO, FL 32809** PHONE: (407) 859-8378

**ARCHITECT:** CIVICA ARCHITECTURE & URBAN DESIGN

8323 NW 12th St. SUITE 106

**DORAL, FL 33126** 

PHONE: (305) 593-9959

**TRAFFIC:** TRAFFIC PLANNING & DESIGN, INC.

535 VERSAILLES DR. SUITE #200

MAITLAND, FL 32751 PHONE: (305) 923-7103

**SURVEYOR: BISHMAN SURVEYING & MAPPING, INC.** 

32 W. PLANT STREET

WINTER GARDEN, FL 34787 PHONE: (407) 905-8877 **FAX:** (407) 905-8875

### **PERMITTING AGENCIES**

S.J.R.W.M.D.: ENVIRONMENTAL RESOURCE PERMIT F.D.E.P.: WATER AND WASTEWATER SYSTEM PERMITS

CITY OF BELLE ISLE: SITE PLAN APPROVAL ORANGE COUNTY UTILITIES: FIRE AND SEWER FLORIDA DEPARTMENT OF TRANSPORTATION

ORLANDO UTILITIES COMMISSION

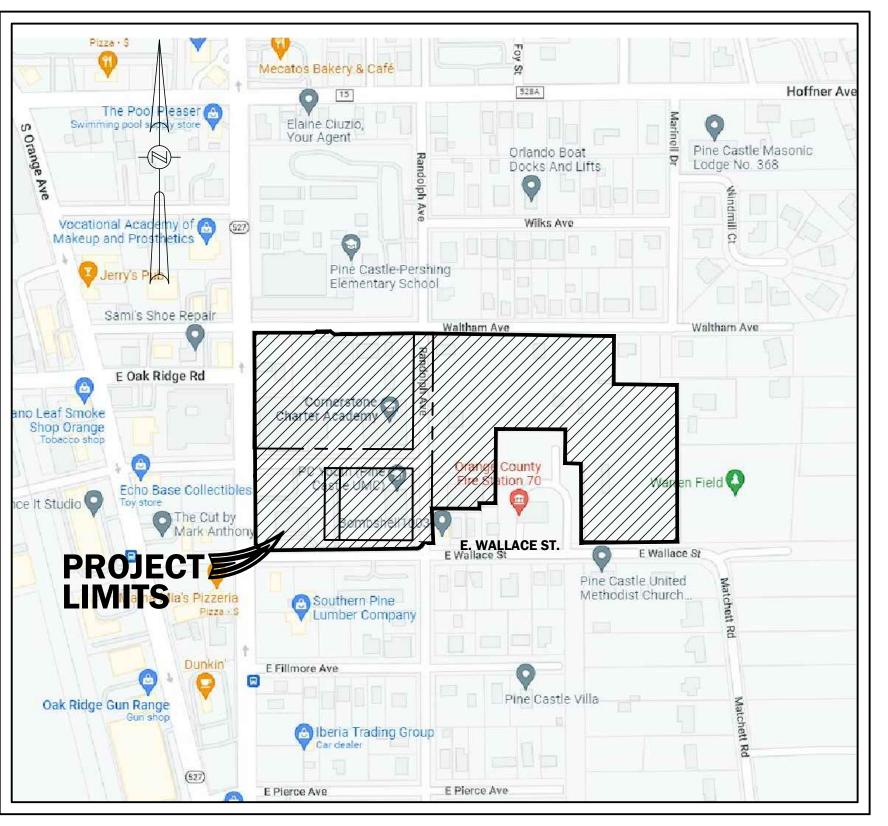
### **UTILITY COMPANIES**

**WATER:** (407)-423-9018 **ORLANDO UTILITIES COMMISSION SEWER:** (407)-254-9764 ORANGE COUNTY UTILITIES (877)-372-8477 **ELECTRIC: DUKE ENERGY** 

**TELEPHONE:** (800)-288-2020 AT&T

**CABLE:** (855)-317-1263 **CHARTER SPECTRUM** 

### **SITE VICINITY MAP**



### **NOT TO SCALE**

# **OCU PROJECT NUMBER: 23-U-066**



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**SITE PLAN - PHOTOMETRIC CALCS** LIGHT FIXTURE CUT SHEETS & AREAS

Orlando, FL 32809

5127 S. Orange Avenue, Suite 200

Phone: 407-895-0324

Fax: 407-895-0325

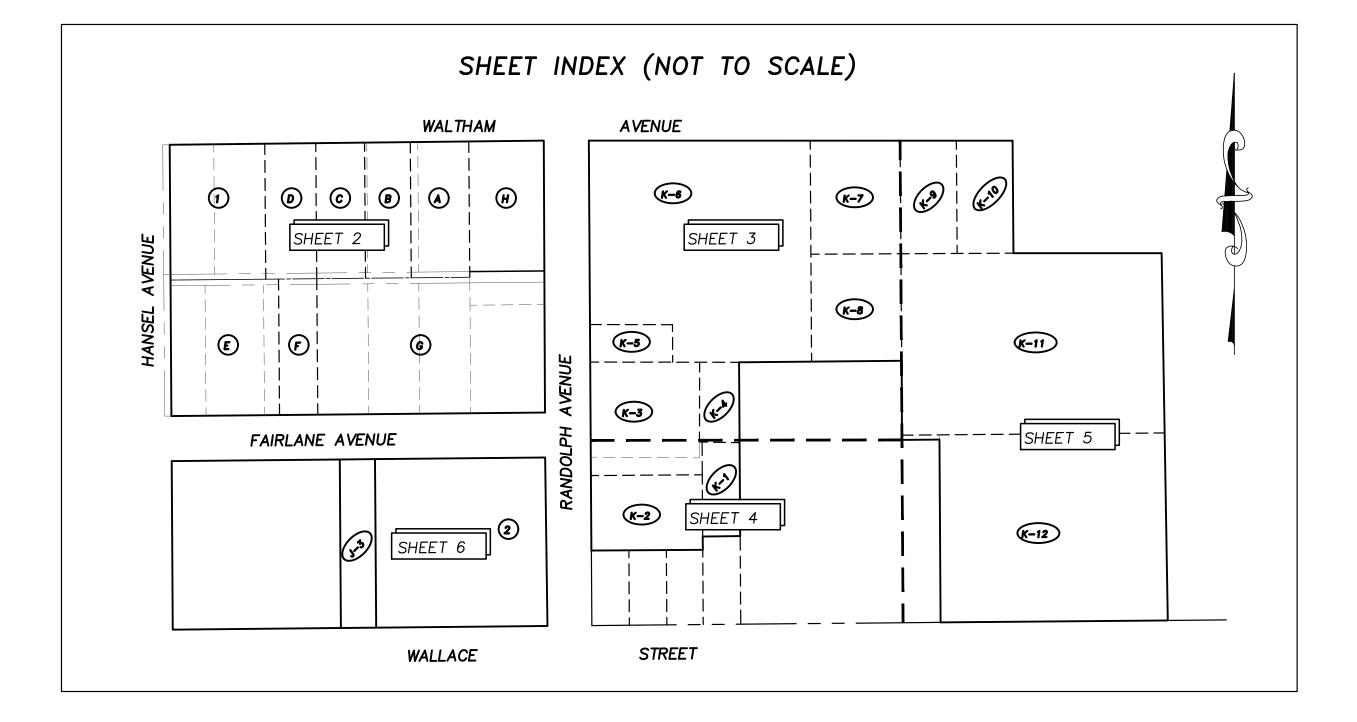
www.feg-inc.us





# BOUNDARY AND TOPOGRAPHIC SURVEY

### CORNERSTONE CHARTER ACADEMY



### **SURVEYORS NOTES:**

. NOT VALID WITHOUT THE SIGNATURE AND THE ORIGINAL RAISED SEAL, OR DIGITAL SIGNATURE AND SEAL OF A FLORIDA LICENSED SURVEYOR AND MAPPER. PRINTED COPIES OF A DIGITAL SIGNED AND SEALED SURVEY ARE NOT VALID.

2. LANDS SHOWN HEREON WERE NOT ABSTRACTED FOR RIGHTS OF WAY, EASEMENTS, OWNERSHIP, OR OTHER INSTRUMENTS OF RECORD, BY THIS FIRM. 3. REVISIONS DO NOT CONSTITUTE A RE-CERTIFICATION OF THE EXISTING FIELD

4. BEARINGS SHOWN HEREON ARE BASED ON THE NNORTH RIGHT-OF-WAY LINE OF FAIRLANE AVENUE AS BEING S89°27'20"W (ASSUMED).

5. THE DESCRIPTION SHOWN HEREON WAS SUPPLIED BY THE CLIENT.

6. UNDERGROUND IMPROVEMENTS AND INSTALLATIONS HAVE NOT BEEN LOCATED.

7. THE LANDS SHOWN HEREON LIE ENTIRELY WITHIN ZONE X (AREAS DETERMINED TO BE OUTSIDE THE 0.2% ANNUAL CHANCE FLOOD) ACCORDING TO "FIRM" MAP NO. 12095C0430 F, COMMUNITY NO. 120179, DATED SEPTEMBER 25, 2009.

8. THE ELEVATIONS SHOWN HEREON ARE BASED ON ORANGE COUNTY DATUM PER BENCH MARK NUMBER S1316-035 BEING A BOX CUT ON TOP OF CURB INLET, ELEVATION = 101.52 (NAVD 1988).

9. SITE BENCHMARKS ARE SHOWN HEREON

10. THE ELECTRONIC FILE FOR THIS PROJECT IS THE PROPERTY OF BISHMAN SURVEYING AND MAPPING, INC. AND IS NOT THE PROPERTY OF THE CLIENT.

### LEGEND/ABBREVIATIONS: NOT ALL SYMBOLS AND ABBREVIATIONS SHOWN HEREON MAY BE USED

R RADIUS △ CENTRAL ANGLE LENGTH CH CHORD CB CHORD BEARING T.B. TANGENT BEARING (M) MEASURED (C) CALCULATED (D) DESCRIPTION POB POINT OF BEGINNING POC POINT OF COMMENCEMENT

O.R. OFFICIAL RECORDS BOOK PG. PAGE TYP. TYPICAL P.T. POINT OF TANGENCY P.C. POINT OF CURVATURE ● IRON ROD & CAP NAIL & DISC

 ↑ 4"x4" CONCRETE MONUMENT IRON PIPE ----- BARBED WIRE FENC ----- METAL FENCE © CENTERLINE

LB LICENSED BUSINESS PSM PROFESSIONAL SURVEYOR & MAPPER WELL ELECTRICAL OUTLET TELEPHONE RISER FIRE HYDRANT MASTER WATER ASSEMBL WATER VALVE IRRIGATION VALVE GAS VALVE SANITARY MANHOLE DRAINAGE MANHOLE GREASE TRAP MANHOLE POWER MANHOLE

WATER BLOW-OFF VALVE

---- FOC --- FIBER OPTIC CABLE WATER SHUT-OFF VALVE POWER TRANSFORMER WATER METER GAS METER POWER METER

WOODEN UTILITY POLE -**(** GUY POLE GUY ANCHOR /-INV=69.73 INVERT ELEVATION + 68.51 EXISTING GROUND ELEVATION ∠60 EXISTING GROUND CONTOUR ──O SINGLE POST SIGN O O DOUBLE POST SIGN HANDICAPPED PARKING SPACE (H/C)

PLS PROFESSIONAL LAND SURVEYOR

PVC POLYVINYL CHLORIDE PIPE

RCP REINFORCED CONCRETE PIPE

CMP CORRUGATED METAL PIPE

CPP CORRUGATED PLASTIC PIPE

SITE BENCH MARK (AS INDICATED)

DIP DUCTILE IRON PIPE

VCP VITIOUS CLAY PIPE

---- UGT --- UNDERGROUND TELEPHONE LINE -----UGCT--- UNDERGROUND CABLE TELEVISION

FIRE DEPARTMENT CONTROL VALVE ELECTRIC HAND HOLE CABLE TELEVISION RISER TAC TELEPHONE ACCESS CABINET CATCH BASIN

DRAIN CURB INLET C 1 / CURB INLET WITHOUT MANHOLE MITERED END SECTION

VAULT UTILITY VAULT A/C AIR CONDITIONER POWER BOX MONITORING WELL

■ LIGHT POLE WALKWAY LIGHT TRAFFIC SIGNAL BO. BOLLARD FP FLAG POLE

PKM PARKING METER TRAFFIC FLOW ARROW SOIL BORING

Lot I and the East 10 feet of Lot 2 of J.G. TYNER'S SUBDIVISION, according to the Plat thereof, as recorded in Plat Book F, Page 44, of the Public Records of Orange County, Florida. TOGETHER WITH North Half of vacated alley way as described in Resolution recorded in Official Records Book 3723, Pages 2582 through 2584, Public Records of Orange County, Florida.

The West 58 feet of Lot 2 and the East 3 feet of Lot 3, of J.G. TYNER'S SUBDIVISION, of a part of the North 391.8 feet of Lot 9, HARNEY'S HOMESTEAD, according to the Plat thereof, filed for record August 19, 1912, in Plat Book F, Page 44, Public Records of Orange County, Florida. TOGETHER WITH The North Half of vacated alleyway as described in Resolution recorded in Official Records Book 3723, Pages 2582 through 2584, Public Records of Orange County, Florida.

Lot 3, LESS the East 3 feet thereof, of J.G. TYNER'S SUBDIVISION of a part of the North 391.8 feet of Lot 9, HARNEY'S HOMESTEAD, according to the Plat there of, filed for record August 19, 1992, in Plat Book F, Page 44, Public Records of Orange County, Florida. TOGETHER WITH The North Half of vacated alley way as described in Resolution recorded in Official Records Book 3723, Pages 2582 through 2584, Public Records of Orange County, Florida.

PARCEL D

Lot4 of J.G. TYNER'S SUBDIVISION of a part of North 391.8 feet of Lot 9,of HARNEY'S HOMESTEAD, according to the Plat thereof, as recorded in Plat Book F, Page 44, Public Records

TOGETHER WITH The North Half of vacated alley way as described in Resolution recorded in Official Records Book 3723, Pages 2582 through 2584, Public Records of Orange County, Florida.

Lots Seven(7) and Eight(8) and the West Twenty Feet(20) of Lot Nine (9) of J.G.TYNER'S SUBDIVISION, according to the Plat there of, as recorded in Plat Book F, Page 44, Public Records

TOGETHER WITH South Half of vacated alley way lying North of said Lots 7 and 8 and the South Half of vacated alley way lying North of said West20 feet of said Lot 9 as described in Resolution recorded in Official Records Book 3723, Pages 2582 through 2584, Public Records of Orange County, Florida.

PARCEL F

Lot 9 (LESS the West 20 feet), J.G. TYNER'S SUBDIVISION, according to the Plat thereof, as recorded in Plat Book F, Page 44, Public Records of Orange County, Florida. TOGETHER WITH South Half of vacated alley way as described in Resolution recorded in Official Records Book 3723, Pages 2582 through 2584, Public Records of Orange County, Florida.

PARCEL C

Lots 10, 11, 12 and 13, of J.G. TYNER'S SUBDIVISION of a part of North 391.8 feet of Lot 9, OMESTEAD, according to the Map or Plat of said HARNEY'S on record; the Plat of J.G. TYNER'S SUBDIVISION, being recorded in Plat Book F, Page 44, Public Records of Orange County, Florida.

ALSO, beginning at the Northwest corner of Lot 13, of J.G. TYNER'S SUBDIVISION, of a part of the North 391.8 feet of Lot 9, of HARNEY'S HOMESTEAD, according to the Map or Plat of said HARNEY'S HOMESTEAD on record, run North 29.8 feet; thence run East 100 feet; thence run South 29.8 feet; thence run West 100 feet to the POINT OF BEGINNING. Said land being located in Section 24, Township 23 South, Range 29 East, Orange County, Florida.

Official Records Book 3723, Pages 2582 through 2584, Public Records of Orange County, Florida.

Extension of said 15 foot alley Easterly through a portion of Lot 9 of HARNEY'S HOMESTEAD,

more particularly described as follows: The North 15 feet of the South 44.8 feet of the North 217.8 feet of the East 100 feet of said Lot 9, together with any other interest of party of the first part in and to that part of said Lot 9, lying North of Lot 13, of J.G.TYNER'S SUBDIVISION, (Plat Book F, Page 44), recorded in Plat Book C, Page 53, Public Records of Orange County, Florida.

<u>DESCRIPTION:</u> (CONTINUED)

The North 173 feet of the East 100 feet of Lot 9 of HARNEY HOMESTEAD, according to the Plat thereof, as recorded in Plat Book C, Page 53, Public Records of Orange County, Florida. ALSO Begin at a stone at the Northeast corner of land formerly belonging to C.J. SWEET AT PINE CASTLE, FLORIDA, situated in Section 24, Township 23 South, Range 29 East, run South 173 feet; thence West 100 feet; thence North 173 feet; thence East 100 feet to the POINT OF BEGINNING.

PARCEL J-3

Lot 9 of the HARNEY HOMESTEAD, as recorded in Plat "C", Page 53, of the Public Records of Orange County, Florida, LESS the Easterly 228.47 feet AND LESS the North 391.8 feet AND LESS the West 224.28 feet thereof;

AND LESS the road right-of-way on the South and being more particularly described as follows: Commence at the Southwest corner of Lot 9 of the HARNEY HOMESTEAD, as recorded in Plat Book "C", Page 53, of the Public Records of Orange County, Florida; thence run North 89 degrees 57minutes 29 seconds East along the North right-of-way line of Wallace Street as shown and depicted on the plat of KEEN-CASTLE, as recorded in Plat Book "P", Page 1, of said public records, a distance of 224.28 feet to the POINT OF BEGINNING; thence North 00 degrees 04 minutes 16 seconds East along the East line of the West 224.28 feet of said Lot 9, a distance of 224.70 feet to a point on the South right-of-way line of Fairlane Avenue; thence along said South line North 89 degrees 58 minutes 20 seconds East, a distance of 47.00 feet; thence leaving said South line South 00 degrees 18 minutes 56 seconds East, a distance of 224.67 feet to a point on the North right—of—way line of Wallace Street; thence along said North line South 89 degrees 57 minutes 29 seconds West, a distance of 47.00 feet to the POINT OF

PARCEL K-I:

North 126 feet of the South 243.7 feet of East 50 feet of West 198.5 feet of Lot 10, Subdivis of the HARNEY HOMESTEAD, according to the Plat there of, as recorded in Plat Book C, Page 53 of the Public Records of Orange County, Florida.

PARCEL K-2:

The North 100 feet of the South 200 feet of the West 148.5 feet of Lot 10, SUBDIVISION OF THE HARNEY HOMESTEAD, according to the Plat there of, as recorded in Plat Book C, Page 53, Public Records of Orange County, Florida. **DESCRIPTION:** (CONTINUED)

PARCEL K-3:

Begin at the Northwest corner of Lot 10, run East 145.0 feet along the North line of Lot 10 thence run South 00 degrees 07 minutes 04 seconds East 105.5 feet, thence run South 89 degrees 59 minutes 34 seconds East 3.5 feet more or less, to the Northwest comer of the above described Parcel K-1, thence South 00 degrees 07 minutes 04 seconds East 43.5 feet more or less, to the Northeast corner of the above described Parcel K-2, thence run North 89 degrees 59 minutes 34 seconds West along the North line of Parcel K-2, 148.5 feet more or less, to the Northwest corner of Parcel K-2, thence North 00 degrees 07 minutes 04 seconds West 149.0 feet more or less, to the POINT OF BEGINNING, all within the SUBDIVISION OF THE HARNEY HOMESTEAD, according to the Plat there of, as recorded in Plat Book C, Page 53, Public Records of Orange

From the Northwest corner of Lot 10, run East 145.0 feet along the North line of Lot 10; thence run South 00 degrees 02 minutes 36 seconds West 105.5 feet to the POINT OF BEGINNING; thence run East 3.5 feet to the Northwest corner of the above described Parcel K-1, thence South 00 degrees 02 minutes 36 seconds West 43.5 feet to the Northeast corner of the above described Parcel K-2, thence run West along the North line of Parcel K-2, 148.5 feet to the Northwest corner of Parcel K-2, thence North 00 degrees 02 minutes 36 seconds East 24.53 feet; thence South 89 degrees 13 minutes 04 seconds East 145.01 feet; thence North 00 degrees 02 minutes 36 seconds East 21.15 feet to the POINT OF BEGINNING, all within the SUBDIVISION OF HARNEY HOMESTEAD, according to the Plat there of, as recorded in Plat Book C, Page 53, Public Records of Orange County, Florida.

PARCEL K-4:

A portion of Lot 10, SUBDIVISION OF HARNEY HOMESTEAD, as recorded in Plat Book C, Page 53, of the Public Records of Orange County, Florida, being more particularly described as follows: Commence at the Northwest corner of said Lot 10; thence due East145.00 feet along the North ine of said Lot 10 for a POINT OF BEGINNING; thence continue along said North line, due East 53.50 feet to the intersection of said North line and the Northerly prolongation of the East line of the North 126 feet of the South 243.7 feet of the East 50.00 feet of the West 198.50 feet o said Lot 10; thence along said east line, South 00 degrees 08 minutes 50 seconds West 105.50 feet to the Northeast corner of the North 126 feet of the South 243.7 feet of the East 50.00 feet of the West 198.50 feet of said Lot 10; thence from said point, due West 53.50 feet; thence North 00 degrees 08 minutes 50 seconds East 105.50 feet to the POINT OF BEGINNING.

The West 110 feet of South 50 feet of Lot 8, SUBDIVISION OF THE HARNEY HOMESTEAD, according to the Plat thereof, as recorded in Plat Book C, Page 53, Public Records of Orange County,

PARCEL K-6:

Lot 8, LESS the West 110 feet of South 50 feet of Lot 8, SUBDIVISION OF THE HARNEY HOMESTEAD, according to the Plat thereof, as recorded in Plat Book C, Page53, Public Records of

The West 119.83 feet of the North 150 feet of Lot 7, SUBDIVISION OF THE HARNEY HOMESTEAD, according to the Plat thereof, as recorded in Plat Book C, Page 53, Public Records of Orange

The West 120 feet of the South 145 feet of Lot 7, SUBDIVISION OF THE HARNEY HOMESTEAD, according to the Plat thereof, as recorded in Plat Book C, Page 53, Public Records of Orange

The East 75 feet of the West 194.83 feet of the North 150 feet of Lot 7, HARNEY HOMESTEAD according to the Map or Plat thereof, as recorded in Plat Book C, Page 53, Public Records of

The East 75 feet of the West 269.83 feet of the North 150 feet of Lot 7, HARNEY HOMESTEAD, according to the Map or Plat thereof, as recorded in Plat Book C, Page 53, Public Records of

Begin 763 feet East and 250 feet North of the South west corner of Lot 10, HARNEY HOMESTEAD, as per Plat thereof, recorded in Plat Book C, Page 53, Public Records of Orange County, Florida, run North 251.51 feet, West 348 feet, South 251.5 feet, East 348 feet to POINT OF BEGINNING.

Less and except there from, that portion there of conveyed by Pine Castle Methodist Church, Inc., a Florida corporation, to Charles E. Maull, Jr. and June L. Maull, by Quit Claim Deed recorded August 21, 2003 in Official Records Book 7061, Page 4692, Public Records of Orange County, Florida, more particularly described as follows:

A portion of Lot 7, Subdivision of HARNEY HOMESTEAD, Plat Book "C", page 53, Public Records of Orange County, Florida, being more particularly described as follows:

Begin at the Southeast corner of the East 75 feet of the West 269.83 feet of the North 150 feet of said Lot 7; thence East 197.48 feet along the South line of the North 150 feet of said Lot 7 to a point on the East line of lands described in Official Records Book 6253, Page 6532, Public Records of Orange County, Florida; thence South 00 degrees 28 minutes 01 seconds East 11.10 feet along said East line; thence North 89 degrees 42 minutes 36 seconds West 197.60 feet to a point on  $m{a}$  . Southerly projection of the East line of the East 75 feet of the West 269.83 feet of the North 150 feet of said Lot 7; thence North 00 degrees 08 minutes 50 seconds East 10.10 feet along said southerly projection to the POINT OF BEGINNING.

PARCEL K-12:

Beginning 465 feet East of the Southwest corner of Lot 10, HARNEY HOMESTEAD, in Section 24, Township 23 South, Range 29 East, as per Plat thereof, as recorded in Plat Book C, Page 53, Public Records of Orange County, Florida, run East 298 feet, North 250 feet, West 298 feet, and South 250 feet to the POINT OF BEGINNING.

PARCEL

Lots 5 and 6, less the West 10 feet of lot 6 for road right-of-way, J.G. TYNER SUBDIVISION, according to the map or lat thereof recorded among the Public Records of Orange County, Florida

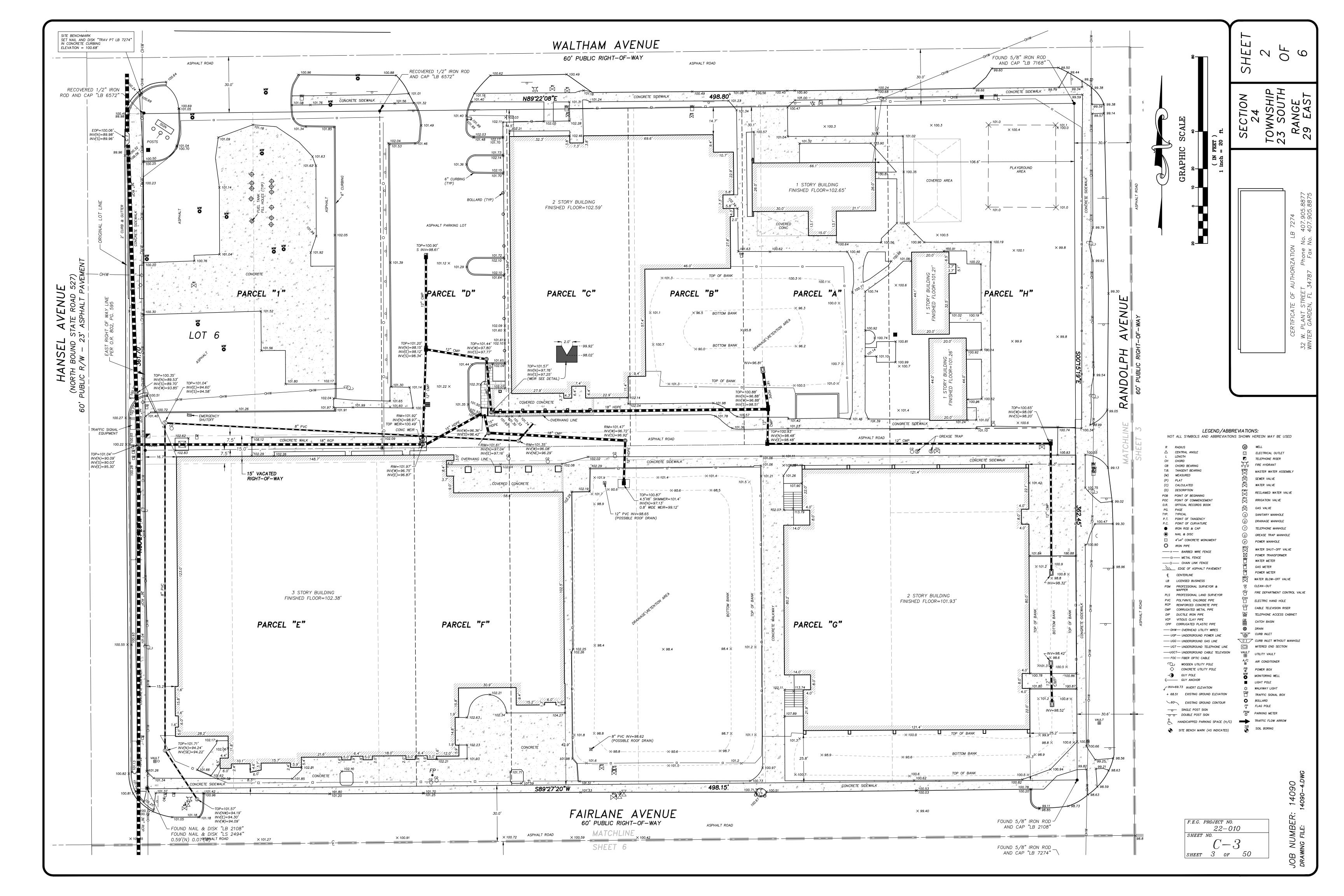
PARCEL 2:

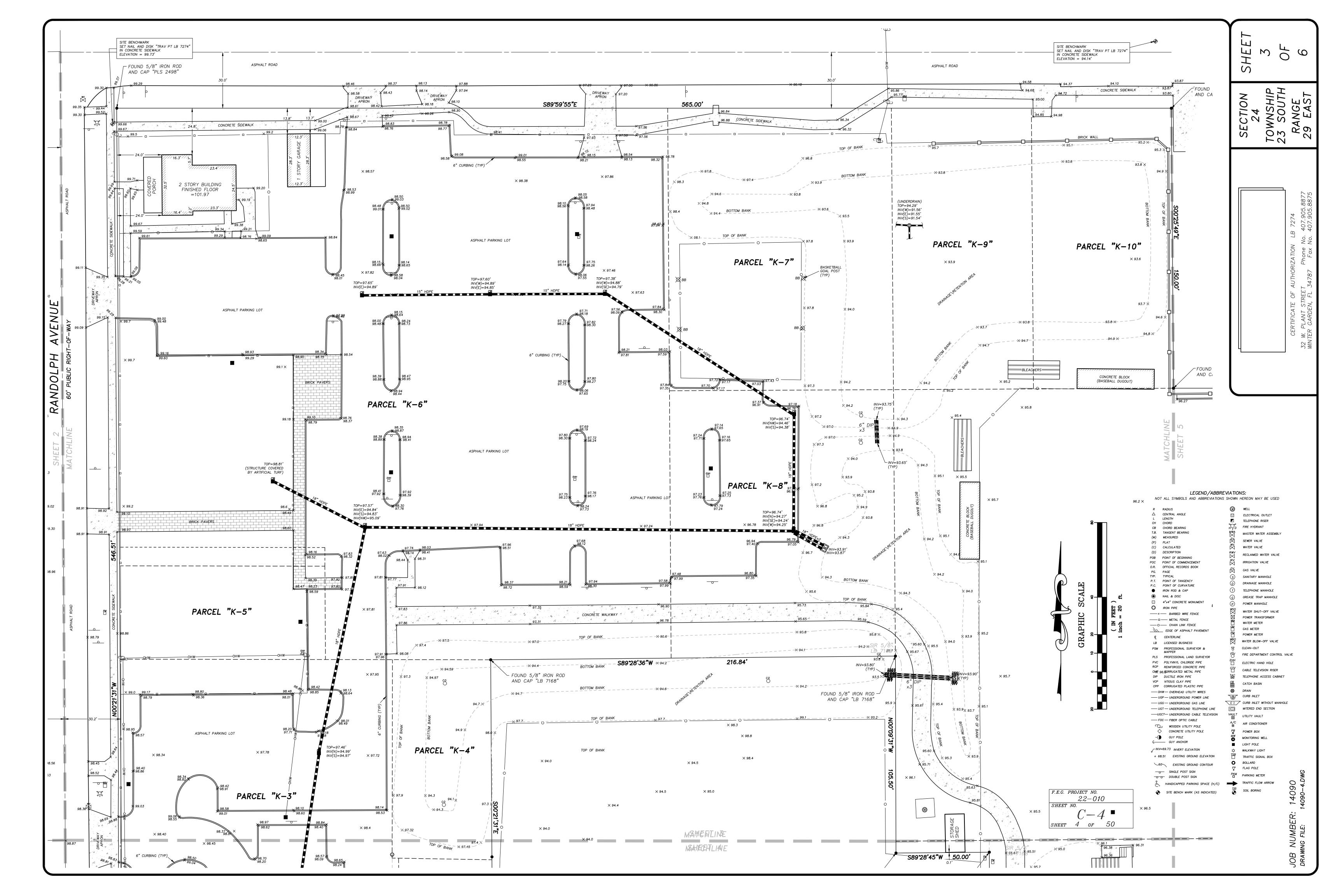
The East 100 feet of Lot 9, (less the North 391.8 feet thereof), HARNEY HOMESTEAD, Plat Book C, Page 53, Public Records of Orange County, Florida.

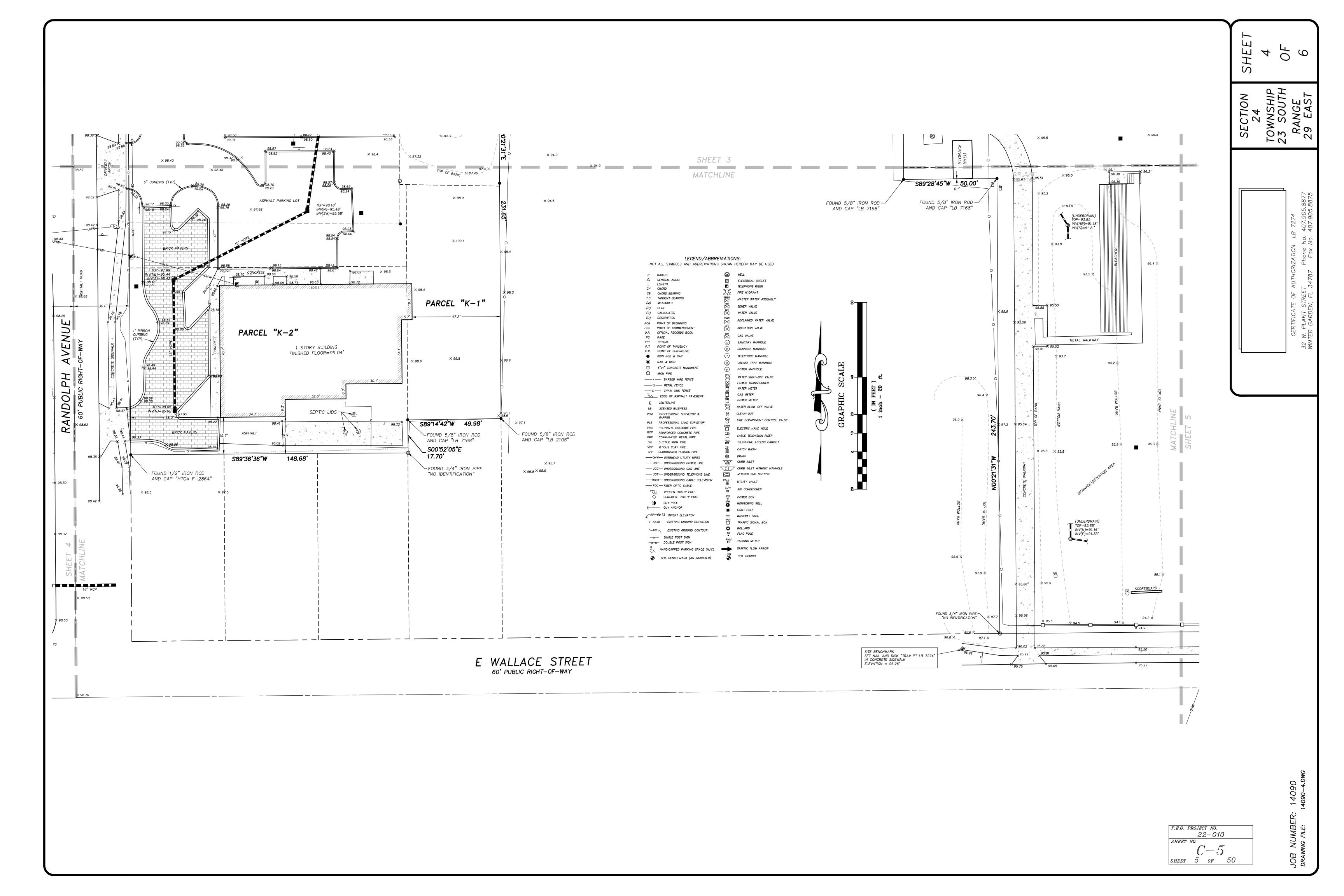
> F.E.G. PROJECT NO. SHEET NO |sheet 2 of

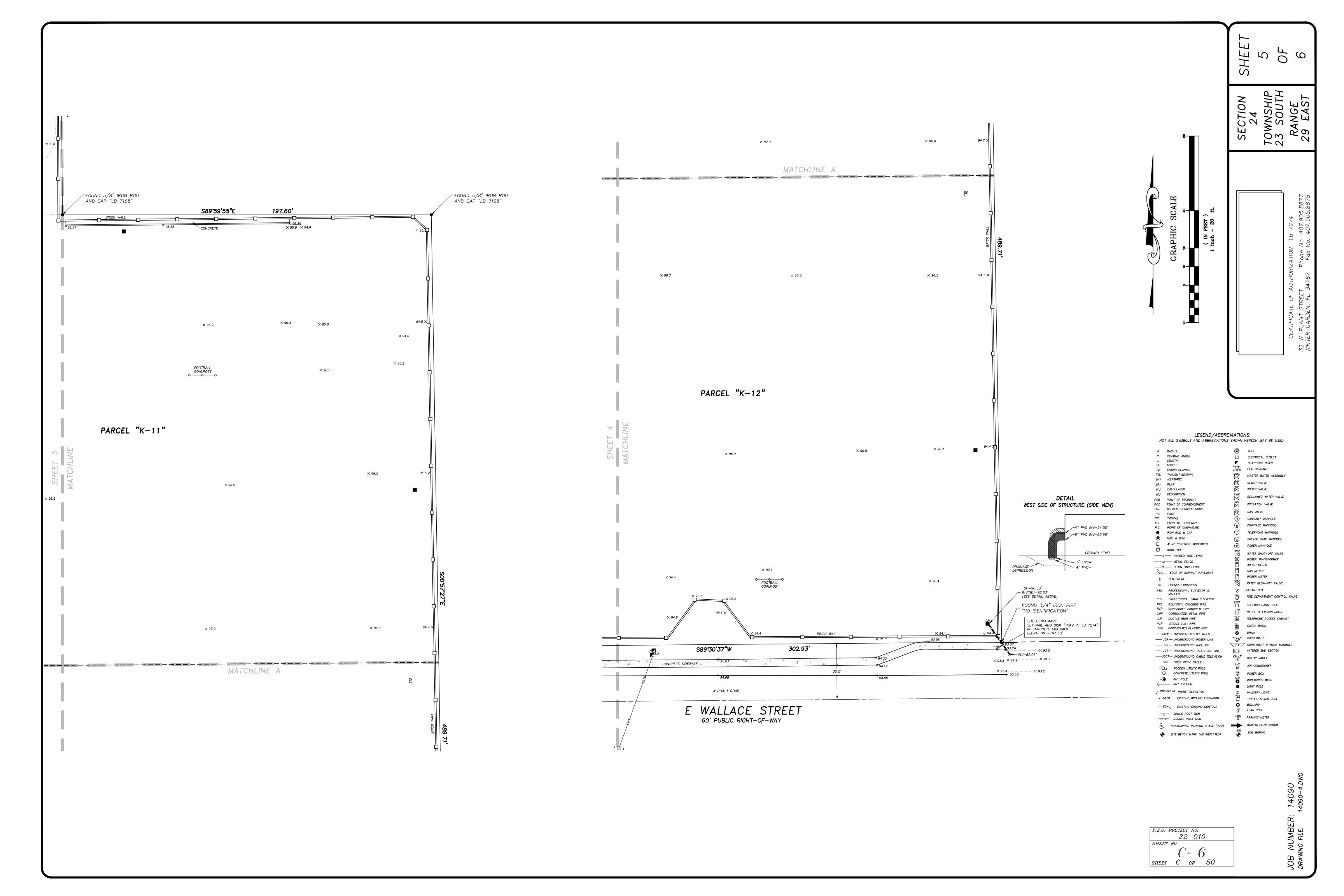
JSHIP OUTH JGE EAST SECTION 24 WN 0 M 8-24-2021 T. CONARD 2002 34-39, 73-14090-3.MJI SURVEY DA FIELD BY: FIELD BOOK PAGES: FIELD FILE:

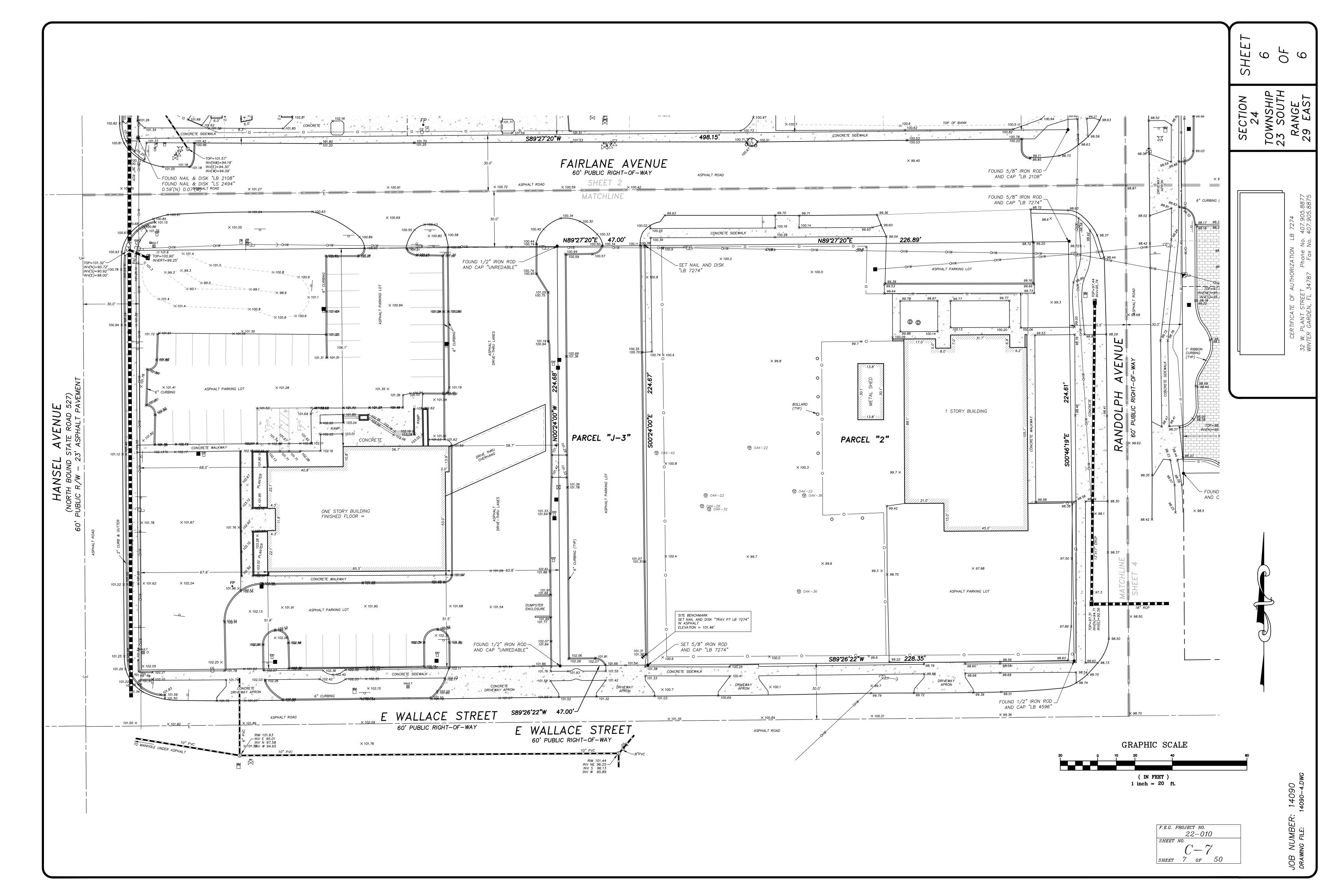
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# FAIRLANE AVENUE 60' PUBLIC RIGHT-OF-WAY × 100.72 × 100.69 01.14 101.3<del>5 c</del> FOUND 1/2" IRON ROD AND CAP "UNREADABLE" × 100.84 100.35 | 100.70**※** | X 101.41 ASPHALT PARKING LOT VENUE TE ROAD 52 SPHALT PA EL HANSE (NORTH BOUNDEDING NORTH BOUNDEDING R/W -ONE STORY BUILDING FINISHED FLOOR = × 101.87 4 CONCRETE WALKWAY × 102.24 DUMPSTER ENCLOSURE × 101.54 ASPHALT PARKING LOT × 102.13 AND CAP "UNREADABLE" 101.25 🗶 △ CONCRETE SIDEWALK → CONCRETE E WALLACE STREET ASPHALT ROAD 60' PUBLIC RIGHT-OF-WAY

# BOUNDARY AND TOPOGRAPHIC SURVEY

### DESCRIPTION:

LOT 9 OF HARNEY HOMESTEAD, AS RECORDED IN PLAT BOOK C, PAGE 53, OF THE PUBLIC RECORDS OF ORANGE COUNTY, FLORIDA, LESS THE EAST 100 FEET THEREOF; LESS THE NORTH 391.8 FEET THEREOF; LESS PORTIONS OF ROAD RIGHT-OF-WAY ON THE NORTH, BOUNDED BY FAIRLANE AVENUE, AND ON THE SOUTH, BOUNDED BY EAST WALLACE STREET, AS THE SAME MAY HAVE BEEN CONVEYED TO OR TAKEN BY THE CITY OF BELLE ISLE OF ORANGE COUNTY, FLORIDA FOR ROAD WIDENING PURPOSES.

### LESS AND EXCEPT:

THAT PART OF LOT 9 CONVEYED TO THE STATE OF FLORIDA BY SPECIAL WARRANTY DEED RECORDED IN OFFICIAL RECORDS BOOK 779, PAGE 14, OF THE OFFICIAL RECORDS OF ORANGE COUNTY, FLORIDA, BEING DESCRIBED AS

THAT PART OF LOT 9, HARNEY HOMESTEAD SUBDIVISION, AS SHOWN IN PLAT BOOK "C", PAGE 53, SAID PUBLIC RECORDS, LESS THE NORTH 391.8 FEET OF SAID LOT 9; LYING WITHIN 30 FEET EASTERLY OF THE SURVEY LINE OF STATE ROAD 527, SECTION 75040, SAID SURVEY LINE BEING DESCRIBED AS FOLLOWS:

BEGIN AT THE EASTERLY EXTENSION OF THE NORTH LINE OF LOT 18, JOHN KEEN'S SUBDIVISION, PLAT BOOK "H", PAGE 11, PUBLIC RECORDS, ORANGE COUNTY, FLORIDA, AT A POINT 31.16 FEET EAST OF THE NORTHEAST CORNER OF SAID LOT 18, AND RUN THENCE NORTH 00°15'17" WEST, 579.36 FEET TO THE CENTER OF SECTION 24, TOWNSHIP 23 SOUTH, RANGE 29

### ALSO, THE EAST 30 FEET OF THE WEST 60 FEET OF THE SOUTH 30 FEET OF THE NORTH 421.8 FET OF SID LOT 9, HARNEY HOMESTEAD:

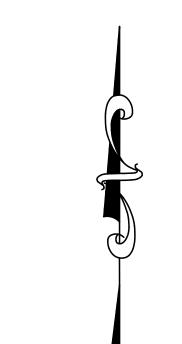
ALSO, THAT PART OF SAID LOT 9, HARNEY HOMESTEAD, LYING WITHIN 30 FEET NORTHERLY OF A LINE DESCRIBED AS FOLLOWS: COMMENCE ON THE EASTERLY EXTENSION OF THE NORTH LINE OF LOT 18, JOHN KEEN'S SUBDIVISION, PLAT BOOK "H", PAGE 11, PUBLIC RECORDS, ORANGE COUNTY, FLORIDA, AT A POINT 31.16 FEET EAST OF THE NORTHEAST CORNER OF SAID LOT 18, AND RUN THENCE NORTH 00"15'47" WEST, 33.70 FEET FOR A POINT OF BEGINNING; FROM SAID POINT OF BEGINNING RUN SOUTH 89°42'47" EAST, 60 FEET.

### FURTHER LESS AND EXCEPT:

THAT PART CONVEYED TO PINE CASTLE METHODIST CHURCH, INC. BY SPECIAL WARRANTY DEED RECORDED IN OFFICIAL RECORDS BOOK 8382, PAGE 274, OF THE OFFICIAL RECORDS OF ORANGE COUNTY, FLORIDA, BEING DESCRIBED AS FOLLOWS:

COMMENCE AT THE SOUTHWEST CORNER OF LOT 9 OF THE HARNEY HOMESTEAD, AS RECORDED IN PLAT BOOK "C", PAGE 53, OF THE PUBLIC RECORDS OF ORANGE COUNTY, FLORIDA, THENCE RUN NORTH 89°57'29" EAST ALONG THE NORTH RIGHT-OF-WAY LINE OF WALLACE STREET AS SHOWN AND DEPICTED ON THE PLAT OF KEEN-CASTLE, AS RECORDED IN PLAT BOOK "P", PAGE "1", OF SAID PUBLIC RECORDS, A DISTANCE OF 224.28 FEET TO THE POINT OF BEGINNING; THENCE NORTH 00°04'16" EAST ALONG THE EAST LINE OF THE WEST 224.28 FEET OF SAID LOT 9, A DISTANCE OF 224.70 FEET TO A POINT ON THE SOUTH RIGHT-OF-WAY LINE OF FAIRLANE AVENUE; THENCE ALONG SAID SOUTH LINE SOUTH 0098'56" EAST ALONG THE WEST LINE OF THE EAST 100.00 FEET OF SAID LOT 9, A DISTANCE OF 224.65 FEET TO A POINT ON THE NORTH RIGHT-OF-WAY LINE OF WALLACE STREET; THENCE ALONG SAID NORTH LINE SOUTH 89°57'29" WEST, A DISTANCE OF 175.47 FEET TO THE POINT OF BEGINNING.

THE ABOVE DESCRIBED PARCEL CONTAINS A TOTAL OF 1.156 ACRES, MORE OR LESS.



GRAPHIC SCALE ( IN FEET )

1 inch = 20 ft.

### SURVEYORS NOTES:

1. NOT VALID WITHOUT THE ORIGINAL SIGNATURE AND SEAL, OR DIGITAL SIGNATURE AND SEAL OF A FLORIDA LICENSED SURVEYOR AND MAPPER. PRINTED COPIES OF A DIGITAL SIGNED AND SEALED SURVEY

2. LANDS SHOWN HEREON WERE NOT ABSTRACTED FOR RIGHTS OF WAY, EASEMENTS, OWNERSHIP, OR OTHER INSTRUMENTS OF RECORD,

3. REVISIONS DO NOT CONSTITUTE A RE-CERTIFICATION OF THE EXISTING FIELD CONDITIONS OF THIS SURVEY.

4. BEARINGS SHOWN HEREON ARE BASED ON THE NORTH RIGHT-OF-WAY LINE OF E WALLACE STREET (ASSUMED).

5. THE DESCRIPTION SHOWN HEREON WAS SUPPLIED BY THE CLIENT. 6. UNDERGROUND IMPROVEMENTS AND INSTALLATIONS HAVE NOT BEEN LOCATED.

7. THE LANDS SHOWN HEREON LIE ENTIRELY WITHIN ZONE X (AREAS DETERMINED TO BE OUTSIDE THE 0.2% ANNUAL CHANCE FLOOD) ACCORDING TO "FIRM" MAP NO. 12095C0430F, DATED SEPTEMBER 25,

THE ELEVATIONS SHOWN HEREON ARE BASED ON ORANGE COUNTY DATUM PER BENCH MARK NUMBER S1316-035 BEING A BOX CUT ON TOP OF CURB INLET, ELEVATION = 101.52 (NAVD 1988).

9. SITE BENCHMARK IS SHOWN HEREON.

10. THIS SURVEY WAS PERFORMED IN ACCORDANCE WITH THE STANDARDS OF PRACTICE SET FORTH IN RULE 5J-17.052 ADOPTED BY THE FLORIDA BOARD OF SURVEYORS AND MAPPERS, PURSUANT TO FLORIDA STATUTES 472.027.

### LEGEND/ABBREVIATIONS: NOT ALL SYMBOLS AND ABBREVIATIONS SHOWN HEREON MAY BE USED

RADIUS CENTRAL ANGLE ELECTRICAL OUTLET LENGTH TELEPHONE RISER CH CHORD FIRE HYDRANT CB CHORD BEARING T.B. TANGENT BEARING MASTER WATER ASSEMBLY (M) MEASURED SEWER VALVE (P) PLAT WATER VALVE (C) CALCULATED (D) DESCRIPTION RECLAIMED WATER VALVE POB POINT OF BEGINNING POC POINT OF COMMENCEMENT IRRIGATION VALVE O.R. OFFICIAL RECORDS BOOK GAS VALVE PG. PAGE TYP. TYPICAL SANITARY MANHOLE P.T. POINT OF TANGENCY DRAINAGE MANHOLE P.C. POINT OF CURVATURE ● IRON ROD & CAP TELEPHONE MANHOLE NAIL & DISC GREASE TRAP MANHOLE POWER MANHOLE WATER SHUT-OFF VALVE POWER TRANSFORMER WATER METER

IRON PIPE -----x ---- BARBED WIRE FENCE ── □ ── WOOD FENCE \_\_\_\_\_ EDGE OF ASPHALT PAVEMENT © CENTERLINE LB LICENSED BUSINESS PSM PROFESSIONAL SURVEYOR & PLS PROFESSIONAL LAND SURVEYOR PVC POLYVINYL CHLORIDE PIPE

RCP REINFORCED CONCRETE PIPE CMP CORRUGATED METAL PIPE DIP DUCTILE IRON PIPE VCP VITIOUS CLAY PIPE CPP CORRUGATED PLASTIC PIPE ----OHW--- OVERHEAD UTILITY WIRES ---- UGG --- UNDERGROUND GAS LINE ---- UGT --- UNDERGROUND TELEPHONE LINE — FOC — FIBER OPTIC CABLE

WOODEN UTILITY POLE CONCRETE UTILITY POLE -**(** GUY POLE ← GUY ANCHOR /-INV=69.73 INVERT ELEVATION + 68.51 EXISTING GROUND ELEVATION ►60 EXISTING GROUND CONTOUR O SINGLE POST SIGN

O O DOUBLE POST SIGN HANDICAPPED PARKING SPACE (H/C) TRAFFIC FLOW ARROW SITE BENCH MARK (AS INDICATED)

CURB INLET C 1 CURB INLET WITHOUT MANHOLE MITERED END SECTION UTILITY VAULT AIR CONDITIONER POWER BOX MONITORING WELL LIGHT POLE WALKWAY LIGHT TRAFFIC SIGNAL BOX FLAG POLE PKM PARKING METER

SOIL BORING

GAS METER

CLEAN-OUT

POWER METER

WATER BLOW-OFF VALVE

ELECTRIC HAND HOLE

CABLE TELEVISION RISER

TELEPHONE ACCESS CABINET

FIRE DEPARTMENT CONTROL VALVE

F.E.G. PROJECT NO. 22-010 SHEET NO. C-8

SHEET 8 OF 50

SECTION 24 00 P 0 22029.000 JOB NUMBER:

### **GENERAL NOTES:**

- . THESE GENERAL NOTES APPLY TO ALL WORK IN THIS SET OF DRAWINGS.
- 2. IT WILL BE THE RESPONSIBILITY OF THE CONTRACTOR(S) TO ENSURE THAT ALL REQUIRED PERMITS ARE OBTAINED AND ARE IN HAND AT THE JOB SITE PRIOR TO THE COMMENCEMENT OF CONSTRÙĆTION. CONTRACTOR SHALL ABIDE BY ALL CONDITIONS CONTAINED THEREIN.
- 3. THE SPECIFICATIONS, NOTES, AND PLANS CALL ATTENTION TO CERTAIN REQUIRED FEATURES OF THE CONSTRUCTION BUT DO NOT PURPORT TO COVER ALL DETAILS OF DESIGN AND CONSTRUCTION. HOWEVER, THE CONTRACTOR SHALL FURNISH & INSTALL THE WORK IN ALL DETAILS AND
- 4. ALL EQUIPMENT SHALL BE HANDLED, STORED, INSTALLED, TESTED, AND OPERATED IN STRICT ACCORDANCE WITH THE APPLICABLE MANUFACTURER'S WRITTEN INSTRUCTIONS.
- 5. ALL WORK SHALL BE ACCOMPLISHED TO THE HIGHEST QUALITY CRAFTSMANSHIP STANDARDS AS APPROVED BY THE ENGINEER.
- 6. ALL WORK SHALL BE ACCOMPLISHED IN STRICT ACCORDANCE WITH ALL APPLICABLE FEDERAL, STATE, AND LOCAL CODES, ORDINANCES AND REGULATIONS.
- 7. APPARENT ERRORS, DISCREPANCIES, OR OMISSIONS ON THE DRAWINGS SHALL BE BROUGHT TO THE ENGINEER'S ATTENTION BEFORE BIDDING 8. AFTER COMPLETION OF CONSTRUCTION, THE CONTRACTOR SHALL PERFORM SITE CLEAN—UP OPERATIONS FOR REMOVAL OF ALL TRASH, DEBR EXCESS MATERIAL, AND EQUIPMENT. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO PRESENT THE PROJECT SITE CLEAN AND IN GOOD ORDER AT THE TIME OF FINAL ACCEPTANCE.
- 9. THE CONTRACTOR SHALL COMPLY WITH ALL RULES, REGULATIONS, AND SPECIFICATIONS OF CITY OF EDGEWOOD FOR SITE IMPROVEMENT IN THE ABSENCE OF A PARTICULAR REQUIREMENT.
- 10. FLORIDA LAW (F.S. 553.851) PROTECTION OF UNDERGROUND PIPELINES MANDATES THAT "NO EXCAVATOR SHALL COMMENCE OR PERFORM ANY EXCAVATION IN ANY PUBLIC OR PRIVATE STREET, ALLEY, OR RIGHT-OF-WAY DEDICATED TO THE PUBLIC USE, OR GAS UTILITY EASEMENT WITHOUT FIRST OBTAINING INFORMATION CONCERNING THE POSSIBLE LOCATION OF GAS PIPELINES IN THE AREA OF THE PROPOSED EXCAVATION THIS INCLUDES ANY OPERATION UTILIZING HAND TOOLS OR POWER TOOLS WHICH MOVES OR REMOVES ANY STRUCTURE, EARTH, ROCK, OR OTHER MASS OF MATERIAL BY SUCH METHODS AS DIGGING, BACKFILLING, DEMOLITION, GRADING, DITCHING, DRILLING, BÓRING, ÁND CABLE PLOWING. THE EXCAVATOR MUST NOTIFY THE GAS UTILITY A MINIMUM OF 48 HOURS AND A MAXIMUM OF 5 DAYS PRIOR TO EXCAVATING (EXCLUDING SATURDAYS, SUNDAYS, AND LEGAL HOLIDAYS).
- 11. CONTRACTOR SHALL NOTIFY ALL APPROPRIATE UTILITY COMPANIES OF PROPOSED START OF WORK IN ACCORDANCE WITH THEIR STANDARD REQUIREMENTS; INCLUDING BUT NOT LIMITED TO WATER, SEWER, POWER, TELEPHONE, GAS, AND CABLE TV COMPANIES.
- 12. ANY DIFFERING SITE CONDITIONS FROM THAT WHICH IS REPRESENTED HEREON, WHETHER ABOVE, ON, OR BELOW THE SURFACE OF THE GROUND, SHOULD BE BROUGHT TO THE IMMEDIATE ATTENTION OF THE ENGINEER AND OWNER IN WRITING. NO CLAIM FOR EXPENSES INCURRED BY THE CONTRACTOR DUE TO DIFFERING SITE CONDITIONS WILL BE ALLOWED IF CONTRACTOR FAILS TO PROVIDE THE REQUIRED WRITTEN NOTIFICATION OF SUCH CONDITIONS FOR REVIEW BY THE ENGINEER AND OWNER.
- 13. THE CONTRACTOR SHALL FURNISH OWNER WITH ACCURATE RECORD DRAWINGS PREPARED BY A LICENSED PROFESSIONAL SURVEYOR SHOWING AS—CONSTRUCTED HORIZONTAL AND VERTICAL DIMENSIONING OF THE WORK. THE SUBMITTAL COPY OF THE RECORD DRAWINGS WILL NOT BE RETURNED. THE RECORD DRAWING OR A REPRODUCIBLE COPY PREPARED BY THE ENGINEER SHALL BE CERTIFIED BY THE CONTRACTOR AS CORRECT. ALL INFORMATION WHICH IS UNCHANGED AND CURRENT SHALL BE NOTED BY CHECKING OFF OR CIRCLING. ALL REVISED INFORMATION SHALL BE CROSSED THROUGH AND NEW DATA ADDED. ADDITIONAL REQUIREMENTS ARE NOTED IN PAVING, GRADING, DRAINAGE, WATER, AND SEWER NOTES.
- 14. ALL PRIVATE AND PUBLIC PROPERTIES AFFECTED BY THIS WORK SHALL BE RESTORED TO A CONDITION EQUAL TO OR BETTER THAN EXISTED UNLESS SPECIFICALLY EXEMPTED BY THE PLANS. THE COST FOR SUCH RESTORATION SHALL BE INCIDENTAL TO OTHER CONSTRUCTION AND NO EXTRA COMPENSATION WILL BE ALLOWED.
- 15. THE CONTRACTOR SHALL FOLLOW THE GEOTECHNICAL ENGINEER'S RECOMMENDATIONS IN PREPARING THE SITE FOR CONSTRUCTION; THIS INCLUDES REMOVAL OF ANY EXISTING ORGANIC SOILS, DELETERIOUS MATERIAL, VEGETATION, AND/OR DEBRIS FROM WITHIN THE LIMITS OF CONSTRUCTION AS IDENTIFIED BY THE GEOTECHNICAL ENGINEER; PROOFROLLING OF THE NATURAL SOILS WHERE REQUIRED; AND OTHER GENERAL SITE PREPARATION REQUIREMENTS. SPECIFIC PROOFROLLING COMPACTION REQUIREMENTS SHOULD BE CONSISTENT WITH THE APPLICABLE DESIGN DOCUMENTS AND GEOTECHNICAL ENGINEER'S RECOMENDATIONS. IF THERE IS A CONFLICT BETWEEN THE GEOTECHNICAL ENGINEER'S RECOMMENDATIONS AND THE DESIGN DOCUMENTS, THE MORE STRINGENT REQUIREMENT SHALL APPLY.

### **GEOMETRY NOTES:**

- . THESE PLANS ARE BASED ON A SURVEY PREPARED FOR THE OWNER BY BISHMAN SURVEYING & MAPPING, INC. AND DATED AUGUST 24, 2021 & MARCH 15, 2022.
- 2. REFER TO SHEETS C-2 TO C-8 FOR REFERENCED BENCHMARK.
- 3. CONTRACTOR SHALL STAKE ALL IMPROVEMENTS USING THE GEOMETRIC DATA PROVIDED. IT IS THE CONTRACTOR'S SOLE RESPONSIBILITY TO COMPLETELY STAKE & CHECK ALL IMPROVEMENTS TO ENSURE ADEQUATE POSITIONING, BOTH HORIZONTAL & VERTICAL, PRIOR TO THE INSTALLATION OF ANY IMPROVEMENTS. THE CONTRACTOR SHALL NOTIFY THE ENGINEER IF ANY APPARENT DISCREPANCIÉS ARE FOUND.
- 4. ALL DIMENSIONS ARE TO THE FACE OF CURB OR EDGE OF PAVEMENT UNLESS OTHERWISE NOTED.
- 5. CONTRACTOR SHALL VERIFY THE ACCURACY OF THE BUILDING GEOMETRY SHOWN WITH THAT IN THE FINAL ARCHITECTURAL DRAWINGS, PRIOR TO STAKE-OUT, & SHALL NOTIFY OWNER & ENGINEER IMMEDIATELY OF ANY DISCREPANCIES.

### MARKING, STRIPING, & SIGNAGE NOTES:

- MARKINGS MUST COMPLY WITH THE F.D.O.T. ROADWAY & TRAFFIC STANDARD, MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, 2022 EDITION, AND THE ORANGE COUNTY LAND DEVELOPMENT CODE. PARKING SPACES MAY BE F.D.O.T. RATED PAINT. ALL OTHER MARKINGS MUST
- HANDICAP PARKING SPACES SHALL BE PROPERLY SIGNED AND STRIPED IN ACCORDANCE WITH FLORIDA STATUTE 316. THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES AND OTHER APPLICABLE STANDARDS. REFER TO 2023 F.D.O.T. ROAD AND BRIDGE CONSTRUCTION STANDARD PLANS INDEX 700-102 FOR HANDICAP SYMBOL.
- . HANDICAP SIGN SHALL BE F.D.O.T. SPECIFICATION FTP 20-06.

### PAVING, GRADING, & DRAINAGE NOTES:

- ALL CONSTRUCTION, INCLUDING SIDEWALKS, SHALL BE IN ACCORDANCE WITH CITY OF BELLE ISLE CONSTRUCTION SPECIFICATIONS AND OTHER GENERAL AND SPECIAL SPECIFICATIONS, AND THE LATEST EDITION OF THE FLORIDA DEPARTMENT OF TRANSPORTATION'S STANDARD SPECIFICATIONS FOR ROAD & BRIDGE CONSTRUCTION, UNLESS STATED OTHERWISE IN THE SPECIFICATIONS OR ON THE PLANS.
- SUBSURFACE INFORMATION PROVIDED WITH THESE DRAWINGS WAS OBTAINED FOR USE IN ESTABLISHING DESIGN CRITERIA FOR THE PROJECT. THE ACCURACY OF THIS INFORMATION IS NOT GUARANTEED AND IS NOT TO BE CONSTRUED AS PART OF THE PLANS GOVERNING CONSTRUCTION OF THE PROJECT.
- 5. THE LOCATIONS OF EXISTING UTILITIES AND STORM DRAINAGE SHOWN ON THE PLANS HAVE BEEN DETERMINED FROM THE BEST INFORMATION AVAILABLE AND ARE GIVEN FOR THE CONVENIENCE OF THE CONTRACTOR. ENGINEER ASSUMES NO RESPONSIBILITY FOR INACCURACY. PRIOR TO THE START OF ANY CONSTRUCTION ACTIVITY, IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO MAKE ARRANGEMENTS FOR FIELD LOCATIONS AND FOR ANY RELOCATIONS OF THE VARIOUS EXISTING UTILITIES WITH THE UTILITY OWNERS, WHICH SHALL BE DONE IN A TIMELY FASHION TO MINIMIZE IMPACT ON THE CONSTRUCTION SCHEDULE. ANY DELAY OR INCONVENIENCE CAUSED THE CONTRACTOR BY THE RELOCATION OF THE VARIOUS UTILITIES SHALL BE INCIDENTAL TO THE CONTRACT AND NO EXTRA COMPENSATION WILL BE ALLOWED.
- . ALL FILL MATERIAL IN GENERAL IMPROVEMENT AREAS SHALL BE COMPACTED TO A MINIMUM OF 95% OF THE SOIL'S MODIFIED PROCTOR MAXIMUM DRY DENSITY AS DETERMINED BY AASHTO T—180. SPECIFIC SITE PREPARATION METHODS, TYPE OF FILL TO BE USED FOR PARKING AND BUILDING AREAS, AND COMPACTION SHALL BE IN ACCORDANCE WITH THE GEOTECHNICAL ENGINEER'S RECOMMENDATIONS. THIS PLAN ONLY COVERS SITE RELATED IMPROVEMENTS AND INFRASTRUCTURE. REFER TO PAVEMENT SECTION DETAILS FOR MATERIAL AND COMPACTION REQUIREMENTS OF PAVEMENT SUBGRADE.
- . ALL UNDERGROUND UTILITIES INCLUDING CONDUIT FOR ELECTRICAL, CABLE TV, AND TELEPHONE SHALL BE INSTALLED PRIOR TO PAVEMENT
- 5. CONTRACTOR SHALL IMMEDIATELY NOTIFY THE ENGINEER OF ANY PROBLEMS REQUIRING DEVIATION FROM THESE PLANS AND SPECIFICATIONS. '. THE CONTRACTOR SHALL SUBMIT DETAILED SHOP DRAWINGS OF ALL MAJOR ITEMS PROPOSED FOR THIS PROJECT TO THE ENGINEER PRIOR TO ORDERING ANY OF THE EQUIPMENT. UPON THE CONTRACTOR'S RECEIPT OF APPROVED SHOP DRAWINGS FROM THE ENGINEER, THE CONTRACTOR MAY PROCEED WITH THE WORK.
- B. ALL DISTURBED AREAS MUST BE SODDED UNLESS OTHERWISE NOTED ON THE PLANS. ALL SODDING MUST BE DONE IN ACCORDANCE WITH SECTION 570 OF THE FLORIDA DEPARTMENT OF TRANSPORTATION'S STANDARD SPECIFICATIONS FOR ROAD & BRIDGE CONSTRUCTION, LATEST
- 9. PROVIDE HANDICAP ACCESS WHERE SIDEWALKS MEET CURBS.

### EROSION CONTROL NOTES

08/15/2023

08/16/2023

08/17/2023

08/17/2023

10/09/2023

DATE

- . ALL EROSION AND SEDIMENT CONTROL WORK SHALL CONFORM WITH CITY OF BELLE ISLE SPECIFICATIONS, SUBJECT TO AUTHORIZED AND APPROVED VARIANCES, WAIVERS AND/OR CONDITIONAL CHANGES.
- EROSION AND SEDIMENT CONTROL MEASURES ARE TO BE PLACED PRIOR TO OR AS THE FIRST STEP IN CONSTRUCTION. SEDIMENT CONTROL PRACTICES WILL BE APPLIED AS A PERIMETER DEFENSE AGAINST ANY TRANSPORTATION OF SILT OFF THE SITE
- CONTRACTOR SHALL SUBMIT AN EROSION CONTROL PLAN AT THE PRE—CONSTRUCTION MEETING. THE CONTRACTOR SHALL USE BEST MANAGEMENT PRACTICES IN CONTROLLING EROSION AND SEDIMENTATION DURING CONSTRUCTION.
- $\cdot$ . ALL CLEARED AREAS FOR IMPROVEMENT AND/OR CONSTRUCTION SHALL BE WATERED TO PREVENT WIND EROSION.

08/14/2023 /3\ REVISED PER ORANGE COUNTY FIRE DEPT. DATED 08/07/2023

 $\sqrt{5}$  REVISED PER OCU COMMENTS DATED 07/27/2023

 $\sqrt{2}$  REVISED PER FDOT COMMENTS DATED 07/11/2023

/8\ REVISED PER CITY COMMENTS DATED 10/04/2023

 $/4\$  REVISED PER SJRWMD COMMENTS DATED 07/24/2023

- 5. PRIOR TO LAND CLEARING THE CONTRACTOR SHALL PROVIDE TREE PROTECTION BARRIERS TO MEET THE REQUIREMENTS OF ORANGE COUNTY.
- . THE CONTRACTOR SHALL SELECTIVELY CLEAR ONLY THE AREAS REQUIRED FOR CONSTRUCTION AND STABILIZE ANY POTENTIAL EROSION AREAS IMMEDIATELY FOLLOWING COMPLETION OF CONSTRUCTION.

√6\ REVISED PER CITY OF BELLE ISLE COMMENTS DATED 08/04/2023 VP/MS JAA

REVISIONS

VP/MS JAA

VP/MS JAA

VP/MSI JAA

VP/MS| JAA

MP/MS JAA

BY ICHECKED

### WATER & SEWER UTILITY NOTES:

(OBSERVED BY ENGINEER) AND REPORTED TO CONFORM TO PROJECT SPECIFICATIONS.

- . CONTRACTOR SHALL COORDINATE WITH ORLANDO UTILITIES COMMISSION AND ORANGE COUNTY UTILITIES FOR CONSTRUCTION OF THE WATER AND SEWER SYSTEMS, RESPECTIVELY. ALL MATERIAL AND WORKMANSHIP SHALL CONFORM TO THEIR SPECIFICATIONS AND REQUIREMENTS, AS APPLICABLE AND WILL BE SUBJECT TO THEIR INSPECTION AND ACCEPTANCE.
- CONTRACTOR SHALL COORDINATE ALL WATER AND SEWER SYSTEM TEST SCHEDULING TO ALLOW ENGINEER'S ATTENDANCE AND PROVIDE FIVE (5) WORKING DAYS NOTICE OF WATER AND SEWER TESTS. CONTRACTOR'S FAILURE TO PROPERLY NOTIFY ENGINEER MAY RESULT IN RETESTING AT
- ENGINEER'S OPTION AND AT CONTRACTOR'S EXPENSE . ENGINEER RESERVES THE RIGHT TO WITHHOLD APPROVAL FOR ANY PORTION OF THE WATER OR SEWER PIPE WORK WHICH HAS NOT BEEN TESTED
- 4. SITE CONTRACTOR SHALL COORDINATE AND VERIFY ALL UTILITY SERVICES WITH FINAL ARCHITECTURAL DRAWINGS AND BUILDING CONTRACTOR.
- 5. CONTRACTOR SHALL VERIFY SIZE AND TYPE OF EXISTING MAIN PRIOR TO ORDERING TAPPING MATERIALS FOR TIE-INS.
- 6. CONTRACTOR SHALL MAINTAIN A SET OF RECORD DRAWINGS MARKED UP WITH HORIZONTAL AND VERTICAL AS-BUILT INFORMATION ON LOCATION OF WATER MAINS, FITTINGS, AND WATER SERVICES LOCATED FROM CENTERLINE OF NEAREST FIRE HYDRANT OR NEAREST MANHOLE. 1. SITE UTILITY WORK SHALL TERMINATE 5 FEET FROM BUILDINGS UNLESS OTHERWISE STATED.
- 8. CONTRACTOR SHALL NOT ACTIVATE WATER SERVICE UNTIL THE FDEP HAS CLEARED THE SYSTEM FOR USE AND THE CLEARANCE LETTER HAS BEEN RECEIVED BY THE OWNER.

### F.D.E.P. CONSTRUCTION NOTES:

### <u>UTILITY SEPARATION - VERTICAL CLEARANCE:</u>

- I. NEW OR RELOCATED, UNDERGROUND WATER MAINS THAT ARE INCLUDED IN THIS PROJECT AND THAT WILL CROSS ANY EXISTING OR PROPOSED GRAVITY —OR VACUUM— TYPE SANITARY SEWER OR STORM SEWER SHALL BE LAID SO THE OUTSIDE OF THE WATER MAIN IS AT LEAST SIX INCHES ABOVE THE OTHER PIPELINE OR AT LEAST 12" BELOW THE OTHER PIPELINE; AND NEW OR RELOCATED, UNDERGROUND WATER MAINS THAT ARE INCLUDED IN THIS PROJECT AND THAT WILL CROSS ANY EXISTING OR PROPOSED PRESSURE—TYPE SANITARY SEWER, WASTEWATER OR STORMWATER FORCE MAIN, OR PIPELINE CONVEYING RECLAIMED WATER SHALL BE LAID SO THE OUTSIDE OF THE WATER MAIN IS AT LEAST 12 INCHES ABOVE OR BELOW THE OTHER
- 2. AT THE UTILITY CROSSINGS DESCRIBED ABOVE, ONE FULL LENGTH OF WATER MAIN PIPE SHALL BE CENTERED ABOVE OR BELOW
  THE OTHER PIPELINE SO THE WATER MAIN JOINTS WILL BE AS FAR AS POSSIBLE FROM THE OTHER PIPELINE <u>OR</u> THE 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

### **UTILITY SEPARATION HORIZONTAL SEPARATION:**

- . NEW OR RELOCATED, UNDERGROUND WATER MAINS INCLUDED IN THIS PROJECT SHALL BE LAID TO PROVIDE A HORIZONTAL DISTANCE OF AT LEAST THREE FEET BETWEEN THE OUTSIDE OF THE WATER MAIN AND THE OUTSIDE OF ANY EXISTING OR PROPOSED VACUUM-TYPE SANITARY SEWER, STORM SEWER, STORMWATER FORCE MAIN, OR PIPELINE CONVEYING RECLAIMED WATER REGULATED UNDER PART III CHAPTER 62-610, F.A.C.; A HORIZONTAL DISTANCE OF AT LEAST SIX FEET BETWEEN THE OUTSIDE OF THE WATER MAIN AND THE OUTSIDE OF ANY EXISTING OR PROPOSED GRAVITY-TYPE SANITARY SEWER (OR A HORIZONTAL DISTANCE OF AT LEAST THREE FEET BETWEEN THE OUTSIDE OF THE WATER MAIN AND THE OUTSIDE OF ANY EXISTING OR PROPOSED GRAVITY—TYPE SANITARY SEWER IF THE BOTTOM OF THE WATER MAIN WILL BE LAID AT LEAST (6") SIX INCHES ABOVE THE TOP OF THE SEWER): A
  HORIZONTAL DISTANCE OF AT LEAST SIX FEET BETWEEN THE OUTSIDE OF THE WATER MAIN AND THE OUTSIDE OF ANY EXISTING OR PROPOSED
  PRESSURE—TYPE SANITARY SEWER, WASTEWATER FORCE MAIN, OR PIPELINE CONVEYING RECLAIMED WATER NOT REGULATED UNDER PART III OF CHAPTER
  62—610, F.A.C.; AND A HORIZONTAL DISTANCE OF AT LEAST TEN FEET BETWEEN THE OUTSIDE OF THE WATER MAIN AND ALL PARTS OF ANY EXISTING OR PROPOSED "ON-SITE SEWAGE TREATMENT AND DISPOSAL SYSTEM."
- THE CONTRACTOR SHALL PERFORM HYDROSTATIC TESTING OF ALL NEWLY-INSTALLED WATER DISTRIBUTION SYSTEM IN ACCORDANCE WITH THE ORLANDO UTILITIES COMMISSION & IN ACCORDANCE WITH AWWA STANDARD C600 FOR DUCTILE-IRON PIPE. TESTING SHALL BE IN ACCORDANCE
- THE CONTRACTOR SHALL DISINFECT ALL SECTIONS OF THE WATER DISTRIBUTION SYSTEM IN ACCORDANCE WITH THE F.D.E.P. WATER PERMIT, & RECEIVE APPROVAL THEREOF FROM THE LOCAL WATER UTILITY, ENGINEER OF RECORD, & F.D.E.P., PRIOR TO PLACING IN SERVICE. IT IS THE CONTRACTOR'S RESPONSIBILITY TO OBTAIN COPIES OF THE F.D.E.P. WATER & SEWER PERMITS FROM THE PERMITS FROM THE OWNER & MAINTAIN THEM ON THE JOB SITE AT ALL TIMES. DISINFECTION OF THE WATER DISTRIBUTION SYSTEM SHALL SYSTEM SHALL BE PERFORMED IN ACCORDANCE WITH AWWA 651 "DISINFECTING WATER MAINS". SHALL BE PERFORMED IN ACCORDANCE WITH AWWA 651 "DISINFECTING WATER MAINS".

### **CONSTRUCTION NOTES:**

- THE <u>PERMITTEE</u> SHALL BE SEPARATELY RESPONSIBLE FOR APPROPRIATE CONSTRUCTION, DISINFECTION & TESTING BEYOND THE METER TO ASSURE POTABILITY AT THE POINT OF USE.
- 2. POTABLE WATER PIPES WILL BE DISINFECTED IN ACCORDANCE WITH AWWA SPECIFICATIONS C651.
- 3. POTABLE PIPES WILL BE HYDROSTATICLY TESTED IN ACCORDANCE WITH SPECIFICATION NUMBERS C600 & C605/M23 FOR DUCTILE IRON & PVC PIPES,
- A. POTABLE WATER PIPES MUST BE MANUFACTURED IN ACCORDANCE WITH THE FOLLOWING AWWA SPECIFICATIONS:
- B. DUCTILE IRON PIPE (3" TO 64") AWWA C150/AWWA C151; LINING PER AWWA C104, COATING PER AWWA C116, ENCASEMENT PER AWWA C105, FLANGED PIPE PER AWWA C115, GASKET JOINTS PER AWWA C111 AND FITTINGS PER AWWA C110 OR AWWA C153.
- C. PVC (WITH NATIONAL SANITATION FOUNDATION SEAL) 1. AWWA C900/ASTM 1784 (4" TO 12") WITH DR25 MINIMUM;
- 2. AWWA C905 (14" TO 48")
- 3. PRESSURE RATED PIPE (SDR SERIES) SHALL BE ASTM D2241, SCHEDULE 40, 80, & 120 PVC PIPES PER ASTM D1785. THE COMPOUNDS USED FOR EITHER OF THESE TYPES SHALL BE PER ASTM D1784.
- D. POLYETHYLENE PIPE (1/2" 3") AWWA C901 WITH VALVES & FITTINGS (AWWA C800);
- E. POLYETHYLENE PIPE (4" 63") AWWA C906.
- F. FIRE HYDRANTS & VALVES PER AWWA SERIES C500 THROUGH C560
- G. METERS PER AWWA SERIES C700 THROUGH C710
- E. NON-AWWA PVC PIPES (ALLOWED ONLY FOR SIZES LESS THAN 4 INCHES) MUST HAVE A MINIMUM PRESSURE CLASS OF 200 PSI AND MUST BEAR THE NSF MARK ON EACH INSTALLED LENGTH.

### CONNECTION TO EXISTING WATER MAINS:

- . IF CONNECTION OF THE PROPOSED ACTIVITY TO THE WATER MAIN WILL RESULT IN DEPRESSURIZATION OF THE EXISTING SYSTEM BELOW 20 POUNDS PER SQUARE INCH, ONE OF THE FOLLOWING MUST OCCUR:
- A. PRECAUTIONARY BOIL WATER NOTICES MUST BE ISSUED IN CASES OF PLANNED DISTRIBUTION INTERRUPTIONS, WHICH DEEMED AN IMMINENT PUBLIC HEALTH THREAT BY THE D.E.P. CENTRAL DISTRICT OR WILL AFFECT BACTERIOLOGICAL QUALITY OF THE DRINKING WATER UNLESS THE PUBLIC WATER SYSTEM CAN DEMONSTRATE, BY SOUND ENGINEERING JUDGMENT, THAT THE INTEGRITY OF THE WATER
- QUALITY ARE EXPECTED TO OCCUR & NOT DEEMED AN IMMINENT PUBLIC HEALTH RISK. B. IN CASES OF BRIEF INTERRUPTION IN SERVICE, ADVISORIES (NOT BOIL WATER NOTICES) SHOULD BE ISSUED IF TEMPORARY CHANGES IN WATER QUALITY ARE EXPECTED TO OCCUR & NOT DEEMED AN IMMINENT PUBLIC HEALTH RISK.

### FILLING OF WATERMAINS:

I. FILLING OF PROPOSED WATER MAINS FROM EXISTING WATER MAINS WILL BE DONE IN ACCORDANCE WITH AWWA SPECIFICATIONS C651.

- FDOT NOTE: 1. ALL THE WORK TO BE PERFORMED IN ACCORDANCE WITH FY-2023-24 STANDARDS PLANS, 2023 BRIDGE SPECIFICATION FOR ROAD BRIDGE CONSTRUCTION AND 2017 UTILITY ACCOMMODATION MANUAL.
- 2. ALL WORK PERFORMED WITHIN THE FDOT RIGHT-OF-WAY SHALL BE IN ACCORDANCE WITH LATEST EDITIONS OF THE FDOT DESIGN STANDARDS, SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, AND THE 2017 UTILITY ACCOMMODATIONS MANUAL
- 3. PERMITTEE SHALL CONTACT ORLANDO OPERATIONS AT (321) 319-8100 TO PROVIDE START NOTICE AT LEAST TWO BUSINESS DAYS PRIOR TO STARTING WORK.
- PLEASE INITIATE WORK IN THE OSP BEFORE BEGINNING WORK.
- 5. ALL AFFECTED SIDEWALKS, RAMPS & CROSSWALKS, WILL BE BUILT AND INSPECTED TO MEET CURRENT ADA REQUIREMENTS.
- 6. ENGINEER OF RECORD IS FULLY RESPONSIBLE TO UPDATE/ADD/REMOVE ANY SIGNS AND PAVEMENT MARKINGS THAT NEED TO BE UPDATED/ADDED/REMOVED IN THE FIELD WITH THE PROPOSED CHANGES EVEN IF THE FDOT COMMENTS BELOW ARE NOT COMPREHENSIVE AND DO NOT COVER EVERY ONE OF THE CHANGES REQUIRED.
- CONTRACTOR TO COORDINATE WORK WITHIN FDOT R/W WITH MICHAEL COLON (321-354-7063 AND MICHAEL.COLONRODRIGUEZ@OCFL.NET) AT ORANGE COUNTY REGARDING EXISTING FIBER NETWORK AND TO USE CAUTION WORKING IN THIS AREA AS SHOWN ON SHEET C-19.

### MATERIAL SPECIFICATIONS:

### PAVING, GRADING, & DRAINAGE:

- 1. PAVING MATERIALS SHALL CONFORM WITH 2023 F.D.O.T. ROAD AND BRIDGE CONSTRUCTION STANDARD PLANS. LATEST EDITION.
- 2. STORM DRAINS SHALL BE REINFORCED CONCRETE PIPE, PER ASTM C-76 CLASS III, UNLESS OTHERWISE SPECIFIED. LIFTING HOLES ARE
- 3. ALL STORM STRUCTURES SHALL CONFORM WITH 2018 F.D.O.T. ROAD AND BRIDGE CONSTRUCTION STANDARD PLANS EXCEPT THAT DITCH BOTTOM INLETS IN PAVED AREAS SHALL HAVE TRAVERSABLE, TRAFFIC BEARING, GRATES SUPPORTED BY STEEL ANGLE SEATS OR SUPPORTED ON FOUR SIDES. GRATES SHALL BE CAST IRON UNLESS BICYCLE TRAFFIC IS ANTICIPATED.
- 4. ALL TYPE "P" STRUCTURE BOTTOMS SHALL BE ROUND UNLESS OTHERWISE SPECIFIED & SHALL HAVE 4 FEET MINIMUM DIAMETER.

### **WATER MATERIAL:**

### GENERAL MATERIAL SPECIFICATIONS

MATERIAL USED IN THE CONSTRUCTION OF THE WATER DISTRIBUTION SYSTEM SHALL ADHERE TO THE REQUIREMENTS OUTLINED IN THE OUC WATER DISTRIBUTION'S SPECIFICATION STANDARDS MANUAL. THE FOLLOWING INFORMATION IS TO PROVIDE GENERAL GUIDANCE IN THE PREPARATION OF CONSTRUCTION PLANS AND SPECIFICATIONS, AND IN NO WAY LIMITS OUC'S RIGHTS TO APPROVE OR DISAPPROVE PLANS, SPECIFICATIONS OF INSTALLATIONS. MOST CENTRAL FLORIDA UTILITY SUPPLY COMPANIES HAVE A COPY OF OUC'S SPECIFICATION STANDARDS MANUAL.

- 1. THE TYPICAL O.U.C. DISTRIBUTION SYSTEM PIPE SIZES AND MATERIAL USED ARE:
- \* TWO INCH (2") WATER MAINS SHALL BE ASTM 2241 CLASS 200 SDR21 POLYVINYL CHLORIDE (PVC) PIPE.
- \* FOUR INCH (4") WATER MAINS SHALL BE EITHER PRESSURE CLASS 350 DUCTILE IRON (D.I.) IN ACCORDANCE WITH ANSI/AWWA CI50/A21.50-96 AND ANSI/AWWA C151/A21.51-86 OR, AS CONDITIONS WARRANT, C900 SDR18 CLASS 150 PVC PIPE.
- ANSI/AWWA C150/A21.50-96 AND ANSI/AWWA C151/A21.51-86. ° THIRTY INCH (30") AND LARGER WATER MAINS SHALL BE PRESSURE CLASS 250 D.I. PIPE IN ACCORDANCE WITH ANSI/AWWA C150/A21.50-96

\* SIX INCH (6") THROUGH TWENTY FOUR INCH (24") WATER MAINS SHALL BE PRESSURE CLASS 350 D.I. PIPE IN ACCORDANCE WITH

- AND ANSI/AWWA C151/A21.51-86.
- 1. THE USE OF 2" AND/OR 4" PVC PIPE MUST BE APPROVED BY O.U.C. WATER ENGINEERING. 2. PVC PIPE MUST BE BLUE IN COLOR OR HAVING CONTINUOUS BLUE MARKINGS TO CONFORM TO AWWA COLORS WITH NSF LOGO FOR
- 3. DUCTILE IRON PIPE WILL BE STRIPED WITH BLUE LATEX ACRYLIC PAINT. STRIPES WILL BE A MINIMUM OF 2" WIDE. PIPES LESS THAN 24" WILL HAVE 1 STRIPE ON TOP. PIPES 24" AND LARGER WILL HAVE AN ADDITIONAL STRIPE ON EACH SIDE.
- JOINT ENDS. ALL PIPE FITTINGS 30" OR LARGER SHALL BE CEMENT LINED (CLASS 250) DUCTILE IRON, WITH MECHANICAL JOINT ENDS.

2. ALL PIPE FITTINGS 4"UP TO 30"SHALL BE CEMENT OR EPOXY LINED (CLASS 350)AWWA CI53 "COMPACT"DUCTILE IRON, WITH MECHANICAL

- 3. A SERVICE MATERIAL FOR AND 1" SHALL INCLUDE SOFT ANNEALED TYPE-K COPPER TUBING.
- B SERVICE MATERIAL FOR 2" SHORT SIDE SERVICES SHALL INCLUDE 2" CTS TYPE-K HARD COPPER PIPE. C SERVICE MATERIAL FOR 2" LONG SIDE SERVICES SHALL INCLUDE 2" RESTRAINED JOINT (SDR 17/CLASS 250) PVC PIPE (IPS-0.D.).
- 4. SERVICE MATERIAL (CORP. STOPS, CURB STOPS, ETC.) FOR 1", AND 2" SERVICES SHALL BE BRASS COMPRESSION FITTINGS IN ACCORDANCE W/AWWA C800. FLARED FITTINGS ARE ACCEPTABLE UNDER CONTROLLED CONDITIONS. AN AWWA (CC) THREADING IS REQUIRED ON ALL 1" CORPORATION STOPS USED WITH DIRECT PIPE TAPPING ON DUCTILE IRON PIPE OR WITH SERVICE CLAMPS ON PVC PIPE. INSTALLATION OF 2' SERVICES REQUIRE SERVICE CLAMPS AND TO ACCOMMODATE 1 1/2" OR 2" METERS, 2" BALL ANGLE METER VALVES (CTS X FLANGE) WITH SLOTTED HOLES ON THE FLANGE FACE ARE REQUIRED. PADLOCK WINGS MUST BE INCLUDED ON EACH CURB STOP OR BALL METER VALVE.
- 5. FIRE HYDRANTS SHALL BE TRAFFIC DRY BARREL TYPE AND MEET OUC SPECIFICATIONS. MANUFACTURERS ACCEPTED MUELLER A-423 (CENTURION), KENNEDY K-81A, U.S. PIPE & FOUNDRY COMPANY (METROPOLITAN), AMERICAN-DARLING B84B, M & H VALVE COMPANY #929.
- 6. ALL VALVES 4" THROUGH 12" SHALL BE RESILIENT SEAT/WEDGE GATE VALVES WITH EPOXY COATING INTERNALLY/EXTERNALLY AND CONFORM TO ANSI/AWWA STANDARD C509-94 OR LATEST REVISION. ALL VALVES 16" AND LARGER SHALL BE BUTTERFLY, HAVE EPOXY COATING AND CONFORM TO ANSI/AWWA C504-94 OR LATEST REVISION.
- 7. ALL VALVE BOXES SHALL BE CAST IRON SLIDING TYPE. SCREW TYPE ARE NOT APPROVED.

OUC SPECIFICATIONS OFTEN ADD TO THE MANUFACTURER'S SPECIFICATIONS. IF YOU HAVE ANY QUESTIONS, PLEASE CONTACT: OUC WATER DISTRIBUTION STANDARDS AND SPECIFICATIONS (407) 244-8786 OR VISIT OUR WEB SITE AT: http://www.ouc.com/vendor

### SEWER MATERIAL:

- 1. PVC GRAVITY SEWER PIPE
- a. PVC GRAVITY SEWER PIPE (4"-15"), ASTM D3034, SDR26. UNIFORM MINIMUM "PIPE STIFFNESS" AT FIVE (5) PERCENT DEFLECTION SHALL BE 46 PSL. THE JOINTS MANUFACTURED IN ACCORDANCE WITH ASTM D3212 AND ASTM F477. APPLICABLE UNI-BELL PLASTIC PIPE ASSOCIATION STANDARD IS UNI-B-4.
- b. PVC GRAVITY SEWER PIPE (18"-27"), ASTM F679, SDR26. UNIFORM MINIMUM "PIPE STIFFNESS" AT FIVE (5) PERCENT DEFLECTION SHALL BE 46 PSI. THE JOINTS SHALL BE INTEGRAL BELL ELASTOMERIC GASKET JOINTS MANUFACTURED IN ACCORDANCE WITH ASTM D3212 AND ASTM F477. APPLICABLE UNI-BELL PLASTIC PIPE ASSOCIATION STANDARD IS UNI-B-7.
- c. ALL PVC PIPE SHALL BEAR THE NSF-DW SEAL. THE MINIMUM STANDARD LENGTH OF PIPE SHALL BE THIRTEEN (13) FEET.
- . ALL PIPE SHALL HAVE A HOMING MARK ON THE SPIGOT PROVIDED BY THE MANUFACTURER. ON FIELD CUT PIPE, CONTRACTOR SHALL PROVIDE HOMING MARK ON THE SPIGOT IN ACCORDANCE WITH MANUFACTURERS RECOMMENDATIONS. REINFORCED CONCRETE PIPE SHALL HAVE MARKINGS INDICATING THE MINOR AXIS OF THE ELLIPTICAL REINFORCEMENT.

### 3. JOINTS MATERIALS

- a. PVC SEWER PIPE JOINTS SHALL BE FLEXIBLE ELASTOMERIC SEALS PER ASTM D 3212.
- b. JOINTS BETWEEN PIPES OF DIFFERENT MATERIALS SHALL BE MADE WITH A FLEXIBLE MECHANICAL COMPRESSION COUPLING WITH NO. 304 STAINLESS STEEL BANDS. REFER TO COUNTY MANUAL FOR APPROVED MANUFACTURERS' LIST

### 4. FITTINGS

- a. UNLESS OTHERWISE SPECIFIED, WYE BRANCHES SHALL BE PROVIDED IN THE GRAVITY SEWER MAIN FOR SERVICE LATERAL CONNECTIONS. WYES SHALL BE SIX (6) INCHES INSIDE DIAMETER, UNLESS OTHERWISE APPROVED BY THE COUNTY. ALL FITTINGS SHALL BE OF THE SAME MATERIAL AS THE PIPE.
- b. PLUGS FOR STUB OUTS SHALL BE OF THE SAME MATERIAL AS THE PIPE, AND GASKETED WITH THE SAME GASKET MATERIAL AS THE PIPE JOINT, OR BE OF MATERIAL APPROVED BY THE COUNTY. THE PLUG SHALL BE SECURED TO WITHSTAND TEST PRESSURES SPECIFIED IN SECTION 44 OF THE ORANGE COUNTY MANUAL OF STANDARDS AND SPECIFICATIONS FOR WASTEWATER CONSTRUCTION.

### PRE-CONSTRUCTION HOLD COMMENTS

- CONTRACTOR WILL BE REQUIRED TO ATTEND A PRE-CONSTRUCTION MEETING WITH THE CITY OF BELLE ISLE REPRESENTATIVES PRIOR TO COMMENCEMENT OF CONSTRUCTION. THE CONTRACTOR WILL BE REQUIRED TO PRESENT THE FOLLOWING:
- A MILESTONE SCHEDULE,
- SITE LOGISTICS PLAN INCLUDING, BUT NOT LIMITED TO,
- SITE TRAILER LOCATION (INCLUDING SEWERAGE HOLDING TANK), • TEMPORARY SANITARY ("PORT-0'-POTTY") LOCATIONS,
- TIRE WASH-OFF STATION(S).
- MOT PLAN. • CONCRETE TRUCK WASH DOWN AREA AND METHOD OF DISPOSAL,
- HAZARDOUS MATERIAL STORAGE AREA(S),
- CONSTRUCTION MATERIAL STAGING AREA(S)
- THE PROJECT'S SWPPP AND THE FDEP LETTER ACKNOWLEDGING THEIR ACCEPTANCE OF THE CONTRACTOR'S NOI AND STATING THAT THE PROJECT IS COVERED UNDER THE STATE'S CONSTRUCTION GENERAL PERMIT (CGP) ENVIRONMENTAL RESOURCE PERMIT (ERP) OR EXEMPTION LETTER FROM WATER MANAGEMENT DISTRICT
- DEWATERING PERMIT, IF APPLICABLE, FROM WATER MANAGEMENT DISTRICT CONTACT NAMES AND PHONE NUMBERS OF SUPERVISORS AND PROJECT MANAGERS FOR BOTH THE GC AND

### CORNERSTONE CHARTER ACADEMY CONSTRUCTION PLANS CITY OF BELLE ISLE, FLORIDA



5127 S. Orange Avenue, Suite 200 Orlando, FL 32809 Phone: 407-895-0324 Fax: 407-895-0325

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THE MAJOR SUB-CONSULTANT TRADES..... FLORIDA ENGINEERING GROUP, IN 22-010 CERTIFICATE No. EB-0006595 LEGEND NOTES AND SPECIFICATIONS No 45128 N.T.S. JUNE 23, 2023 STATE OF CORID. APPROVED BY DESIGNED BY DRAWN BY CHECKED BY JAA JAA

### LEGEND SITE POLE SIGN

SMALL PYLON SIGN LARGE PYLON SIGN RIGHT TURN DIRECTIONAL ARROW STRAIGHT DIRECTIONAL ARROW LEFT TURN DIRECTIONAL ARROW

STRAIGHT AND LEFT TURN DIRECTIONAL ARROW STRAIGHT AND RIGHT TURN DIRECTIONAL ARROW

HANDICAP PARKING SYMBOL F.D.O.T. TYPE "D" CURB F.D.O.T. TYPE "F" CURB AND GUTTER

GATE VALVE BOX, WV= WATER, FV=FIRE,

IV=IRRIGATION, & SSV=SANITARY SEWER -X X CHAINLINK FENCE DECORATIVE WOOD OR ALUMINUM FENCE

→ × → × → BARB WIRE FENCE SCREEN/RETAINING WALL, AS NOTED.

BIKE RACK PARKING COUNT SYMBOL PER ROW

### ROAD CENTERLINE SYMBOL GRADING & DRAINAGE

F.D.O.T. TYPE "C" DRAINAGE INLET F.D.O.T. TYPE "D" DRAINAGE INLET F.D.O.T. TYPE "E" DRAINAGE INLET F.D.O.T. TYPE "1" DRAINAGE INLET F.D.O.T. TYPE "2" DRAINAGE INLET F.D.O.T. TYPE "3" DRAINAGE INLET F.D.O.T. TYPE "4" DRAINAGE INLET F.D.O.T. TYPE "5" DRAINAGE INLET F.D.O.T. TYPE "6" DRAINAGE INLET STORM DRAINAGE MANHOLE MITERED END SECTION

STORM DRAINAGE PIPE DRAINAGE FLOW DIRECTIONAL ARROW (S-1) DRAINAGE STRUCTURE BUBBLE GRADE ELEVATION

**-90** CONTOUR ELEVATION ■ ■ ■ EROSION CONTROL SILT FENCE

### UTILITY

DCDA - DOUBLE CHECK DETECTOR ASSEMBLY DCVA - DOUBLE CHECK NN VALVE ASSEMBLY RPZ - REDUCED PRESSURE ZONE DEVICE DOMESTIC METER

BLOW-OFF GATE VALVE

IRRIGATION METER GATE VALVE

REDUCER WET WELL

11.25° PIPE BEND 22.5° PIPE BEND

30° PIPE BEND

45° PIPE BEND 60° PIPE BEND

90° PIPE BEND TEE CROSS

> FIRE HYDRANT ASSEMBLY W/ UNOBSTRUCTED AREA CLEARANCES AS REQUIRED BY FIRE MARSHALL FIRE DEPARTMENT CONNECTION CLEAN OUT

LIFT STATION GREASE TRAP

•

SITE LIGHTING

DECORATIVE SITE LIGHTING UTILITY POLE

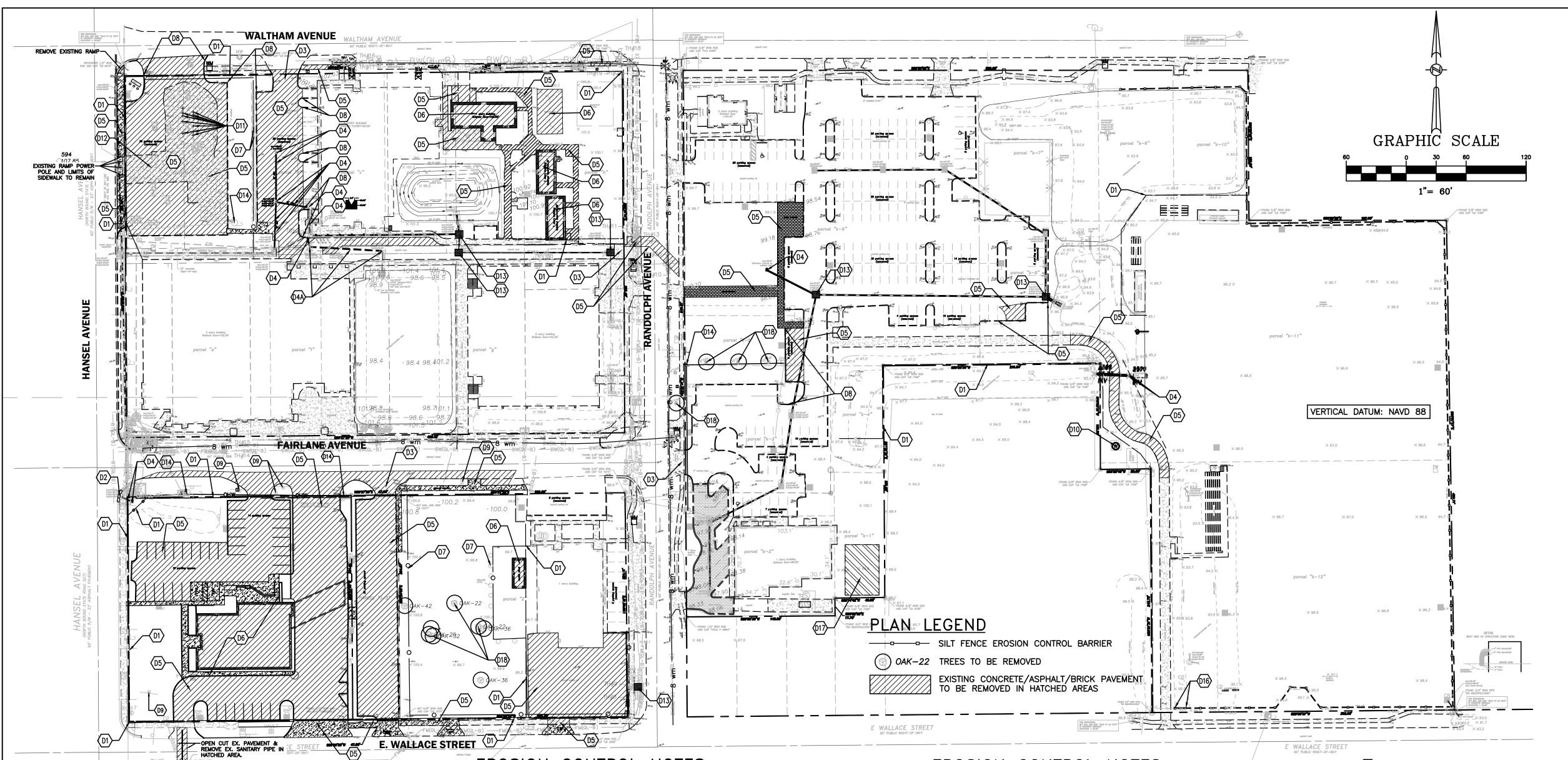
> SEALED BY (ENGINEER), P.E. ON (DATE) USING A SHA-1 AUTHENTICATION CODE. PRINTED COPIES OF THIS DOCUMENT ARE NOT CONSIDERED SIGNED AND SEALED AND THE SHA AUTHENTICATION CODE MUST BE

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### EROSION CONTROL SITE DESCRIPTION NOTES:

- 1. THE PROPOSED CONSTRUCTION ACTIVITY WILL ENTAIL THE IMPROVEMENT OF A 14.84± ACRES SITE LOCATED AT 5903 RANDOLPH AVE., BELLE ISLE, FLORIDA TO BUILD NEW SCHOOL BUILDINGS AND THEIR ASSOCIATED PARKING, DRIVE AISLE AND UTILITIES.
- 2. THE SEQUENCE OF SOILS DISTURBANCE ACTIVITY IS AS FOLLOWS:
- A. INSTALL SILT FENCE AS SHOWN ON THE PLANS & PROVIDE TREE PROTECTION ON SITE, IF APPLICABLE.
- B. CLEAR & GRUB THE AREA TO BE DISTURBED.
- C. PLACE FILL ON-SITE TO BRING THE SITE UP TO THE PROPOSED GRADES.
- D. BEGIN COMPACTION / STABILIZATION PROCESS.
- 3. THE TOTAL SITE AREA IS 14.84± ACRES & THE AREA TO BE DISTURBED IS 6.1± ACRES.
- 4. THE EXISTING SOILS ARE PREDOMINANTLY SAND WITH SILT (SP-SM). THE QUALITY OF THE STORMWATER DISCHARGE IS CONSISTENT W/ THE RUNOFF GENERATED BY A COMMERCIAL SITE.
- 5. THE TOTAL DRAINAGE AREA FOR THE PROJECT IS APPROXIMATELY 14.84± ACRES AND INCLUDES THE AREAS OF THE FUTURE PARKING & NEW BUILDINGS.
- 6. THE LATITUDE & LONGITUDE FOR THE DISCHARGE POINTS IS LAT: 28° 47' 25" LONG: 81° 36' 77". THE RECEIVING WATER BODY IS THE PROPOSED STORMWATER PONDS, DESIGNED TO RECEIVE WATER RUNOFF FROM THE PROJECT SITE.
- 7. WASTE DISPOSAL SHALL BE IMPLEMENTED IN ACCORDANCE WITH LOCAL, STATE & FEDERAL REGULATIONS. ALL TRUCKS EXITING THE SITE WILL BE HOSED, ITS LOAD COVERED and THE COVER PROPERLY SECURED. THE STORAGE, APPLICATION, GENERATION & MIGRATION OF ALL FERTILIZERS, HERBICIDES, PESTICIDES & TOXIC MATERIAL SHALL BE IN ACCORDANCE W/ LOCAL, STATE & FEDERAL REGULATIONS.
- 8. CONTRACTOR SHALL IDENTIFY THE INDIVIDUAL(S) RESPONSIBLE FOR THE DAILY & REQUIRED INSPECTIONS. A REPORTING SYSTEM ENTAILING THE ITEMS TO BÉ INSPECTED & THEIR CONDITION SHOULD BE DOCUMENTED & PLACED IN A DEDICATED FILING SYSTEM THAT WILL REMAIN ON THE PROJECT SITE, ACCESSIBLE TO THE CONSTRUCTION TEAM & TO THE F.D.E.P. INSPECTORS. 9. INSPECTIONS: CONSTRUCTION SITE WILL BE INSPECTED FOR EROSION PROBLEMS DAILY AND AFTER AFTER EACH RAINFALL GREATER THAN 0.5 INCH. A RAIN GAUGE WILL BE ON SITE TO MEASURE THE RAINFALL AMOUNT.

### **EROSION CONTROL NOTES:**

08/14/2023

08/15/2023

08/16/2023

08/17/2023

08/17/2023

10/09/2023

DATE

1. THE CONTRACTOR SHALL COMPLY WITH ALL FEDERAL, STATE, & LOCAL CODES, ORDINANCES, & REGULATIONS GOVERNING POLLUTION OF THE ENVIRONMENT & SHALL IMPLEMENT ALL MEASURES NEEDED TO ENSURE ADEQUATE EROSION & SEDIMENT CONTROL DURING THE ENTIRE DURATION OF CONSTRUCTION. EROSION & SEDIMENT CONTROL MEASURES SHALL CONFORM TO CITY OF ORLANDO, SOUTH FLORIDA WATER MANAGEMENT DISTRICT, FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION, & FLORIDA DEPARTMENT OF TRANSPORTATION REQUIREMENTS. INSTALLATION OF SILT FENCES & TURBIDITY BARRIERS SHALL BE IN ACCORDANCE WITH F.D.O.T. ROADWAY & TRAFFIC DESIGN STANDARDS & STANDARD SPECIFICATIONS FOR ROAD & BRIDGE CONSTRUCTION, LATEST EDITION.

REVISED PER ORANGE COUNTY FIRE DEPT. DATED 08/07/2023

**REVISIONS** 

REVISED PER SJRWMD COMMENTS DATED 07/24/2023

REVISED PER OCU COMMENTS DATED 07/27/2023

REVISED PER FDOT COMMENTS DATED 07/11/2023

REVISED PER CITY COMMENTS DATED 10/04/2023

### EROSION CONTROL NOTES:

- EROSION & SEDIMENT CONTROL MEASURES ARE TO BE PLACED PRIOR TO OR AS THE FIRST STEP IN CONSTRUCTION. EROSION & SEDIMENT CONTROL MEASURES ARE TO BE APPLIED AS A PERIMETER DEFENSE AGAINST THE TRANSPORTATION OF SILT & SEDIMENTS OFF THE PROJECT SITE OR INTO ADJACENT WATER BODIES OR WETLANDS.
- 3. THE CONTRACTOR SHALL PREPARE & IMPLEMENT AN EROSION CONTROL PLAN AS PART OF THE SCOPE OF WORK COVERED BY THESE PLANS. THE CONTRACTOR SHALL USE BEST MANAGEMENT PRACTICES IN CONTROLLING EROSION & SEDIMENT TRANSPORT DURING CONSTRUCTION. THE FLORIDA DEVELOPMENT MANUAL "A GUIDE TO SOUND LAND & WATER MANAGEMENT" MAY BE USED AS REFERENCE FOR RECOMMENDED BEST MANAGEMENT PRACTICES RELATED TO EROSION & SEDIMENT CONTROL. SEDIMENTATION CONTROLS/BEST MANAGEMENT PRACTICES SHALL PREVENT STORM WATER RUNOFF WITH TURBIDITY CREATER THAN 29 NTU FROM LEAVING THE CONSTRUCTION SITE. DEWATERING SHALL BE DONE IN ACCORDANCE WITH FDEP.
- 4. THE CONTRACTOR SHALL SUBMIT THE EROSION CONTROL PLAN TO THE OWNER FOR APPROVAL PRIOR TO THE PRE-CONSTRUCTION MEETING.
- 5. ALL EROSION & SEDIMENT CONTROL MEASURES WHICH ARE NECESSARY TO LIMIT THE TRANSPORT OF SILTS & SEDIMENTS TO OUTSIDE THE LIMITS OF THE WORK AREA OR TO WATER BODIES OR WETLANDS ARE THE RESPONSIBILITY OF THE CONTRACTOR, THE CONTRACTOR SHALL PROVIDE BEST MANAGEMENT PRACTICES & IMPLEMENT STRUCTURAL MEASURES AS NEEDED TO PREVENT EROSION & SEDIMENT TRANSPORT FROM THE WORK AREAS. THE FOLLOWING ARE MINIMUM RECOMMENDED GUIDELINES TO BE IMPLEMENTED DURING CONSTRUCTION AS PART OF THE EROSION & SEDIMENT CONTROL PLAN:

### A. STOCKPILING OF MATERIAL

NO EXCAVATED MATERIAL SHALL BE STOCKPILED IN SUCH A MANNER AS TO DIRECT RUNOFF DIRECTLY OFF THE PROJECT SITE OR INTO ANY ADJACENT WATER BODY OR STORMWATER COLLECTION FACILITY.

### B. EXPOSED AREA LIMITATION & PROTECTION

THE SURFACE AREA OF OPEN, RAW ERODIBLE SOIL EXPOSED BY CLEARING & GRUBBING OPERATIONS OR EXCAVATION & FILLING OPERATIONS SHALL BE LIMITED AS NEEDED TO MINIMIZE THE POTENTIAL OF OFF-SITE SEDIMENT TRANSPORT. ALL EXPOSED AREAS SHALL BE PROTECTED BY INSTALLING EFFECTIVE EROSION & SEDIMENT CONTROL MEASURES SUCH AS SILT SCREENS, SYNTHETIC BALES, TURBIDITY BARRIERS, SWALES, OR A COMBINATION OF THESE & OTHER MEASURES AS WARRANTED.

### C. INLET PROTECTION

INLETS & CATCH BASINS SHALL BE PROTECTED DURING CONSTRUCTION FROM SEDIMENT LADEN STORMWATER RUNOFF BY PROVIDING A COMBINATION OF SILT SCREENS, SYNTHETIC BALES, FILTER FABRIC COVERS OR OTHER MEASURES AS NECESSARY TO CONTROL THE TRANSPORT OF SEDIMENT.

### D. TEMPORARY GRASSING

VP/MS JAA

BY ICHECKED

AREAS OPENED BY CONSTRUCTION OPERATIONS THAT ARE NOT ANTICIPATED TO BE DRESSED OR RECEIVE FINAL GRASSING TREATMENT SHALL BE SEEDED WITHIN 7 DAYS PER FDEP WITH A QUICK GROWING GRASS SPECIES WHICH WILL PROVIDE AN EARLY COVER DURING THE SEASON IN WHICH IT IS PLANTED. TEMPORARY SEEDING SHALL BE CONTROLLED AS TO NOT ALTER OR COMPETE WITH PERMANENT GRASSING. SLOPES STEEPER THAN 6:1 SHALL ADDITIONALLY RECEIVE MULCHING OF APPROXIMATELY 2 INCHES OF LOOSE MEASURE OF MULCH MATERIAL CUT INTO THE SOIL OF THE SEEDED AREA TO A DEPTH OF 4 INCHES. THE SEEDED OR SEEDED & MULCHED AREAS SHALL BE rolled & watered as needed to ensure optimum growing conditions for the establishment OF A GOOD GRASS COVER. IF AFTER 14 DAYS, THE TEMPORARY GRASSED AREAS HAVE NOT ATTAINED A MINIMUM OF 75% OF GOOD GRASS COVER, THE AREAS WILL BE REWORKED & ADDITIONAL SEED JAAAPPLIED TO ESTABLISH THE DESIRED VEGETATION COVER. REWORKED & ADDITIONAL SEED APPLIED.

# EROSION CONTROL NOTES:

- 1. EROSION & SEDIMENT CONTROL MEASURES SHALL BE MAINTAINED DURING THE ENTIRE DURATION OF CONSTRUCTION. THE CONTRACTOR SHALL INSPECT THE EROSION & CONTROL MEASURES ON A DAILY BASIS & 24 HOURS FOLLOWING RAINFALL EVENTS (0.5" OR GREATER) & IMMEDIATELY REPAIR ANY OBSERVED DAMAGED CONTROLS. ALL EROSION & SEDIMENT CONTROLS SHALL BE MAINTAINED AS TO FUNCTION PROPERLY WITHOUT THE TRANSPORT OF SEDIMENTS OUTSIDE THE LIMITS OF THE PROJECT.
- APPROXIMATE SLOPES AFTER MAJOR GRADING VARIES BETWEEN 0.5% TO 4%. MAXIMUM SLOPES ARE FOUND IN THE POND & THEY RANGE BETWEEN 25% TO 50%.
- AREAS OF SOILS DISTURBANCE IS LIMITED TO THE AREA WITHIN THE SILT FENCE LIMITS AS SHOWN ON THIS PLAN.
- 4. ALL DISTURBED PERVIOUS AREAS WILL BE SODDED, UNLESS OTHERWISE NOTED.
- THERE ARE NO WETLAND WITHIN THE PROJECT SITE.
- THE CONTRACTOR SHALL ACQUIRE A CONSTRUCTION GENERIC PERMIT (CGP) AND NOTICE OF INTENT (NOI) PRIOR TO BEGINNING WORK.

### **INSPECTION NOTE**

INSPECTIONS BY THE CONTRACTOR TO DETERMINE THE EFFECTIVENESS OF EROSION/SEDIMENT CONTROL EFFORTS SHALL BE CONDUCTED DAILY AND WITHIN 24 HOURS AFTER EACH 0.50 INCH OR GREATER RAINFALL EVENT. ANY NECESSARY REMEDIES SHALL BE PERFORMED IMMEDIATELY.

### **DUST CONTROL & PREVENTION:**

- THE SURFACE AREA OF OPEN, RAW ERODIBLE SOILS EXPOSED BY CLEARING & GRUBBING OPERATIONS OR EXCAVATION & FILLING OPERATIONS SHALL BE LIMITED AS NEEDED TO MINIMIZE THE POTENTIAL OF DUST PRODUCTION. IN ADDITION,
- 1. ALL EXPOSED AREAS SHALL BE PROTECTED BY INSTALLING DUST CONTROL CONTROL MEASURES SUCH AS STABLIZING EXPOSED SOILS USING VEGETATION, MULCHING, SPRAY-ON ADHESIVES, CALCIUM CHLORIDE, WET SUPPRESSION (WATERING) AND STONE/GRAVEL LAYERING AS APPLICABLE FOR THE PROJECT AND DEEMED NECESSARY BY THE CONTRACTOR TO CONTROL DUST.
- 2. ONSITE VEHICLE TRAFFIC SHOULD BE LIMITED TO A MAXIMUM 15 MPH SPEED, AND THE NUMBER AND ACTIVITY OF VEHICLES SHOULD BE CONTROLLED AT ANY GIVEN TIME.
- 3. A MOBILE UNIT SHOULD BE AVAILABLE TO APPLY WATER TO CONTROL DUST WHEN NEEDED.
- 4. COVERS SHALL BE PROVIDED FOR ALL HAUL TRUCKS TRANSPORTING MATERIALS THAT CONTRIBUTE

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5. IF CHEMICAL STABILIZATION METHOD IS USED, THE CHEMICALS SHOULD BE APPROVED FOR USE BY THE APPROPRIATE REGULATORY AGENCIES AND SHALL NOT CREATE ANY ADVERSE IMPACTS TO STORMWATER, PLANT LIFE, WATER BODIES, GROUNDWATER, OR FISH AND WILDLIFE.

## **#** DEMOLITION KEYNOTES

- D1. F.D.O.T. TYPE "III" SILT FENCE EROSION CONTROL BARRIER PER DETAIL ON THIS SHEET.
- D2. SYNTHETIC EROSION CONTROL BARRIER.
- D3. CONSTRUCTION ENTRANCE (EXISTING DRIVEWAY).
- D4. EXISTING STORM PIPE & ITS STRUCTURE TO BE REMOVED.
- D4A. EXISTING STRUCTURE TO REMAIN.
- D5. EXISTING CONCRETE/ASPHALT/BRICK PAVEMENT TO BE REMOVED IN HATCHED AREAS
- D6. EXISTING BUILDING TO BE DEMOLISHED.
- D7. EXISTING FENCE & BOLLARD POLES TO BE REMOVED.
- D8. LIMITS OF EXISTING CURB TO BE REMOVED.
- D9. EXISTING SIGN TO BE REMOVED.
- D10. EXISTING IRRIGATION WELL TO REMAIN. D11. EXISTING FUEL TANKS TO BE REMOVED. CONTRACTOR TO COORDINATE WITH ORANGE COUNTY/ FDEP FOR REMOVAL OF EXISTING FUEL TANKS. CONTRACTOR TO ACQUIRE APPROPRIATE PERMIT AS NEEDED.
- D12. EXISTING WATER LINE & GATE VALVE TO BE REMOVED.
- D13. FILTER FABRICS COVER. D14. EXISTING POWER POLE TO BE RELOCATED. 16
- CONTRACTOR TO COORDINATE WITH A POWER COMPANY FOR RELOCATION. D15. NOT USED.
- D16. LIMITS OF EXISTING WALL TO BE REMOVED AND REPLACE WITH A GATE.
- D17. EXISTING SEPTIC AND DRAIN FIELD TO BE REMOVED. PER HEALTH DEPARTMENT REQUIREMENTS.(CONTRACTOR TO VERIFY THE LOCATION.)
- D18. EXISTING TREE TO BE REMOVED

### **DEMOLITION NOTES**

- 1. THE LOCATIONS, ELEVATIONS, & DIMENSIONS OF EXISTING UTILITIES & OTHER FEATURES ARE SHOWN ON THE PLANS ACCORDING TO THE BEST INFORMATION AVAILABLE AT THE TIME OF PLAN PREPARATION. THE CONTRACTOR SHALL VERIFY THE LOCATIONS, ELEVATIONS, & DIMENSIONS OF ALL EXISTING UTILITIES & OTHER FEATURES AND PROPERTY OF THE PROPE NOTIFY FEG OF ANY DISCREPANCIES WHICH MAY AFFECT THE PROPOSED WORK.
- 2. THE CONTRACTOR SHALL LOCATE ALL UNDERGROUND UTILITIES BEFORE EXCAVATION.
- 3. THE CONTRACTOR SHALL, PRIOR TO INITIATION OF ANY SITE CLEARING OR OTHER CONSTRUCTION ACTIVITIES, INSTALL SILT SCREENS DOWNSTREAM OF ALL AREAS WHICH HAVE POTENTIAL OF EROSION OR SEDIMENT TRANSPORT OFFSITE OR TO WATER BODIES. THE CONTRACTOR SHALL IMPLEMENT OTHER STRUCTURAL EROSION CONTROL MEASURES IF REQUIRED TO PREVENT SEDIMENT TRANSPORT TO OFF—SITE
- 4. ALL TRASH, DEBRIS, & OTHER MATERIAL REMOVED FROM THE SITE SHALL BE PROPERLY DISPOSED OF BY THE CONTRACTOR IN ACCORDANCE WITH ALL LOCAL, STATE, & FEDERAL REGULATIONS.
- 5. ANY EXCAVATED TRENCHES ARE TO BE BACKFILLED WITH CLEAN SAND COMPACTED TO AT LEAST 95% OF THE MODIFIED PROCTOR MAXIMUM DRY DENSITY VALUE (AASHTO T-180). REFER TO GEOTECHNICAL REPORT FOR SPECIFIC COMPACTION REQUIREMENTS UNDER BUILDING & OTHER STRUCTURES.
- 6. ALL EXISTING CONCRETE TO BE REMOVED SHALL BE SAWCUT & REMOVED @ THE FIRST AVAILABLE GOOD JOINT & REPLACED TO MATCH EXISTING.
- 7. THE CONTRACTOR SHALL CONTACT THE GAS UTILITY FOR LOCATION BEFORE EXCAVATION. CHAPTER 17–153 F.S. REQUIRES THAT AN EXCAVATOR NOTIFIES ALL GAS UTILITIES AT LEAST TWO DAYS PRIOR TO EXCAVATING. ALSO CALL 1–800–432–4770 FOR SUNSHINE LOCATES. F.S. 556.101 THROUGH 111.
- 8. CONTRACTOR TO PROVIDE TREE PROTECTION AS REQUIRED BY THE LOCAL JURISDICTION

### SOIL TRACKING PREVENTION

- 1. A SOIL TRACKING PREVENTION DEVICE (STPD) SHALL BE CONSTRUCTED AT THE LOCATION SHOWN ON THE PLANS. TRAFFIC FROM UNSTABILIZED AREAS OF CONSTRUCTION SHALL BE DIRECTED THRU THE STPD BARRIER. FLAGGING OR OTHER POSITIVE MEANS SHALL BE USED AS REQUIRED TO LIMIT & DIRECT VEHICULAR EGRESS ACROSS THE STPD.
- 2. THE CONTRACTOR MAY PROPOSE AN ALTERNATIVE TECHNIQUE TO MINIMIZE OFFSITE TRACKING OF SEDIMENT. THE ALTERNATIVE MUST BE REVIEWED & APPROVED BY THE ENGINEER &/OR CITY OF BELLE ISLE PRIOR TO ITS USE.
- 3. ALL MATERIALS SPILLED, DROPPED, OR TRACKED ONTO PUBLIC ROADS (INCLUDING THE STPD AGGREGATION) & CONSTRUCTION MUD) SHALL BE REMOVED DAILY, OR MORE FREQUENTLY IF SO DIRECTED BY THE ENGINEER &/OR CITY OF BELLE ISLE.
- 4. AGGREGATES SHALL BE AS DESCRIBED IN SECTION 901 EXCLUDING 901—2.3. AGGREGATES SHALL BE FDOT SIZE #1. IF THIS SIZE IS NOT AVAILABLE, THE NEXT AVAILABLE SMALLER SIZE AGGREGATE MAY BE SUBSTITUTED WITH THE APPROVAL OF THE ENGINEER. SIZES CONTAINING EXCESSIVE SMALL AGGREGATE WILL TRACK OFF THE PROJECT & ARE UNSUITABLE.
- 5. THE STPD SHALL BE MAINTAINED IN A CONDITION THAT WILL ALLOW IT TO PERFORM ITS FUNCTION. TO PREVENT OFFSITE TRACKING, THE STPD SHALL BE RINSED (DAILY WHEN IN USE) TO MOVE ACCUMULATED MUD DOWNWARD THRU THE STONE. ADDITIONAL STABILIZATION OF THE VEHICULAR ROUTE LEADING TO THE STPD MAY BE REQUIRED TO LIMIT THE MUD TRACKED.

### EROSION CONTROLS FOR NON STORMWATER DISCHARGES:

A) WASTE DISPOSAL:

**WASTE MATERIAL:** 

ALL WASTE MATERIAL WILL BE COLLECTED AND STORED IN A METAL DUMPSTER WHICH WILL BE MAINTAINE BY A LICENSED SOLID WASTE MANAGEMENT COMPANY IN ORANGE COUNTY. THE DUMPSTER WILL MEET ALL LOCAL, STATE AND FEDERAL REGULATIONS. ALL TRASH AND CONSTRUCTION DEBRIS FROM THE SITE WILL BI DEPOSITED IN THE DUMPSTER. THE DUMPSTER WILL BE EMPTIED AS OFTEN AS NECESSARY TO NOT CAUSE ON-SITE DISPOSAL OF WASTE. THE TRASH WILL BE HAULED TO AN APPROVED ORANGE COUNTY LANDFILL. CONSTRUCTION WASTE WILL BE BURIED ONSITE. ALL PERSONNEL WILL BE INSTRUCTED REGARDING THE CORRECT PROCEDURE FOR WASTE DISPOSAL. NOTICES STATING THESE PRACTICES WILL BE POSTED AT THE SUPERINTENDENT CONSTRUCTION TRAILER. THE INDIVIDUAL RESPONSIBLE FOR MANAGING THIS TASK WILL BE IDENTIFIED BY THE CONTRACTOR.

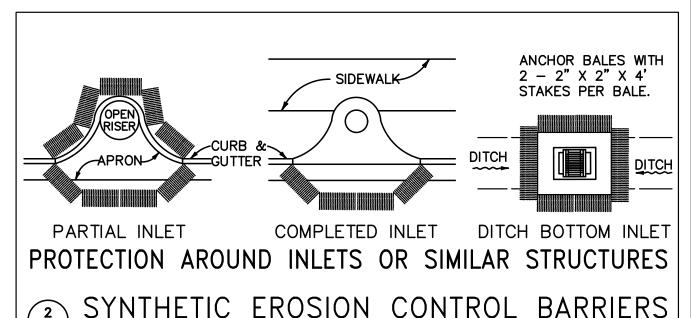
HAZARDOUS WASTE ALL HAZARDOUS WASTE MATERIALS WILL BE DISPOSED OF IN ACCORDANCE WITH THE APPLICABLE LOCAL STATE & FEDERAL REGULATIONS. ALL PERSONNEL WILL BE INSTRUCTED REGARDING THE CORRECT

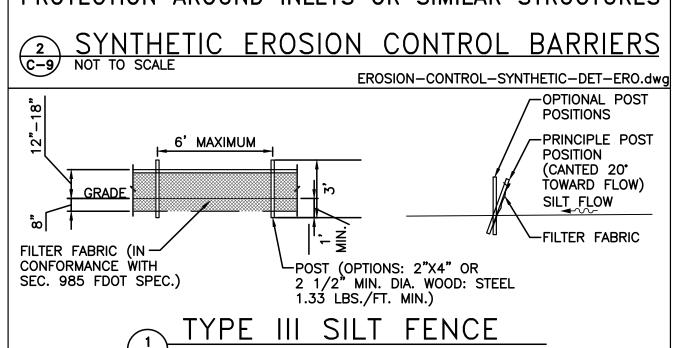
WILL BE IDENTIFIED BY THE CONTRACTOR. **SANITARY WASTE:** ALL SANITARY WASTE WILL BE COLLECTED FROM THE PORTABLE UNITS A MINIMUM OF THREE TIMES PER WEEK BY A LICENSED SANITARY WASTE MANAGEMENT CONTRACTOR AS REQUIRED BY LOCAL REGULATION.

THE SUPERINTENDENT CONSTRUCTION TRAILER. THE INDIVIDUAL RESPONSIBLE FOR MANAGING THIS TASK

### B) OFFSITE VEHICLE TRACKING:

A GRAVEL CONSTRUCTION ENTRANCE HAS BEEN PROVIDED TO HELP REDUCE VEHICLE TRACKING OF SEDIMENTS. THE PAVED STREET ADJACENT TO THE SITE ENTRANCE WILL BE SWEPT DAILY TO REMOVE ANY EXCESS MUD, DIRT OR ROCK TRACKED FROM THE SITE. DUMP TRUCKS HAULING MATERIAL FROM THE CONSTRUCTION SITE WILL BE COVERED WITH A TARPAULIN.





VP/MS| JAA VP/MS JAA CORNERSTONE CHARTER ACADEMY MP/MSI JAA CONSTRUCTION PLANS REVISED PER CITY OF BELLE ISLE COMMENTS DATED 08/04/2023 VP/MS JAA MP/MS JAA CITY OF BELLE ISLE, FLORIDA



5127 S. Orange Avenue, Suite 200 Orlando, FL 32809 Phone: 407-895-0324 Fax: 407-895-0325

SITE DEMOLITION PLAN

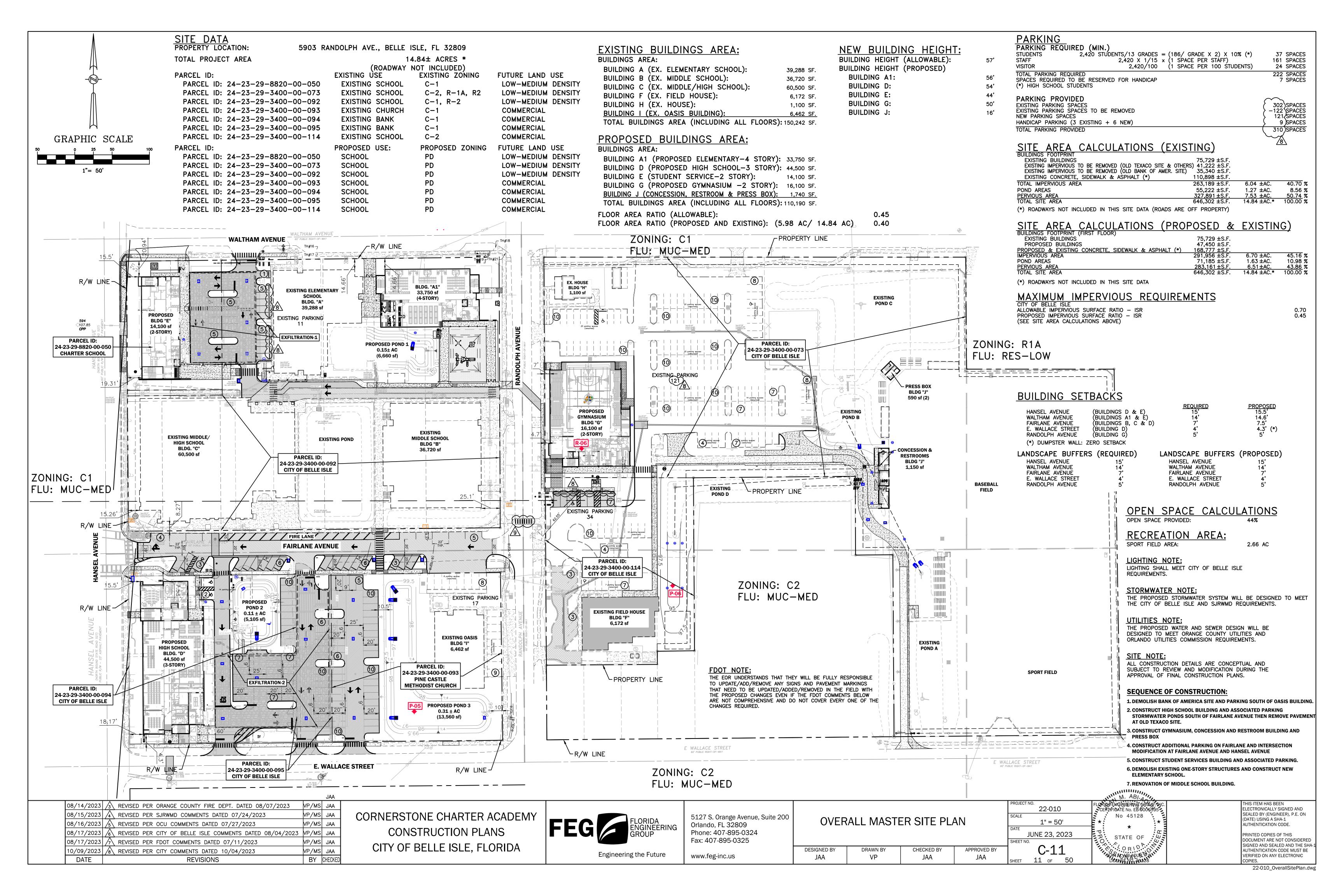
DESIGNED BY APPROVED BY DRAWN BY CHECKED BY JAA JAA

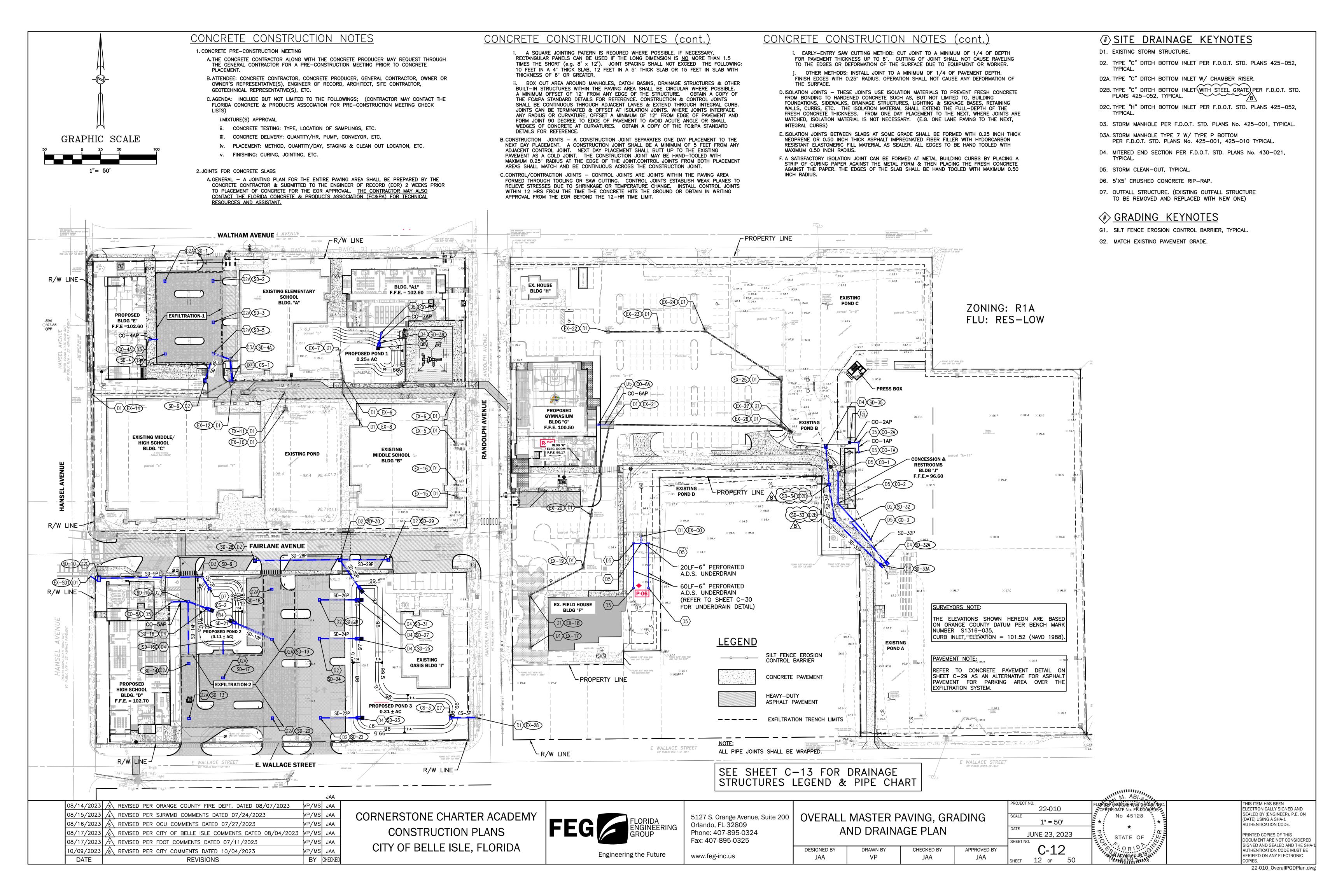
M. ABI LORIDA'ENGINEERING GROUP, 22-010 CERTIFICATE No. EB-0006595 No 45128 1" = 60' JUNE 23, 2023 STATE OF C-10 10 of

THIS ITEM HAS BEEN LECTRONICALLY SIGNED AND SEALED BY (ENGINEER), P.E. ON (DATE) USING A SHA-1 AUTHENTICATION CODE.

EROSION-CONTROL-SILT-DET-ERO-5.dwg

PRINTED COPIES OF THIS DOCUMENT ARE NOT CONSIDERED SIGNED AND SEALED AND THE SHA AUTHENTICATION CODE MUST BE VERIFIED ON ANY ELECTRONIC





STRUCTURE TABLE (	CornerstoneStormPipe)			STR	UCTURE TA
STRUCTURE NAME:	DETAILS:	PIPES IN:	PIPES OUT	STRUCTURE NAME:	DET
CO-1 STORM CLEAN—OUT	TOP EL. = 96.30 INV. EL. = 91.40 ±	EX 8" HP	8"HP(CO-1P)	SD-17 TYPE C INLET W/ CHAMBER RISER	TOP EL.
CO-2 STORM CLEAN— OUT	TOP EL. = 96.45 INV. EL. = 91.30 N INV. EL. = 91.30 SE	8"HP(CO-1P)	8"HP(CO-2P)	SD-18 TYPE C INLET W/ CHAMBER RISER	TOP EL.
CO-3 STORM CLEAN—OUT	TOP EL. = 95.50 INV. EL. = 91.20 NW TOP EL. = 102.00	8"HP(CO-2P)	8"HP(EX)	SD-19 TYPE C INLET W/ CHAMBER RISER	TOP EL.
CS-1 OUTFALL STRUCTURE (POND 1) PE 7 STORM MANHOLE W/ P-BOTTOM MODIFED (4'x7') PER FDOT STD PLANS 425-001, 425-010	INV. EL. = 97.00 N INV. EL. = 97.25± E INV. EL. = 96.30± W INV. EL. = 96.42± S	18" HDPE(SD-5AP) EX. 15" HDPE	EX. 18"HDPE (TO POND 1) EX. 15" HDPE TO HANSEL AVE.	SD-20 TYPE C INLET W/ CHAMBER RISER	TOP EL.
CS-2 OUTFALL STRUCTURE (POND 2) TYPE C INLET FDOT STD. PLANS 425-052	TOP EL. = 101.00 INV. EL. = 98.00 NW		15"HP(SD-8P)	SD-21 M.E.S PER FDOT STD PLANS 430-021	TOP EL. INV. EL. =
CS-3 TYPE C INLET MODIFIED (POND 3) FDOT STD. PLANS 425-052	TOP EL. = 98.50 INV. EL. = 96.00 E		18" HP(CS-3P)	SD-22 TYPE C INLET FDOT STD. PLANS 425-052	TOP EL. INV. EL.
EX-28 EX. STRUCTURE	TOP EL.= 97.31 EL.= 93.00 W (CORE DRILL)	18" HP(CS-3P)		SD-23 M.E.S PER FDOT STD PLANS 430-021	TOP EL. INV. EL.
EX-SD1 EX. STORM STRUCTURE (FDOT)	TOP EL. = 100.50 INV. EL. = $97.50$ SB	15" HP(SD-10P)		SD-24 TYPE C INLET FDOT STD. PLANS 425-052	TOP EL. INV. EL.
SD-1 TYPE C INLET W/ CHAMBER RISER	TOP EL. = $101.10^{27}$	STORM INV. 97.00	CHAMBER - 34" PIPE	<b>SD-25</b> M.E.S	INV. EL.
SD-2 TYPE C INLET W/ CHAMBER RISER	TOP EL. = 101.00	STORM CI INV. 97.00 -		PER FDOT STD PLANS 430-021  SD-26  TYPE C INLET	TOP EL.
SD-3 TYPE C INLET W/ CHAMBER RISER	TOP EL. = 101.00	STORM CI INV. 97.00 -		FDOT STD. PLANS 425-052  SD-27 M.E.S	TOP EL.
SD-4 TYPE C INLET W/ CHAMBER RISER	TOP EL. = 101.17	STORM O		PER FDOT STD PLANS 430-021  SD-28	TOP EL.
SD-4A  TYPE 7 STORM MANHOLE W/ P-BOTTOM  W/ 1' SUMP	TOP EL. = 101.50 INV. EL. = 97.00 W INV. EL. = 97.00 S	18" HP(SD-5P)	18" HDPE(SD-5AP)	TYPE C INLET FDOT STD. PLANS 425-052  SD-29	TOP EL.
PER FDOT STD PLANS 425-001, 425-010	TOP EL. = 101.00			TYPE C INLET FDOT STD. PLANS 425-052	INV. EL.
SD-5 TYPE C INLET W/ CHAMBER RISER		STORM CI INV. 97.00 –		SD-30 TYPE C INLET FDOT STD. PLANS 425-052	INV. EL. INV. EL.
SD-6 TYPE C INLET FDOT STD. PLANS 425-052	TOP EL. = 101.00 INV. EL. = 98.00 N	15" HP(SD-6P)		SD-31 M.E.S PER FDOT STD PLANS 430-021	INV. EL. =
SD-9 TYPE P-7T STORM MANHOLE PER FDOT STD PLANS 425-001, 425-010	TOP EL. = 102.25 INV. EL. = 97.94 W INV. EL. = 97.94 SE	15" HP(SD-9P)	15" HP(CS-2P)	SD-32 TYPE C INLET FDOT STD. PLANS 425-052	TOP EL. INV. EL. =
SD-10 TYPE H INLET FDOT STD. PLANS 425-052	TOP EL. = 100.90 INV. EL. = 97.66 E INV. EL. = 97.60 NW	15" HP(SD-9P)	15" HP(SD-10P)	SD-32A M.E.S PER FDOT STD PLANS 430-021	INV. EL. =
SD-13 TYPE C INLET W/ CHAMBER RISER	TOP EL. = 101.50	STORM CI INV. 98.00 –		SD-33 TYPE C INLET W/ 1' STUMP FDOT STD. PLANS 425-052	TOP EL. INV. EL. = INV. EL.
SD-14  TYPE C INLET W/ CHAMBER RISER	TOP EL. = 101.50	STORM C INV. 98.00 -		SD-33A M.E.S PER FDOT STD PLANS 430-021	INV. EL. =
SD-15 TYPE C INLET FDOT STD. PLANS 425-052	TOP EL. = 101.44 INV. EL. = 97.80 S INV. EL. = 97.80 E INV. EL. = 97.80 W	15" HP(SD-14P) 15" HP(CO-5AP)	18" HP(SD-15P)	SD-34 TYPE C INLET W/ 1' STUMP FDOT STD. PLANS 425-052	TOP EL. INV. EL. INV. EL. INV. EL.
SD-16 M.E.S PER FDOT STD PLANS 430-021	1 TOP EL. = 100.44 INV. EL. = 97.70 W	18" HP(SD-15P)		SD-35 M.E.S PER FDOT STD PLANS 430-021	INV. EL.
SD-16C M.E.S PER FDOT STD PLANS 430-021	TOP EL. = 101.27 INV. EL. = 98.00 S	15" HP(SD-17P)		SD-36 PER FDOT STD PLANS 430-021	INV. EL.
CO-1A STORM CLEAN—OUT	TOP EL.= 95.20 INV. EL.= 94.25**	8" HP	8" HP(CO-1AP)	<u>/1\</u>	
CO-2A STORM CLEAN—OUT	TOP EL.= 95.20 INV. EL. = 94.21**	8" HP(CO-1AP)	8" HP(CO-2AP)	<del></del>	
CO-4A STORM CLEAN—OUT	TOP EL.= 102.50 INV. EL. = 97.50**		15" HP(CO-4AP)	EX-28 EXISTING STORM STRUCTURE	(FDOT) EX
CO-5A STORM CLEAN—OUT	TOP EL.= 102.00 INV. EL. = 98.00**		15" HP(CO-5AP)	TOP EL.= 97.31 INV. EL.= 94.71 N INV. EL.= 92.56 E	IN IN
CO-6A STORM CLEAN—OUT	TOP EL.= 98.50 INV. EL. = 95.30		18" HP(CO-6AP)	INV. EL.= 93.00 W (CORE D	RILL) IN
EX-21 EXISTING STORM STRUCTURE	TOP EL.= 97.57 INV. EL. = 94.84 E INV. EL. = 94.83 S INV. EL. = 95.00 W (CORE DRILL)	18" HP(CO-6AP) 18" HP (EX-20)	18" HP(EX-21)	(*) CONTRACTOR SHALL VERIFY CLEAN-OUT INVERT AND REP BEGINNING ANY WORK.	
CO-7A	TOP EL.= 101.20* (SE	E ARCHITECTURAL	15" HP(CO-7AP)	(**) CONTRACTOR TO CHECK EXI	STING DIDE IN

	UCTURE TABLE (Corner	. ,	
STRUCTURE NAME:	DETAILS:	PIPES IN:	PIPES OUT
SD-17 TYPE C INLET W/ CHAMBER RISER	TOP EL. = 101.35	STORM C INV. 98.00 -	
SD-18 TYPE C INLET W/ CHAMBER RISER	TOP EL. = 101.24	STORM C INV. 98.00 -	
SD-19 TYPE C INLET W/ CHAMBER RISER	TOP EL. = 101.35	STORM CHA INV. 98.00 —	
SD-20 TYPE C INLET W/ CHAMBER RISER	TOP EL. = 101.50	STORM CHAN	
SD-21 M.E.S PER FDOT STD PLANS 430-021	TOP EL. = 101.00 INV. EL. = 98.00 SE	15" HP(SD-19P)	
SD-22 TYPE C INLET FDOT STD. PLANS 425-052	TOP EL. = 100.50 INV. EL. = 97.50 E		15" HP(SD-22P)
SD-23 M.E.S PER FDOT STD PLANS 430-021	TOP EL. = 100.00 INV. EL. = 97.00 W	15" HP(SD-22P)	
SD-24 TYPE C INLET FDOT STD. PLANS 425-052	TOP EL. = 100.50 INV. EL. = 97.50 E		15" HP(SD-24P)
SD-25 M.E.S PER FDOT STD PLANS 430-021	INV. EL. = 97.00 W	15" HP(SD-24P)	
SD-26 TYPE C INLET FDOT STD. PLANS 425-052	TOP EL. = 100.50 INV. EL. = 97.50 E		15" HP(SD-26P)
SD-27 M.E.S PER FDOT STD PLANS 430-021	TOP EL. = 100.00 INV. EL. = 97.00 W	15" HP(SD-26P)	
SD-28 TYPE C INLET FDOT STD. PLANS 425-052	TOP EL. = 100.30 INV. EL. = 97.50 E		15" HP(SD-28P)
SD-29 TYPE C INLET FDOT STD. PLANS 425-052	TOP EL. = 99.84 INV. EL. = 97.40 W		15" HP(SD-29P)
<b>SD-30</b> TYPE C INLET FDOT STD. PLANS 425-052	TOP EL. = 99.70 INV. EL. = 96.20 E INV. EL. = 97.20 W INV. EL. = 97.20 SE	15" HP(SD-29P) 15" HP(SD-28P)	15" HP(SD-30P)
SD-31 M.E.S PER FDOT STD PLANS 430-021	INV. EL. = 97.00 NW	15" HP(SD-30P)	
SD-32 TYPE C INLET FDOT STD. PLANS 425-052	TOP EL. = 94.90 INV. EL. = 94.00 SE		8" HP(SD-32AP)
SD-32A M.E.S PER FDOT STD PLANS 430-021	INV. EL. = 93.80 NW	8" HP(SD-32AP)	
SD-33 TYPE C INLET W/ 1' STUMP FDOT STD. PLANS 425-052	TOP EL. = 96.12 INV. EL. = 94.00 SE INV. EL. = 94.00 N	15" RCP(SD-34P)	15" RCP(SD-33P)
SD-33A M.E.S PER FDOT STD PLANS 430-021	INV. EL. = 93.80 NW	15" RCP(SD-33P)	
SD-34 TYPE C INLET W/ 1' STUMP FDOT STD. PLANS 425-052	TOP EL. = 96.10 INV. EL. = 93.80 S INV. EL. = 94.00 N 	12"X18" ERCP(SD-35P) 3-6" DIP (EX. PIPES)	15" RCP(SD-34P)
SD-35 M.E.S PER FDOT STD PLANS 430-021	INV. EL. = 93.8± 6 DIP)  INV. EL. = 93.80 S		12"X18" ERCP(SD-35I
SD-36 PER FDOT STD PLANS 430-021	INV. EL. = 97.00	15" HP(CO-7AP)	

EX-28
EXISTING STORM STRUCTURE (FDOT)
TOP EL.= 97.31
TOP EL.= 101.32 INV. EL.= 94.71 N INV. EL.= 92.56 E INV. EL.= 90.72 N INV. EL.= 90.96 S INV. EL.= 93.00 W (CORE DRILL) INV. EL.= 97.50 E (CORE DRILL)

CONTRACTOR SHALL VERIFY BUILDING ROOF DRAIN INVERT WITH STORM CLEAN-OUT INVERT AND REPORT ANY DISCREPANCIES TO ENGINEER PRIOR TO **BEGINNING ANY WORK.** (\*\*) CONTRACTOR TO CHECK EXISTING PIPE INVERT AND REPORT ANY DISCREPANCIES TO ENGINEER PRIOR TO BEGINNING WORK.

		PIPE TABLE	(Cornerst	toneStormPipe)			
PIPE NAME	SIZE (")	LENGTH (LF)	SLOPE	FROM STRUCTURE	TO STRUCTURE	PIPE NAME	SIZE
CO-1P	8"	41	0.24%	CO-1	CO-2	SD-20P S	TORM
C0-2P	8"	65	0.15%	CO-2	CO-3	SD-22P	15
CS-2P	15"	19	-0.32%	SD-9	CS-2	SD-24P	15
CS-3P	18"	34	8.87%	CS-3	EX-28	SD-26P	15
SD-1P	STORM	CHAMBER				SD-28P	15
SD-2P	STORM	CHAMBER			-	SD-29P	15
SD-3P	STORM	CHAMBER			-	SD-30P	15
SD-4P	STORM	CHAMBER				SD-32P	8"
SD-5AP	18"	29	0.00%	SD-4A	CS-1	SD-33P	15
SD-5P	18"	10	0.00%	STORM CHAMBER	SD-4A	SD-34P	15
SD-6P	15"	25	4.00%	SD-6	STORM CHAMBER	SD-35P	12"X
SD-9P	15"	138	0.20%	SD-9	SD-10		
SD-10P	15"	11	0.87%	SD-10	EX-SD1		
SD-13AP	STORM	CHAMBER			•		
SD-13P	STORM	CHAMBER	ı	1	-		
SD-14P	15"	70	0.96%	STORM CHAMBER	SD-15		
SD-15P	18"	25	0.40%	SD-15	SD-16		
SD-17P	15"	25	0.00%	STORM CHAMBER	SD-16C		
SD-18P	15"	69	0.19%	SD-18	SD-19		
SD-19P	15"	45	0.00%	STORM CHAMBER	SD-21		$\sim$
CO-1AP	8"	13	0.3%	CO-1A	CO-2A		* \
CO-2AP	8"	9	0.3%	CO-2A	RIP-RAP		
CO-4AP	15"	8	3.8%	CO-4AP	STORM CHAMBER	   INV 97.00 - 34	L" PIPF

**CO-5AP** 15" 21 0.95% CO-5AP

**CO-6AP** 18" 15 1.3% CO-6AP

PIPE TABLE (CornerstoneStormPipe)									
PIPE NAME	SIZE (")	LENGTH (LF)	SLOPE	FROM STRUCTURE	TO STRUCTURE				
SD-20P ST	SD-20P STORM CHAMBER								
SD-22P	15"	53	0.95%	SD-22	SD-23				
SD-24P	15"	53	0.95%	SD-24	SD-25				
SD-26P	15"	53	0.95%	SD-26	SD-27				
SD-28P	15"	115	0.26%	SD-28	SD-30				
SD-29P	15"	64	1.86%	SD-29	SD-30				
SD-30P	15"	42	0.47%	SD-30	SD-31				
SD-32P	8"	69	0.29%	SD-32	SD-32A				
SD-33P	15"	84	0.54%	SD-33	SD-33A				
SD-34P	15"	48	0.42%	SD-34	SD-33				
SD-35P	12"X18"	48	0.42%	SD-35	SD-34				

CO-4AP STORM CHAMBER NV. 97.00 - 34" PIPE

EX. 21

CO-7AP

				JAA
08/14/2023	/3\	REVISED PER ORANGE COUNTY FIRE DEPT. DATED 08/07/2023	VP/MS	JAA
08/15/2023	4	REVISED PER SJRWMD COMMENTS DATED 07/24/2023	VP/MS	JAA
08/16/2023	5	REVISED PER OCU COMMENTS DATED 07/27/2023	VP/MS	JAA
08/17/2023	6	REVISED PER CITY OF BELLE ISLE COMMENTS DATED 08/04/2023	VP/MS	JAA
08/17/2023		REVISED PER FDOT COMMENTS DATED 07/11/2023	VP/MS	JAA
10/09/2023	/8	REVISED PER CITY COMMENTS DATED 10/04/2023	VP/MS	JAA
DATE		REVISIONS	BY	CHECKE

CORNERSTONE CHARTER ACADEMY
CONSTRUCTION PLANS

FLORIDA
ENGINEERING
GROUP CITY OF BELLE ISLE, FLORIDA



G	5127 S. Orange Avenue, Suite 200 Orlando, FL 32809 Phone: 407-895-0324 Fax: 407-895-0325	
	www.feg-inc.us	

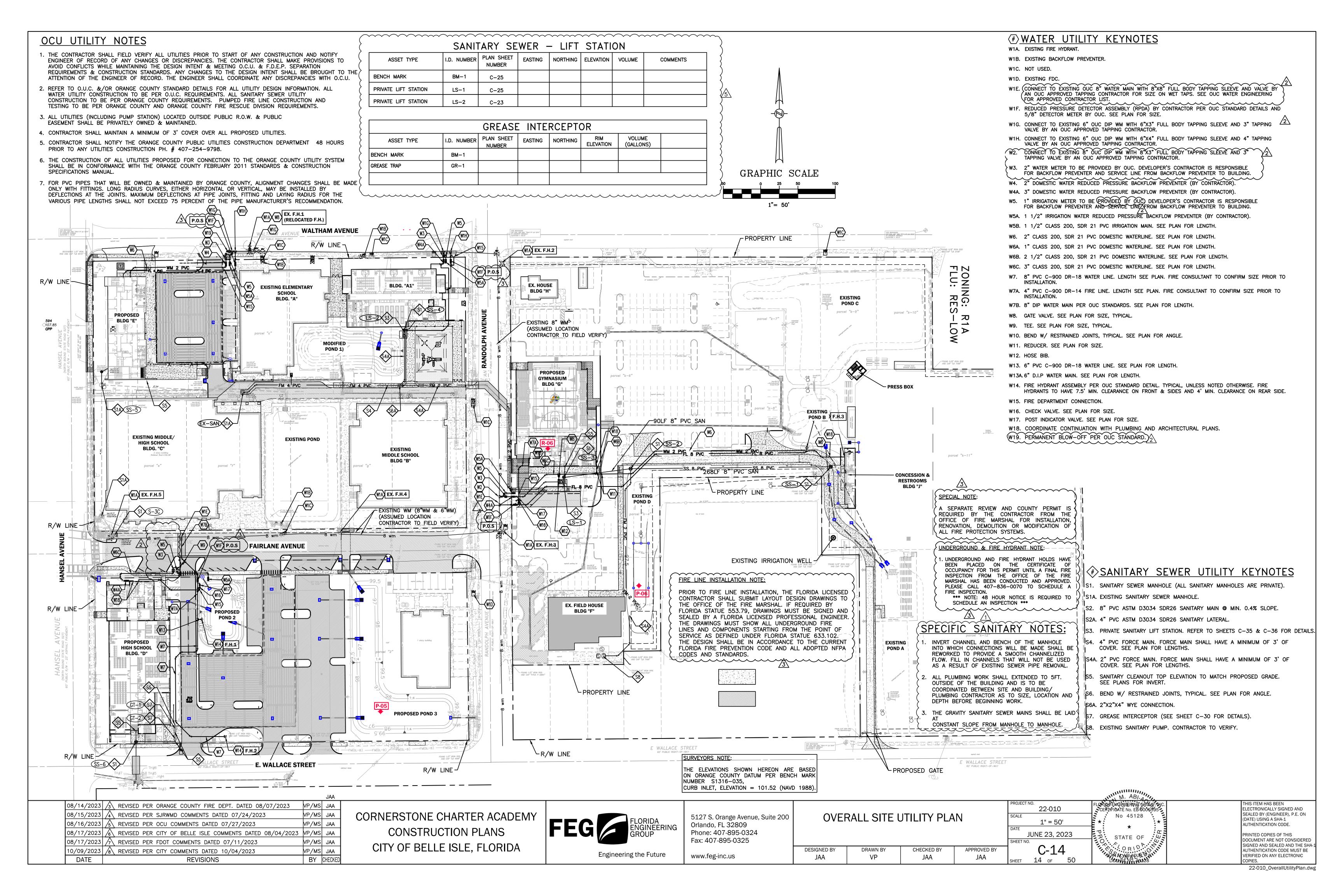
DRAINA	GE STRUC	TURES LEG	END
DESIGNED BY	DRAWN BY	CHECKED BY	APPROVED BY

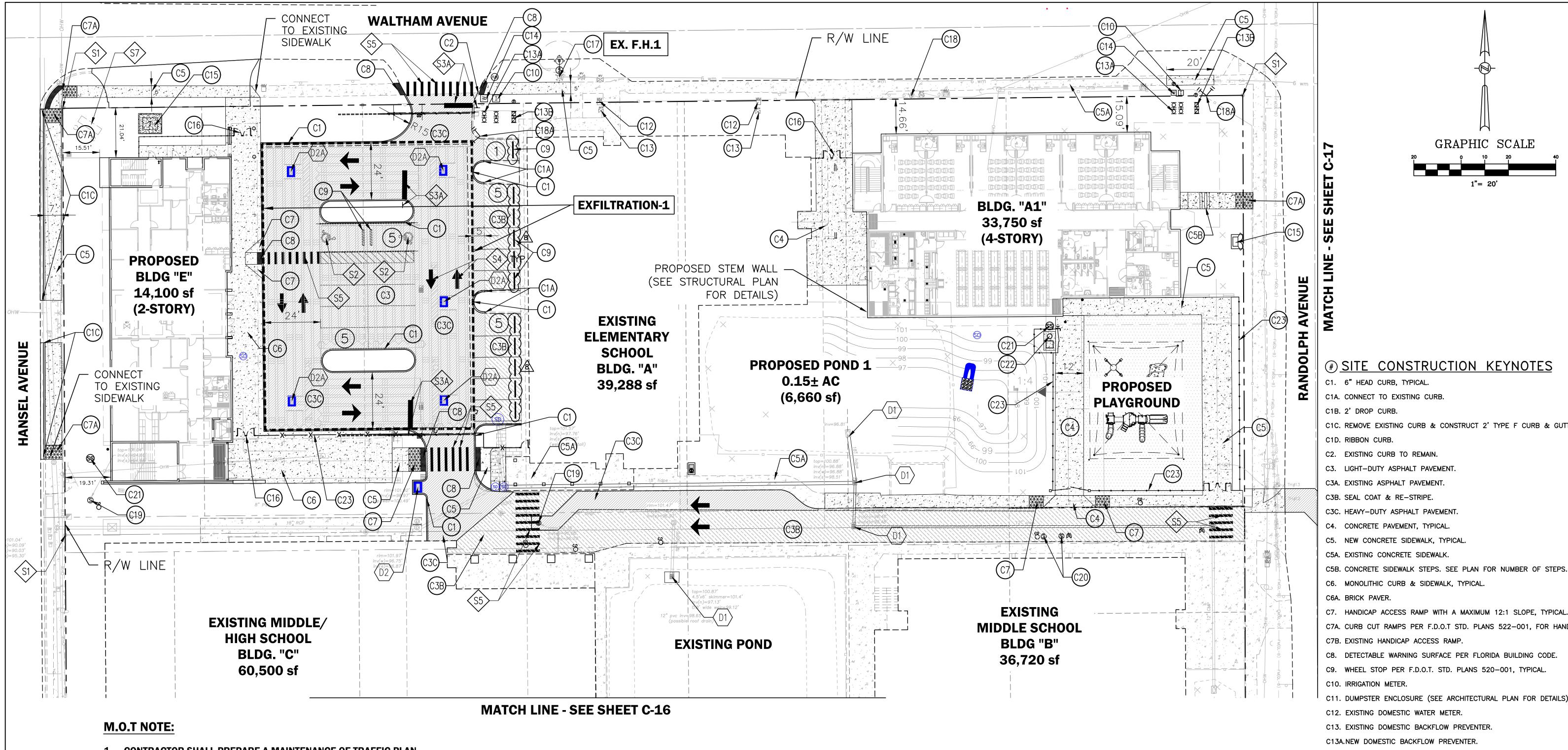
	M. AB/-A
22-010	FLORIDA ENGINEERING GROUP, INC CERTIFICATE NO. EB-0006395
1" = 50'	No 45128 *
JUNE 23, 2023	STATE OF
C-13	JEAN ADABIA OUT, P.B.

ELECTRONICALLY SIGNED AND SEALED BY (ENGINEER), P.E. ON (DATE) USING A SHA-1 AUTHENTICATION CODE. PRINTED COPIES OF THIS DOCUMENT ARE NOT CONSIDERED SIGNED AND SEALED AND THE SHA-1 AUTHENTICATION CODE MUST BE

VERIFIED ON ANY ELECTRONIC

22-010\_PipeNetwork.dwg





1. CONTRACTOR SHALL PREPARE A MAINTENANCE OF TRAFFIC PLAN BASED ON 2023-24 FDOT STANDARD PLANS No. 102-602 FOR THE CONSTRUCTION OF SIDEWALK & CURB ALONG HANSEL AVE. BETWEEN WALTHAM AVE. & FAIRLANE AVE.

# LEGEND: SEAL COAT & RESTRIPE NEW ASPHALT PAVEMENT CONCRETE PAVEMENT BRICK PAVER PAVEMENT

### **ADA NOTE:**

**EOR WILL CERTIFY THAT ALL PROPOSED ADA** PATHWAYS AND PARKING AREAS ARE COMPLIANT PER DESIGN UPON COMPLETION OF CONSTRUCTION AND **REVIEW OF AS-BUILT PLANS.** 

### **\***SITE STRIPING & SIGNAGE KEYNOTES

- S1. PROPERTY BOUNDARY.
- S2. HANDICAP PARKING STALL, TYPICAL.
- S3. 24" THERMOPLASTIC STOP BAR WITH R1-1 HIGH INTENSITY REFLECTORIZED "STOP" SIGN.
- S3A. 24" THERMOPLASTIC STOP BAR & "STOP" LETTERS.
- S3B. 24" THERMOPLASTIC STOP BAR.
- S3C. NO PARKING SIGN.
- S4. DIRECTIONAL ARROWS PER F.D.O.T. STD. PLANS 711-001, TYPICAL (THERMOPLASTIC).
- S5. CROSSWALK STRIPING PER F.D.O.T. STD. PLANS 711-001, TYPICAL (THERMOPLASTIC).
- S5A. INFRARED SENSOR CROSSWALK LIGHT.
- S6. GORE STRIPING PER F.D.O.T. STD. PLANS 711-003 (THERMOPLASTIC).
- S7. EXISTING SIGN TO REMAIN.
- S8. DO NOT ENTER SIGN.
- S9. LEFT TURN ONLY SIGN.
- S10. ONE-WAY SIGN.

### **#** SITE DRAINAGE KEYNOTES

- D1. EXISTING STORM STRUCTURE.
- D2. TYPE "C" DITCH BOTTOM INLET PER F.D.O.T. STD. PLANS 425-052,
- D2A. TYPE "C" DITCH BOTTOM INLET W/ CHAMBER RISER.
  D2B. TYPE "C" DITCH BOTTOM INLET WITH STEEL GRATE PER F.D.O.T. STD. PLANS 425-052, TYPICAL.
- D2C. TYPE "H" DITCH BOTTOM INLET PER F.D.O.T. STD. PLANS 425-052, TYPICAL.
- D3. STORM MANHOLE PER F.D.O.T. STD. PLANS No. 425-001, TYPICAL.
- D3A. STORM MANHOLE TYPE 7 W/ TYPE P BOTTOM PER F.D.O.T. STD. PLANS No. 425-001, 425-010 TYPICAL.
- D4. MITERED END SECTION PER F.D.O.T. STD. PLANS No. 430-021, TYPICAL. D5. STORM CLEAN-OUT, TYPICAL.
- D6. CONCRETE RIP-RAP.
- D7. OUTFALL STRUCTURE.

### # SITE CONSTRUCTION KEYNOTES

- C1. 6" HEAD CURB, TYPICAL.
- C1A. CONNECT TO EXISTING CURB.
- C1B. 2' DROP CURB.
- C1C. REMOVE EXISTING CURB & CONSTRUCT 2' TYPE F CURB & GUTTER.

GRAPHIC SCALE

- C2. EXISTING CURB TO REMAIN

- C6. MONOLITHIC CURB & SIDEWALK, TYPICAL.
- C7. HANDICAP ACCESS RAMP WITH A MAXIMUM 12:1 SLOPE, TYPICAL.
- C7A. CURB CUT RAMPS PER F.D.O.T STD. PLANS 522-001, FOR HANDICAP ACCESS.
- C7B. EXISTING HANDICAP ACCESS RAMP.
- C8. DETECTABLE WARNING SURFACE PER FLORIDA BUILDING CODE.
- C9. WHEEL STOP PER F.D.O.T. STD. PLANS 520-001, TYPICAL.
- C11. DUMPSTER ENCLOSURE (SEE ARCHITECTURAL PLAN FOR DETAILS)
- C12. EXISTING DOMESTIC WATER METER.
- C13. EXISTING DOMESTIC BACKFLOW PREVENTER.
- C13A.NEW DOMESTIC BACKFLOW PREVENTER.
- C13B.NEW REDUCED PRESSURE DETECTOR ASSEMBLY (RPDA).
- C14. NEW WATER METER.
- C15. ELECTRICAL TRANSFORMER.
- C16. PROPOSED DOUBLE SWING GATE.
- C17. EXISTING FIRE HYDRANT.
- C17A.NEW FIRE HYDRANT.
- C18. EXISTING FDC.
- C18A.NEW FDC.
- C19. EXISTING SANITARY MANHOLE.
- C20. EXISTING GREASE TRAP.
- C21. NEW SANITARY MANHOLE.
- C22. NEW LIFT STATION.
- C23. NEW 6' HIGH CHAIN LINK FENCE PVC COATED (SEE ARCHITECTURAL PLAN A501).
- C24. PROPOSED ACCESS GATE (SEE ARCHITECTURAL PLAN FOR DETAILS).

						0/0
08/14/2023	3	REVISED	PER	ORANGE COUNTY FIRE DEPT. DATED 08/07/2023	VP/MS	JAA
08/15/2023	4	REVISED	PER	SJRWMD COMMENTS DATED 07/24/2023	VP/MS	JAA
08/16/2023	5	REVISED	PER	OCU COMMENTS DATED 07/27/2023	VP/MS	JAA
08/17/2023	6	REVISED	PER	CITY OF BELLE ISLE COMMENTS DATED 08/04/2023	VP/MS	JAA
08/17/2023	$\overline{\mathcal{M}}$	REVISED	PER	FDOT COMMENTS DATED 07/11/2023	VP/MS	JAA
10/09/2023	/8	REVISED	PER	CITY COMMENTS DATED 10/04/2023	VP/MS	JAA
DATE				REVISIONS	BY	CHECK

CORNERSTONE CHARTER ACADEMY CONSTRUCTION PLANS CITY OF BELLE ISLE, FLORIDA



5127 S. Orange Avenue, Suite 200 Orlando, FL 32809 Phone: 407-895-0324 Fax: 407-895-0325

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SITE GEOMETRY (1 OF 4

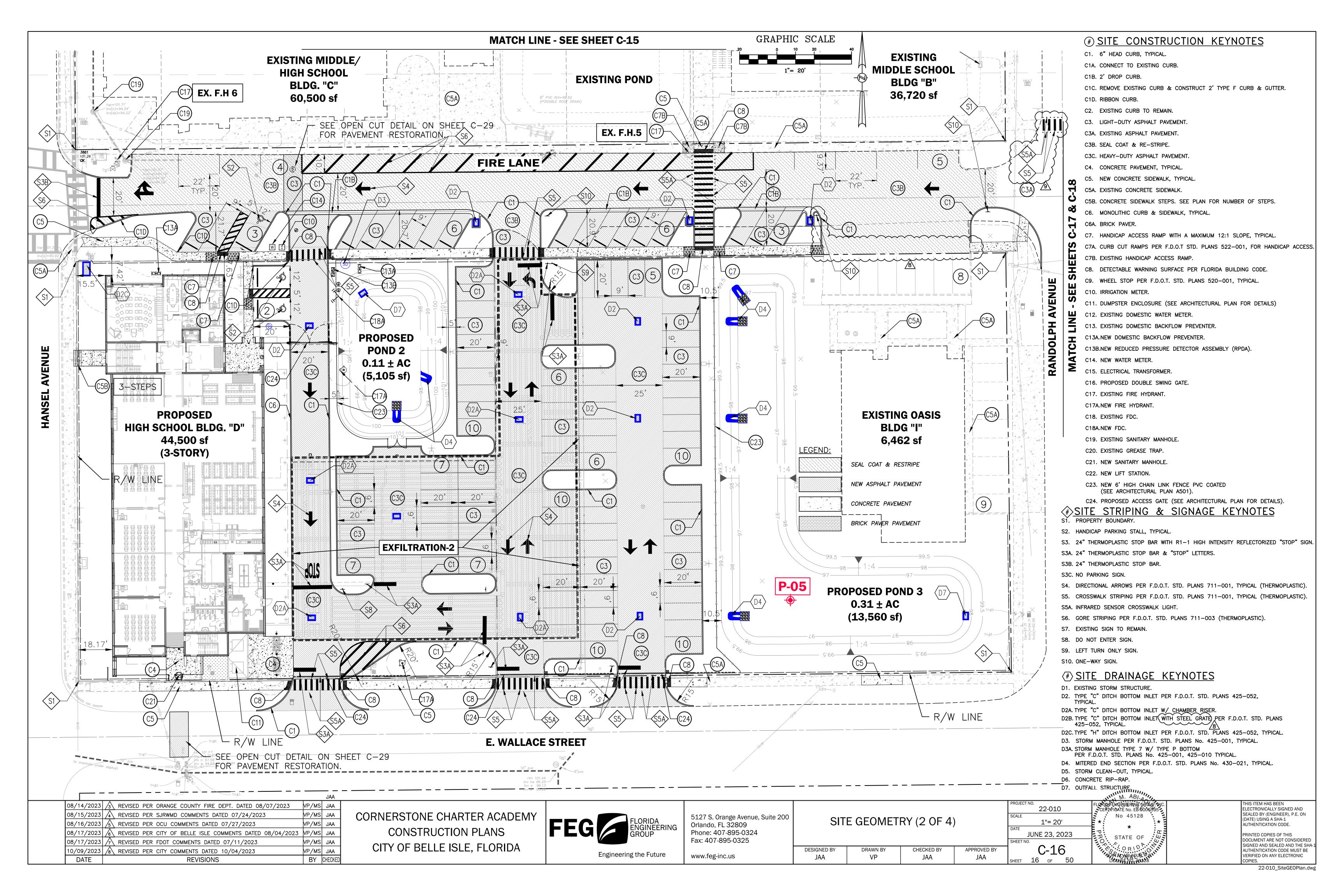
					M. AB/-
		PROJECT NO. 22-010	FLORIDA ENGINEERING C CERTIFICATE NO. EB-0		
SITI	E GEOMET	1"= 20'	No 45128		
		,		JUNE 23, 2023	STATE OF
				SHEET NO.	
DESIGNED BY	DRAWN BY	CHECKED BY	APPROVED BY	1 C-15	ORIO
JAA	VP	JAA	JAA	15 05 50	JEAN MOABIAQUE

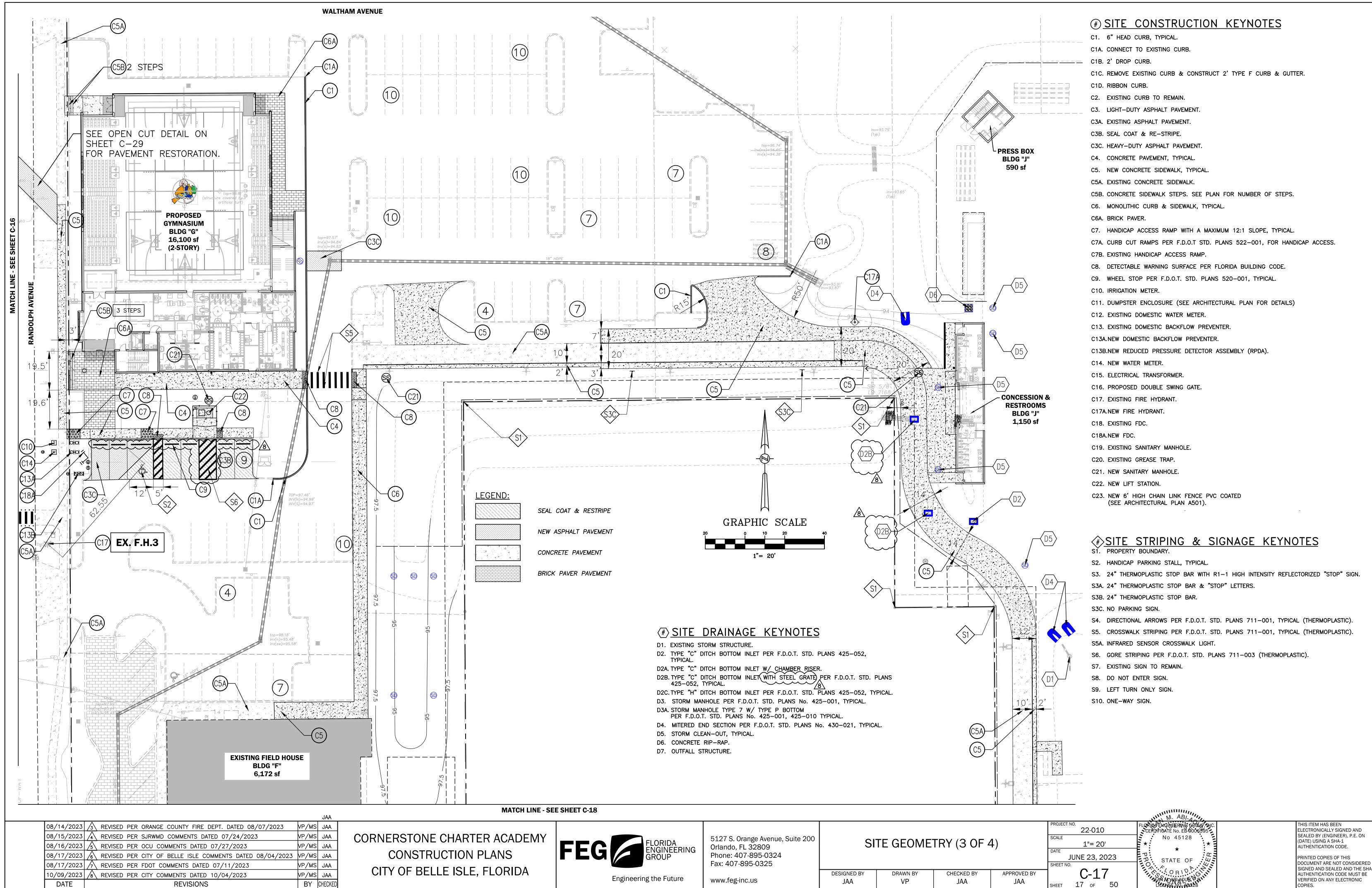
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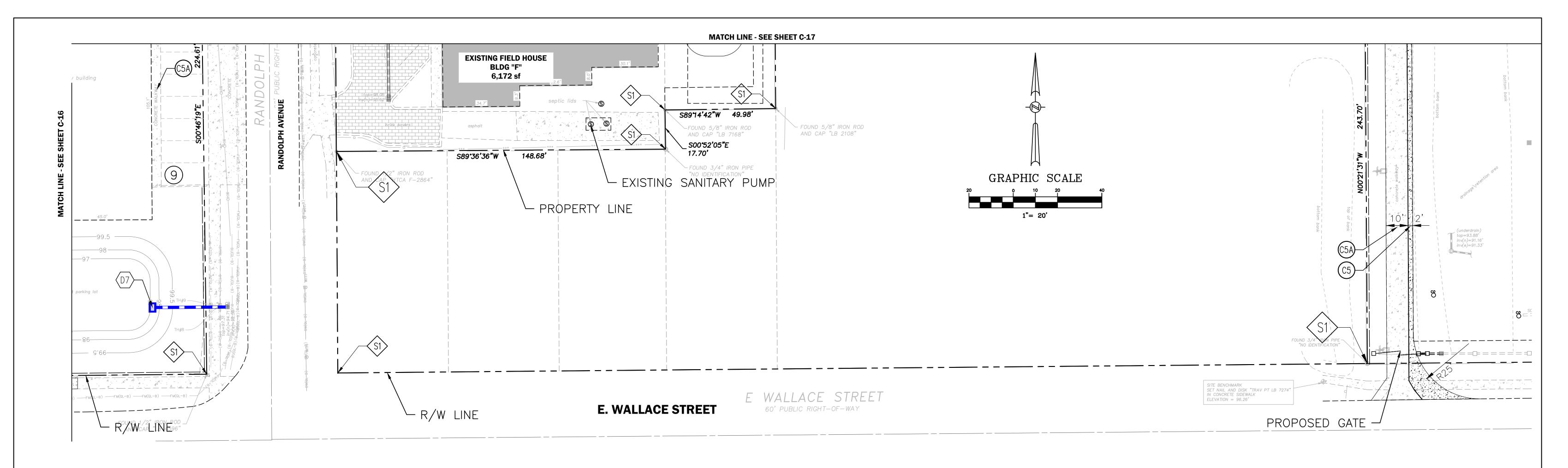
AUTHENTICATION CODE MUST BE

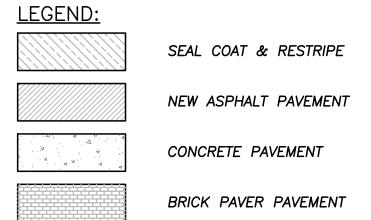
VERIFIED ON ANY ELECTRONIC

THIS ITEM HAS BEEN









# \*\*SITE STRIPING & SIGNAGE KEYNOTES S1. PROPERTY BOUNDARY.

- S2. HANDICAP PARKING STALL, TYPICAL.
- S3. 24" THERMOPLASTIC STOP BAR WITH R1-1 HIGH INTENSITY REFLECTORIZED "STOP" SIGN
- S3A. 24" THERMOPLASTIC STOP BAR & "STOP" LETTERS.
- S3B. 24" THERMOPLASTIC STOP BAR.
- S3C. NO PARKING SIGN.
- S4. DIRECTIONAL ARROWS PER F.D.O.T. STD. PLANS 711-001, TYPICAL (THERMOPLASTIC).
- S5. CROSSWALK STRIPING PER F.D.O.T. STD. PLANS 711-001, TYPICAL (THERMOPLASTIC).
- S5A. INFRARED SENSOR CROSSWALK LIGHT.
- S6. GORE STRIPING PER F.D.O.T. STD. PLANS 711-003 (THERMOPLASTIC).
- S7. EXISTING SIGN TO REMAIN.
- S8. DO NOT ENTER SIGN.
- S9. LEFT TURN ONLY SIGN.
- S10. ONE-WAY SIGN.

### ⟨#⟩ SITE DRAINAGE KEYNOTES

- D1. EXISTING STORM STRUCTURE.
- D2. TYPE "C" DITCH BOTTOM INLET PER F.D.O.T. STD. PLANS 425-052,
- D2A. TYPE "C" DITCH BOTTOM INLET W/ CHAMBER RISER.
- D2B. TYPE "C" DITCH BOTTOM INLET (WITH STEEL GRATE) PER F.D.O.T. STD. PLANS
- D2C. TYPE "H" DITCH BOTTOM INLET PER F.D.O.T. STD. PLANS 425-052, TYPICAL. D3. STORM MANHOLE PER F.D.O.T. STD. PLANS No. 425-001, TYPICAL.
- D3A. STORM MANHOLE TYPE 7 W/ TYPE P BOTTOM
- PER F.D.O.T. STD. PLANS No. 425-001, 425-010 TYPICAL. D4. MITERED END SECTION PER F.D.O.T. STD. PLANS No. 430-021, TYPICAL.
- D5. STORM CLEAN-OUT, TYPICAL.
- D6. CONCRETE RIP-RAP. D7. OUTFALL STRUCTURE.

### (#) SITE CONSTRUCTION KEYNOTES

- C1. 6" HEAD CURB, TYPICAL.
- C1A. CONNECT TO EXISTING CURB.
- C1B. 2' DROP CURB.
- C1C. REMOVE EXISTING CURB & CONSTRUCT 2' TYPE F CURB & GUTTER.
- C1D. RIBBON CURB.
- C2. EXISTING CURB TO REMAIN.
- C3. LIGHT-DUTY ASPHALT PAVEMENT.
- C3A. EXISTING ASPHALT PAVEMENT.
- C3B. SEAL COAT & RE-STRIPE.
- C3C. HEAVY-DUTY ASPHALT PAVEMENT.
- C4. CONCRETE PAVEMENT, TYPICAL.
- C5. NEW CONCRETE SIDEWALK, TYPICAL.
- C5A. EXISTING CONCRETE SIDEWALK.
- C5B. CONCRETE SIDEWALK STEPS. SEE PLAN FOR NUMBER OF STEPS.
- C6. MONOLITHIC CURB & SIDEWALK, TYPICAL.
- C6A. BRICK PAVER.
- C7. HANDICAP ACCESS RAMP WITH A MAXIMUM 12:1 SLOPE, TYPICAL.
- C7A. CURB CUT RAMPS PER F.D.O.T STD. PLANS 522-001, FOR HANDICAP ACCESS.

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- C7B. EXISTING HANDICAP ACCESS RAMP.
- C8. DETECTABLE WARNING SURFACE PER FLORIDA BUILDING CODE.
- C9. WHEEL STOP PER F.D.O.T. STD. PLANS 520-001, TYPICAL.
- C10. IRRIGATION METER.
- C11. DUMPSTER ENCLOSURE (SEE ARCHITECTURAL PLAN FOR DETAILS)
- C12. EXISTING DOMESTIC WATER METER.
- C13. EXISTING DOMESTIC BACKFLOW PREVENTER.
- C13A.NEW DOMESTIC BACKFLOW PREVENTER.
- C13B.NEW REDUCED PRESSURE DETECTOR ASSEMBLY (RPDA).

- C14. NEW WATER METER.
- C15. ELECTRICAL TRANSFORMER.
- C16. PROPOSED DOUBLE SWING GATE.
- C17. EXISTING FIRE HYDRANT.
- C17A.NEW FIRE HYDRANT.
- C18. EXISTING FDC.
- C18A.NEW FDC.
- C19. EXISTING SANITARY MANHOLE.
- C20. EXISTING GREASE TRAP.
- C21. NEW SANITARY MANHOLE.

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- C22. NEW LIFT STATION.
- C23. NEW 6' HIGH CHAIN LINK FENCE PVC COATED (SEE ARCHITECTURAL PLAN A501).
- C24. PROPOSED ACCESS GATE (SEE ARCHITECTURAL PLAN FOR DETAILS).

				JAA
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DATE		REVISIONS	BY	CHECKED

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SITE GEOMETRY (4 OF 4)

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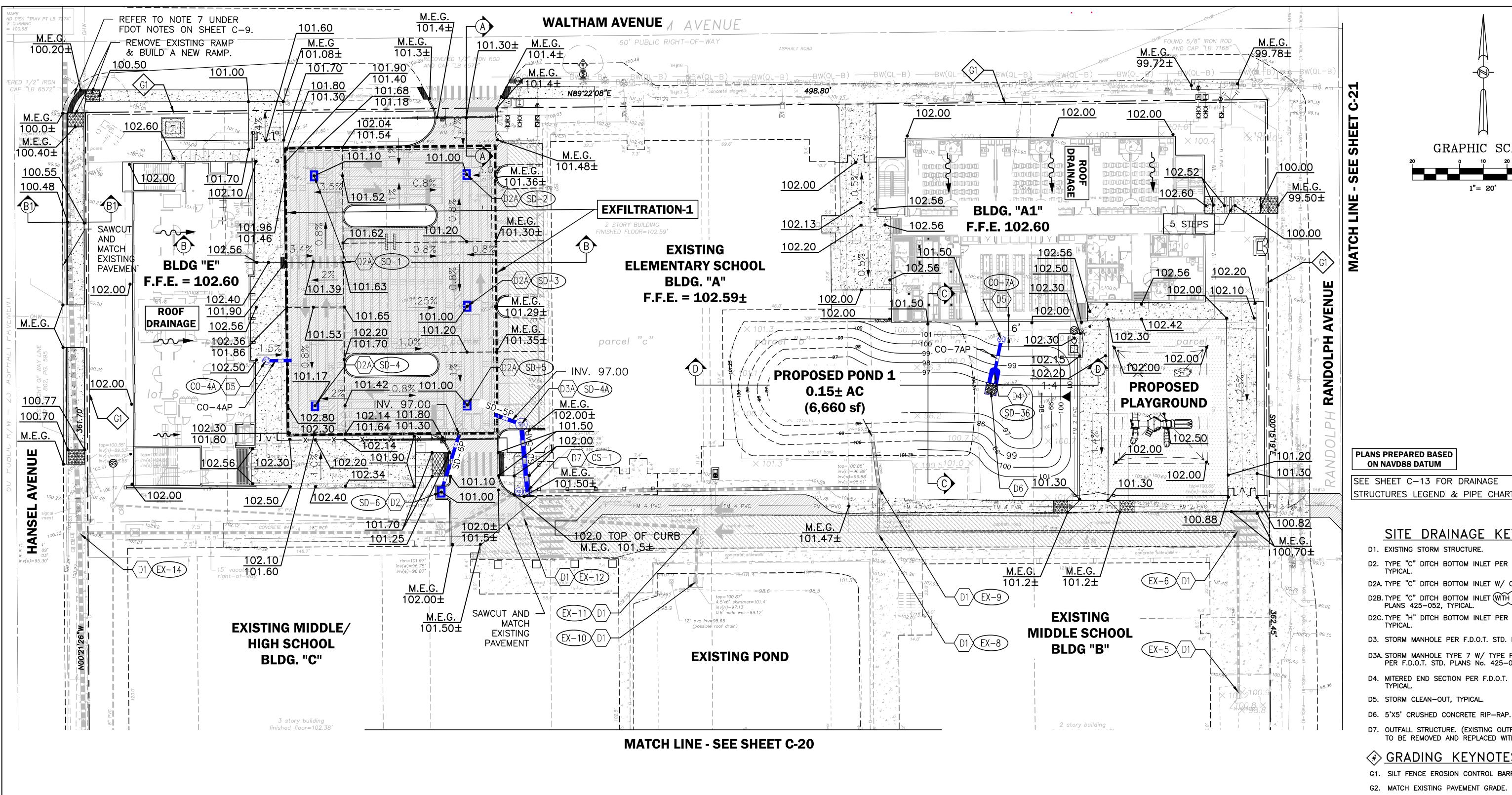
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VP

FLORIDA ENGINEERING GROUP, 1 CERTIFICATE No. EB-0006395 22-010 No 45128 1"= 20' JUNE 23, 2023 STATE OF LICENSE NO ABI28 C-18

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**PLANS PREPARED BASED** ON NAVD88 DATUM

SEE SHEET C-13 FOR DRAINAGE

### SITE DRAINAGE KEYNOTES

- D1. EXISTING STORM STRUCTURE.
- D2. TYPE "C" DITCH BOTTOM INLET PER F.D.O.T. STD. PLANS 425-052,

GRAPHIC SCALE

1"= 20'

- D2A. TYPE "C" DITCH BOTTOM INLET W/ CHAMBER RISER.
- D2B. TYPE "C" DITCH BOTTOM INLET WITH STEEL GRATE PER F.D.O.T. STD. PLANS 425-052, TYPICAL.
- D2C. TYPE "H" DITCH BOTTOM INLET PER F.D.O.T. STD. PLANS 425-052,
- D3. STORM MANHOLE PER F.D.O.T. STD. PLANS No. 425-001, TYPICAL.
- D3A. STORM MANHOLE TYPE 7 W/ TYPE P BOTTOM PER F.D.O.T. STD. PLANS No. 425-001, 425-010 TYPICAL.
- D4. MITERED END SECTION PER F.D.O.T. STD. PLANS No. 430-021,
- D5. STORM CLEAN-OUT, TYPICAL.
- D6. 5'X5' CRUSHED CONCRETE RIP-RAP.
- D7. OUTFALL STRUCTURE. (EXISTING OUTFALL STRUCTURE TO BE REMOVED AND REPLACED WITH NEW ONE)

### **GRADING KEYNOTES**

- G1. SILT FENCE EROSION CONTROL BARRIER, TYPICAL.
- G2. MATCH EXISTING PAVEMENT GRADE.



SEAL COAT & RESTRIPE

NEW ASPHALT PAVEMENT

CONCRETE PAVEMENT

BRICK PAVER PAVEMENT

REVISED PER ORANGE COUNTY FIRE DEPT. DATED 08/07/202308/14/2023 VP/MS JAA 4 REVISED PER SJRWMD COMMENTS DATED 07/24/2023 VP/MS JAA 08/15/2023 REVISED PER OCU COMMENTS DATED 07/27/2023 VP/MS JAA 08/16/2023 08/17/2023 REVISED PER CITY OF BELLE ISLE COMMENTS DATED 08/04/2023 VP/MS JAA VP/MS JAA VP/MS JAA REVISED PER FDOT COMMENTS DATED 07/11/2023 10/09/2023 REVISED PER CITY COMMENTS DATED 10/04/2023 BY CHECKED DATE REVISIONS

CORNERSTONE CHARTER ACADEMY CONSTRUCTION PLANS CITY OF BELLE ISLE, FLORIDA



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SITE PAVING, GRADING AND DRAINAGE (1 OF 4) DESIGNED BY DRAWN BY CHECKED BY APPROVED BY

JAA

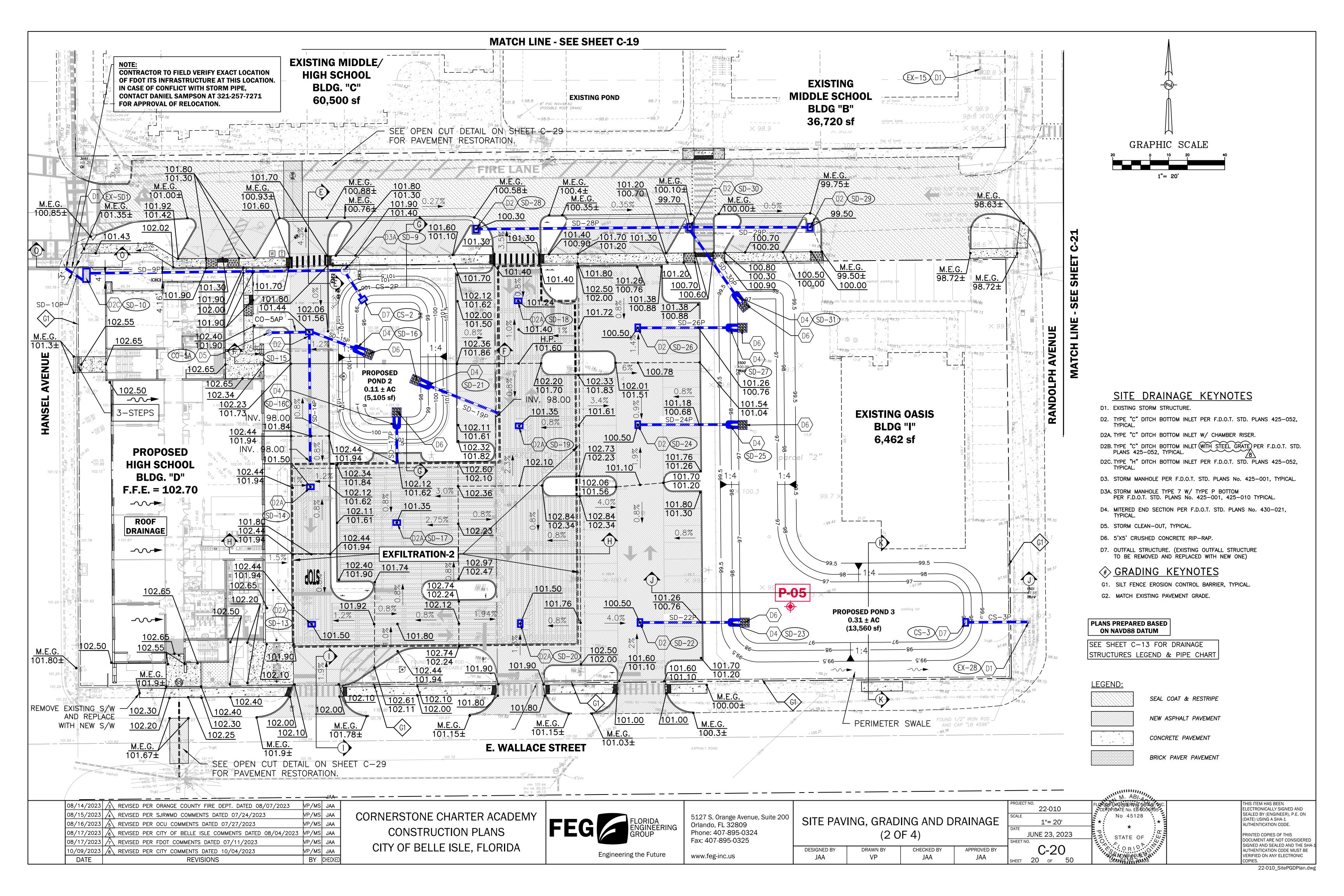
FLORIDA ENGINEETING GROUP, CERTIFICATE NO. EB-0006395 22-010 No 45128 1"= 20' JUNE 23, 2023 STATE OF C-19

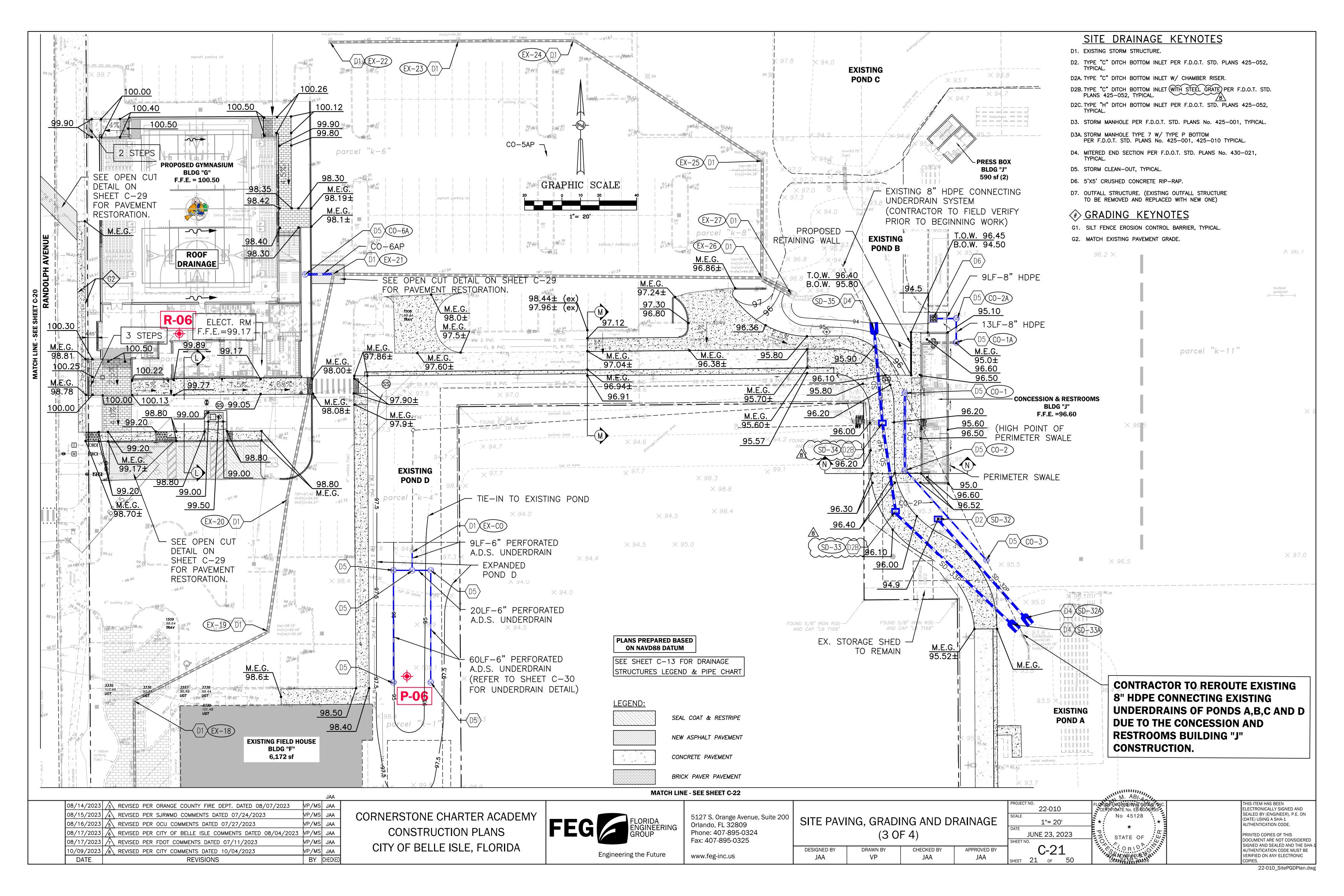
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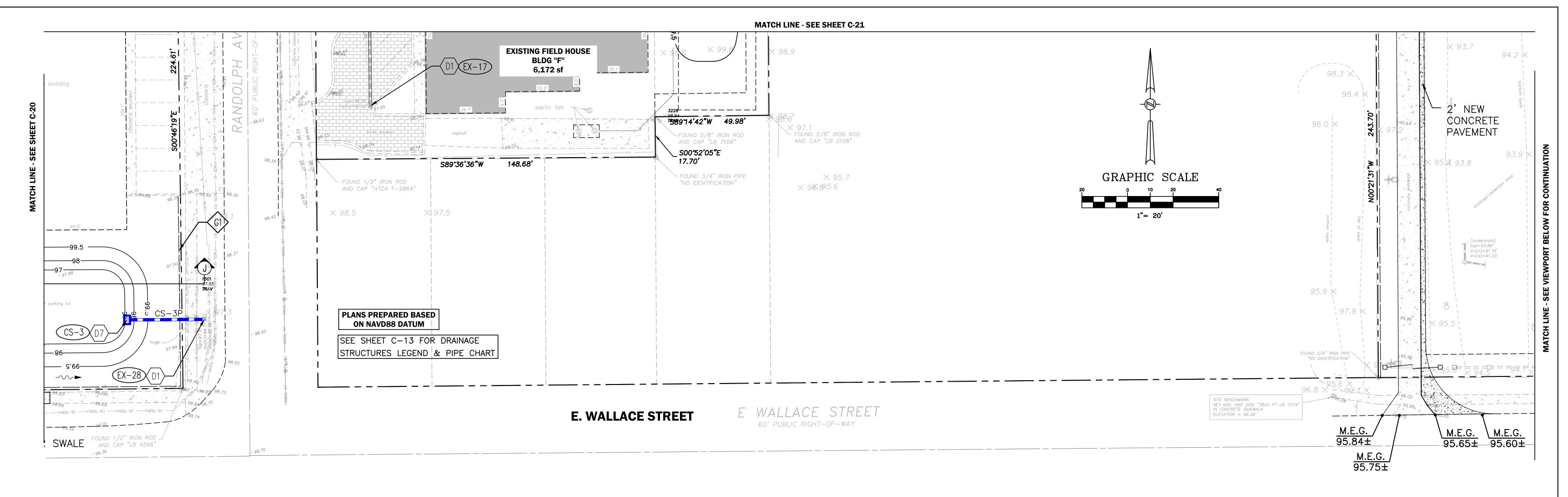
22-010\_SitePGDPlan.dwg

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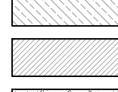




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- **GRADING KEYNOTES**
- G1. SILT FENCE EROSION CONTROL BARRIER, TYPICAL.
- G2. MATCH EXISTING PAVEMENT GRADE.





SEAL COAT & RESTRIPE

NEW ASPHALT PAVEMENT



CONCRETE PAVEMENT

4 4 4

BRICK PAVER PAVEMENT

						JAA	
08/14/2023	/3\	REVISED	PER	ORANGE COUNTY FIRE DEPT. DATED 08/07/2023	VP/MS	JAA	
08/15/2023	4	REVISED	PER	SJRWMD COMMENTS DATED 07/24/2023	VP/MS	JAA	CORNERSTONE CHARTER ACADE
08/16/2023	<u></u>	REVISED	PER	OCU COMMENTS DATED 07/27/2023	VP/MS	JAA	
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DATE				REVISIONS	BY	CHECKED	



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SITE PAVING, GRADING AND DRAINAGE	=
(4 OF 4)	

DRAWN BY

VΡ

E WALLACE STREET

CHECKED BY

JAA

60' PUBLIC RIGHT-OF-WAY

S89°30'37"W

 $\times$  96.5

DESIGNED BY

JAA

	M. AB/-A
DECT NO. 22-010	FLORIDA ENGINEERING GROUP, INC. CERTIFICATE NO. EB-0006995
1"= 20'	No 45128 **
JUNE 23, 2023	マ ス STATE OF ル
C-22 ET 22 OF 50	AFAN ADABI A QUE P. E. L. LICENSE NO. 46128

**E. WALLACE STREET** 

 $\times$  96.3

DATUM: NGVD 1929

 $\times$  96.4

(EX−29) D

 $\times$  96.8

SECTION B-B

EXISTING CONTROL STRUCTURE DETAIL (EX-29)

-----

*302.93*'

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JAA

1. REMOVE AND REPLACE 8' HDPE WITH 6' D.I.
2. ADD 8' DIAMETER HDPE 6 EL. 93.28 PER PLAN VIEW.

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DETAIL
WEST SIDE OF STRUCTURE (SIDE VIEW)

top=96.33' — inv(se)=92.03'

× 93×392.2 × 91.7

(see detail above)

SITE BENCHMARK

ELEVATION = 93.38'

FOUND 3/4" IRON PIPE "NO IDENTIFICATION"

SET NAIL AND DISK "TRAV PT LB 7274" IN CONCRETE SIDEWALK

\_4" PVC INV=94.50'

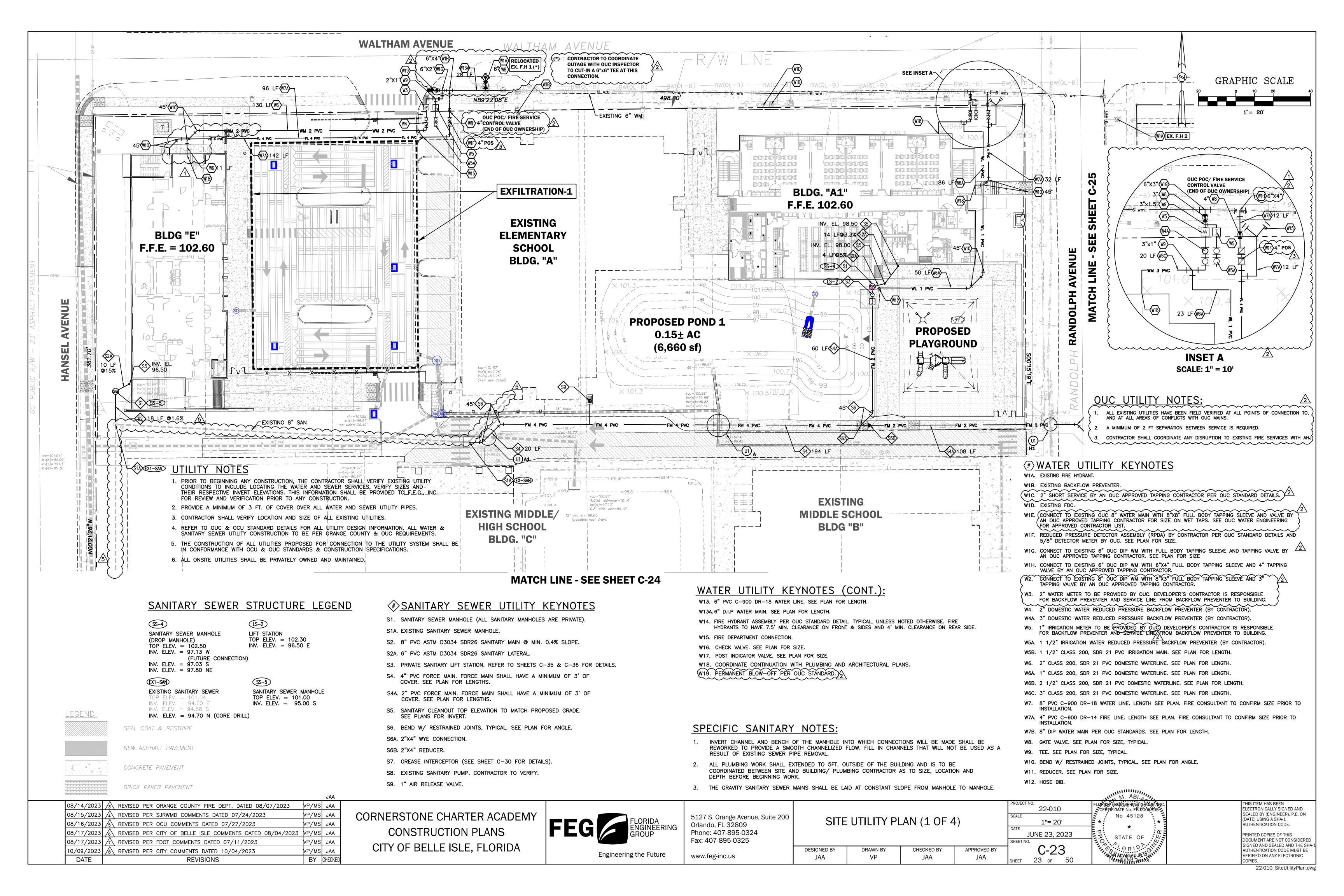
∕6" PVC INV=93.95'

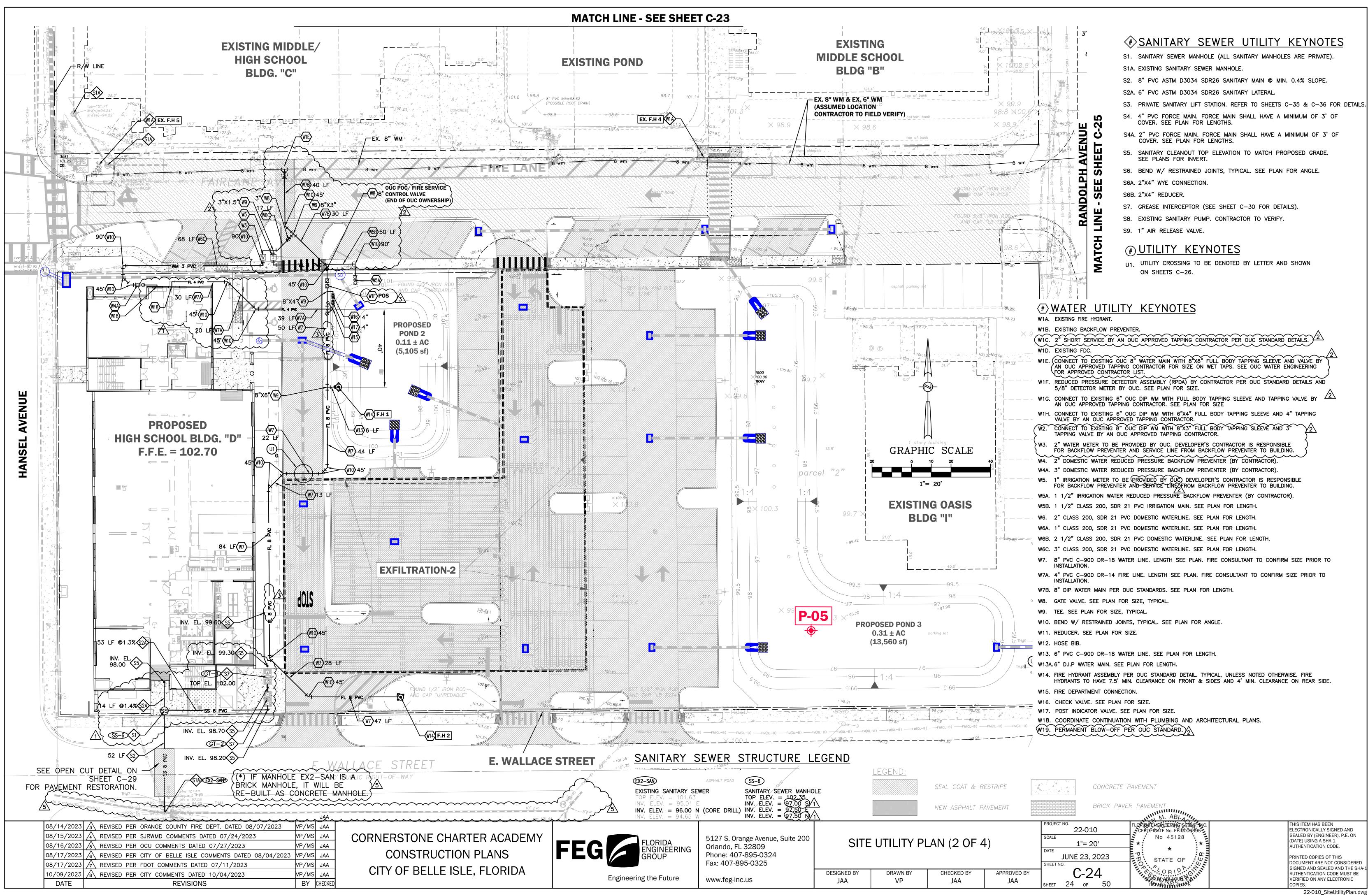
\_ 6" PVC=

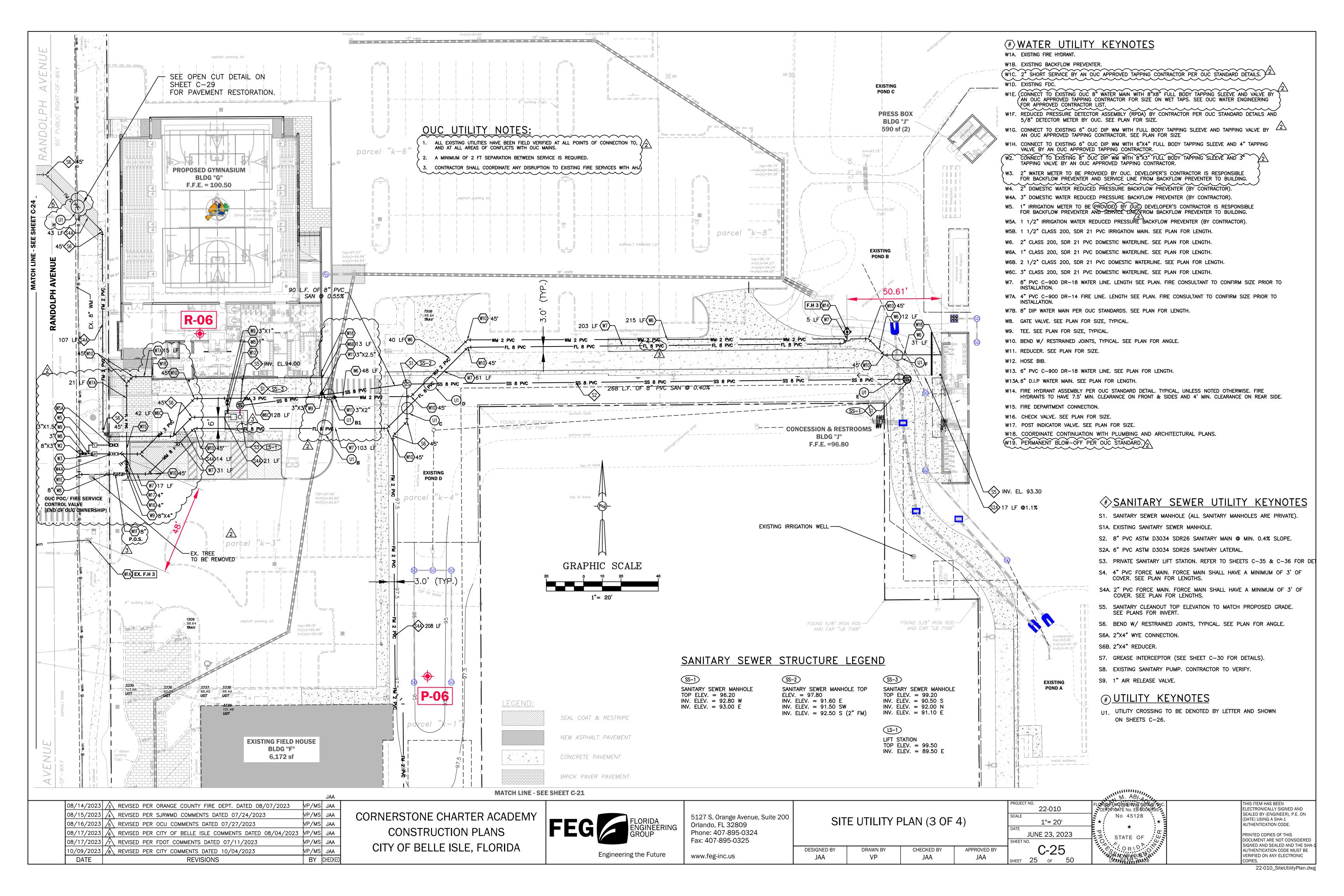
─ 4" PVC=

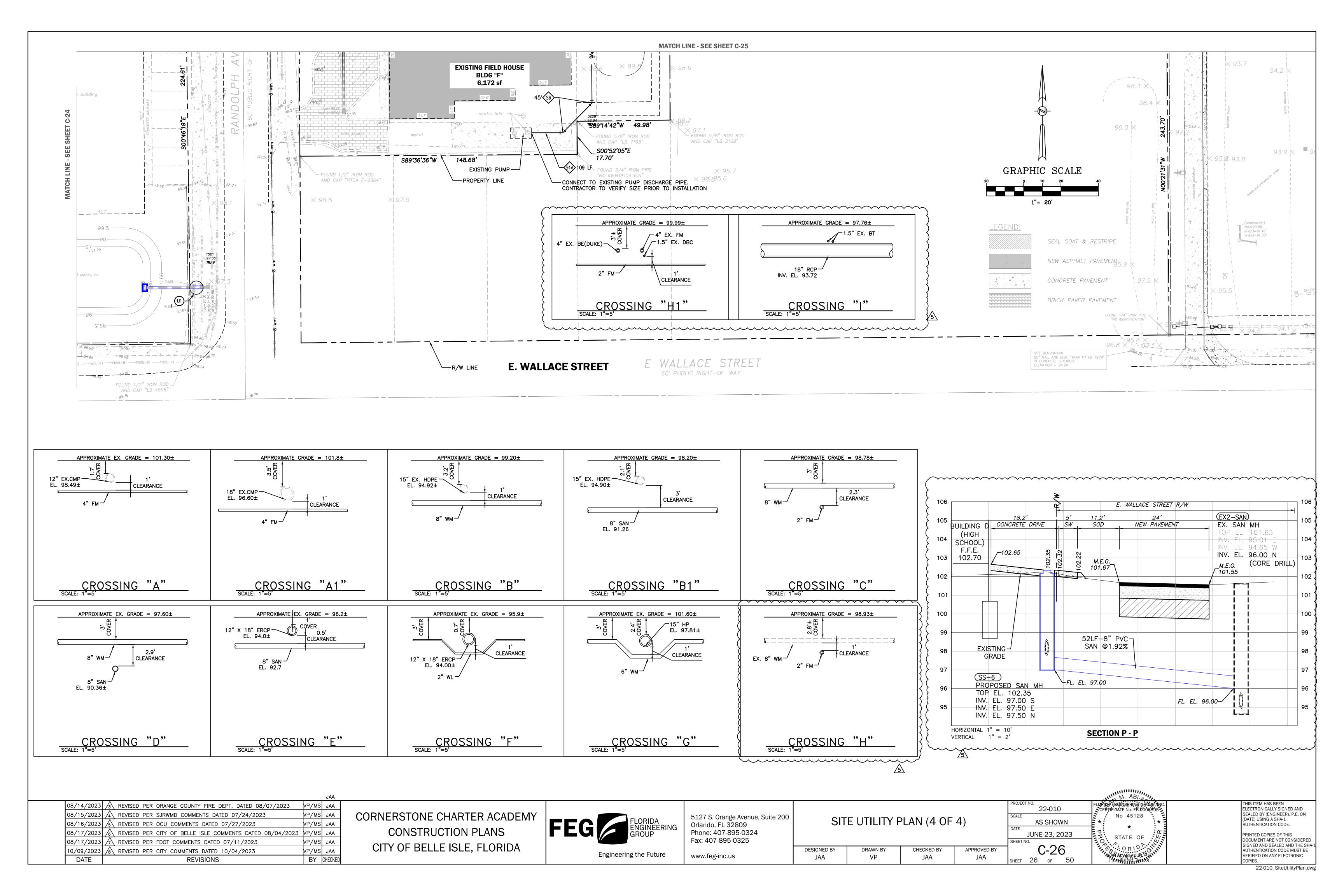
DPIES. 22-010\_SitePGDPlan.dwg

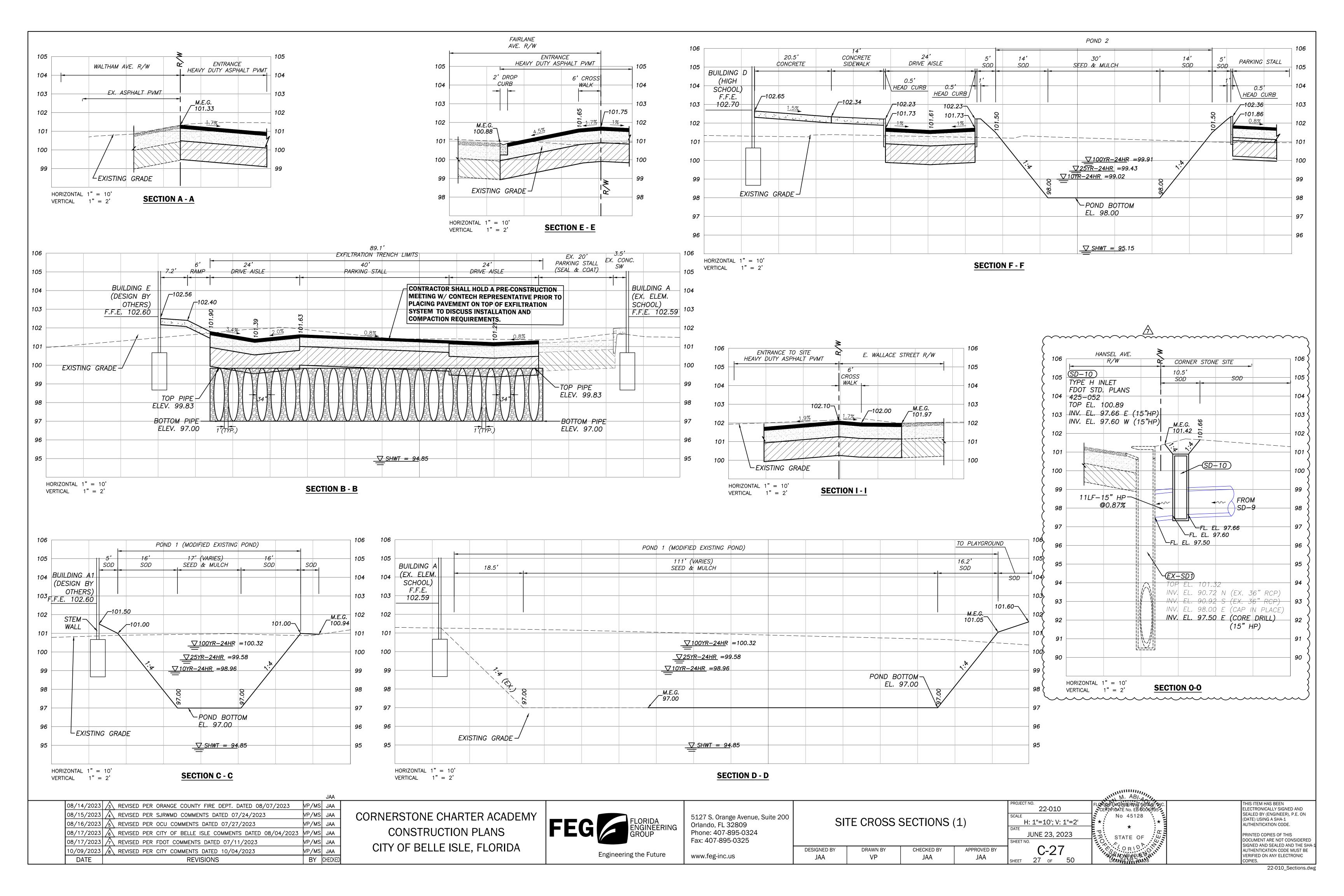
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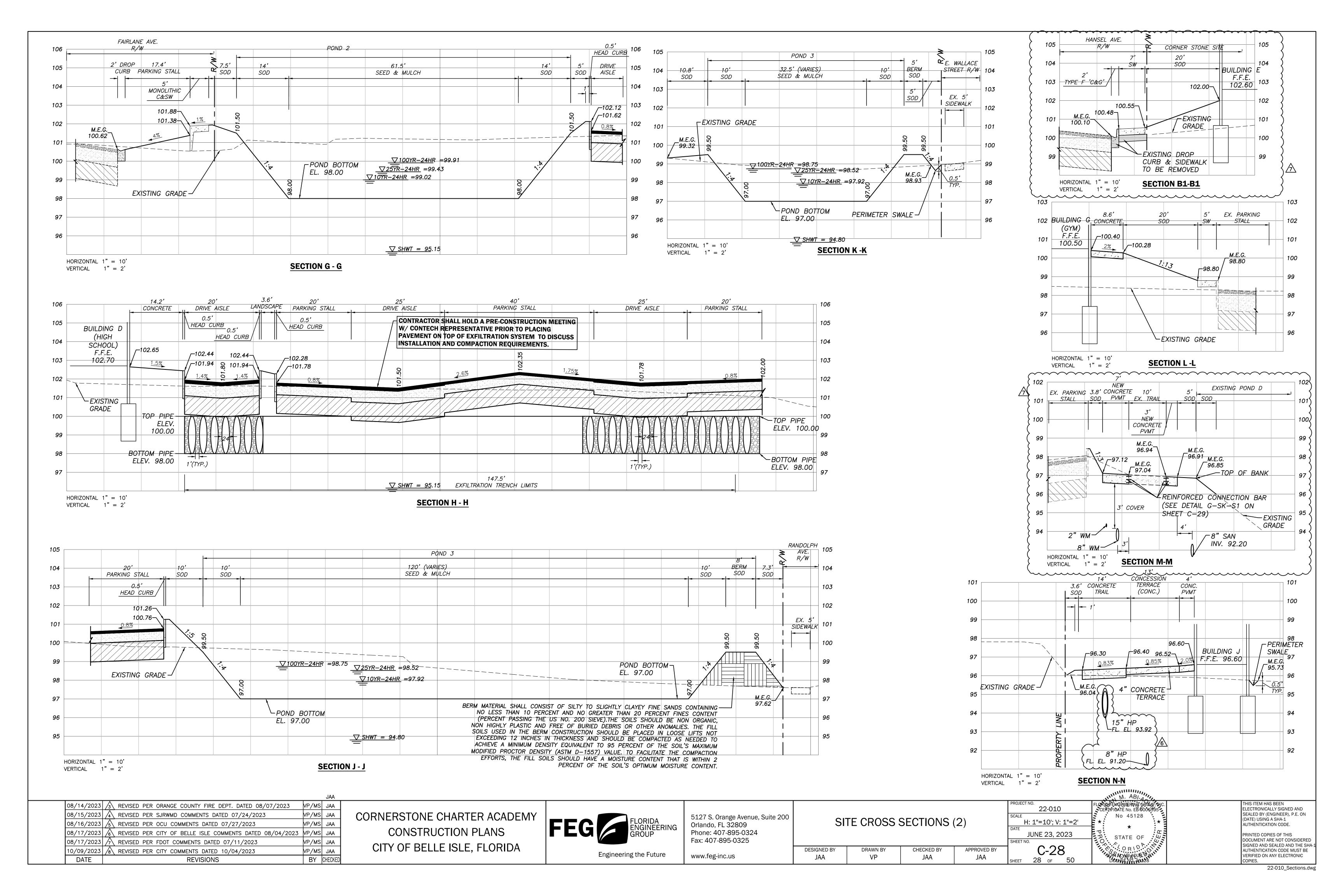


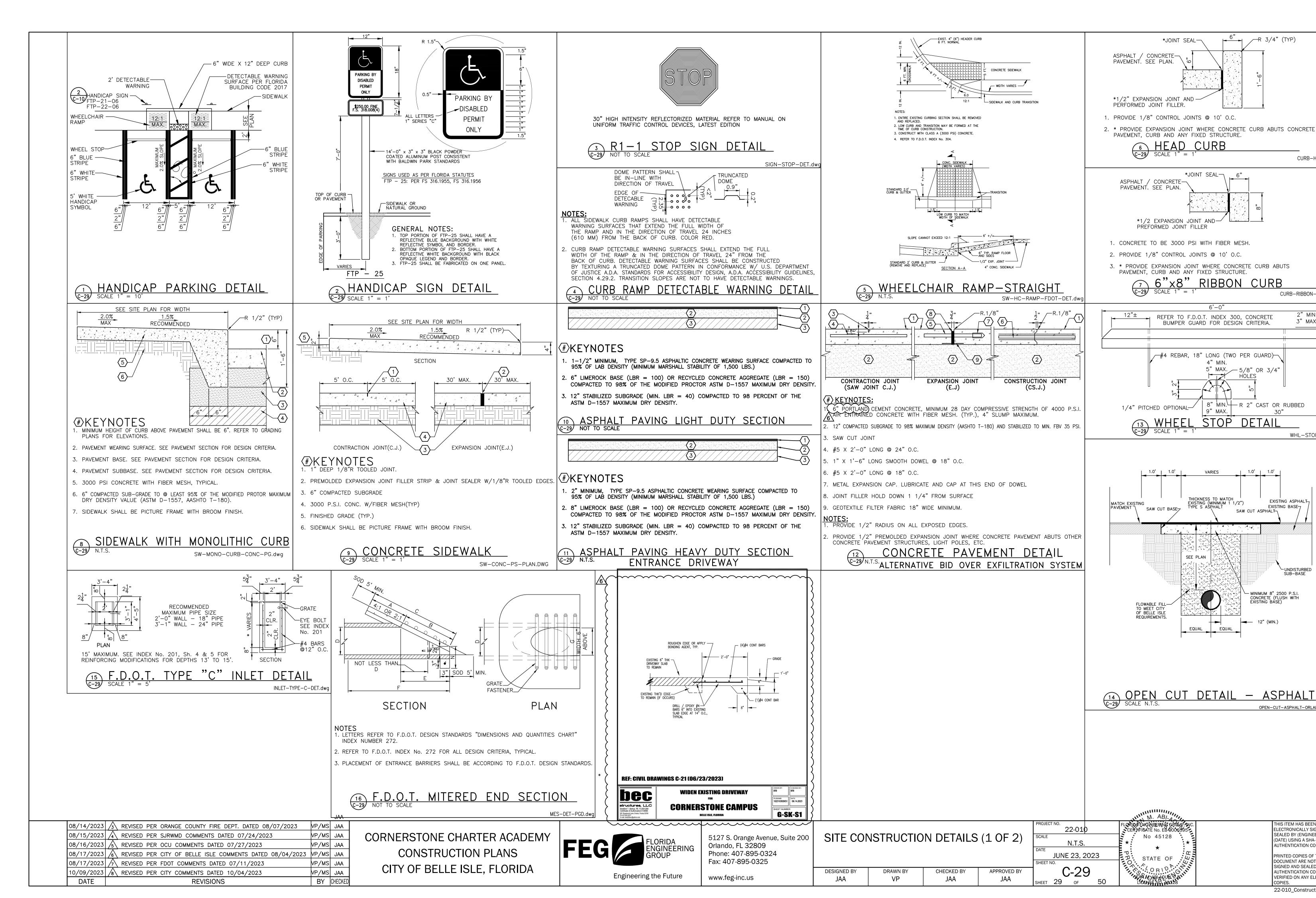












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CURB-HEAD-DET.dwg

CURB-RIBBON-6x8-DET.dwg

2" MIN.

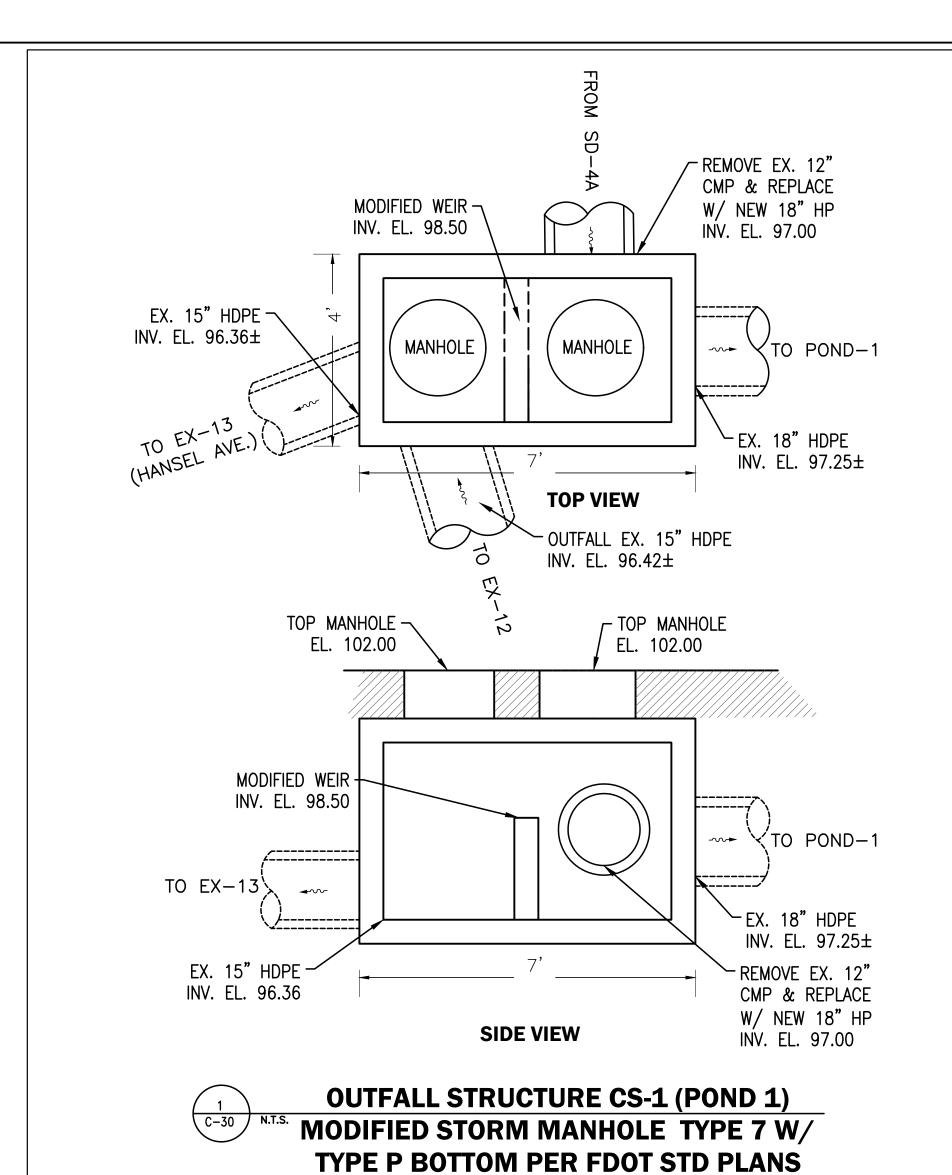
WHL-STOP-DET.dwg

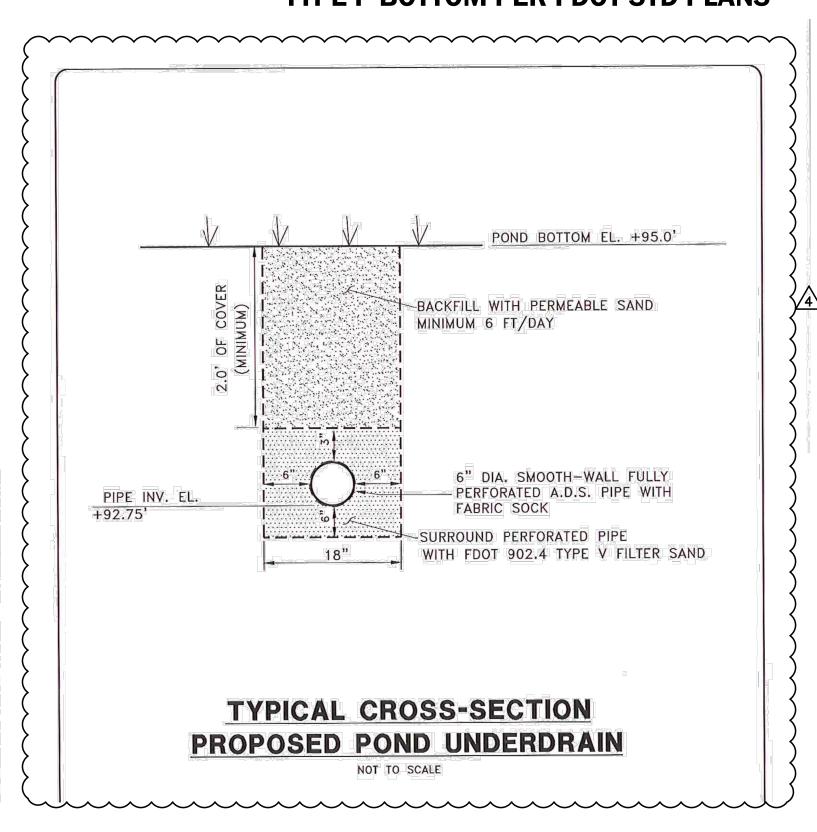
EXISTING ASPHALT

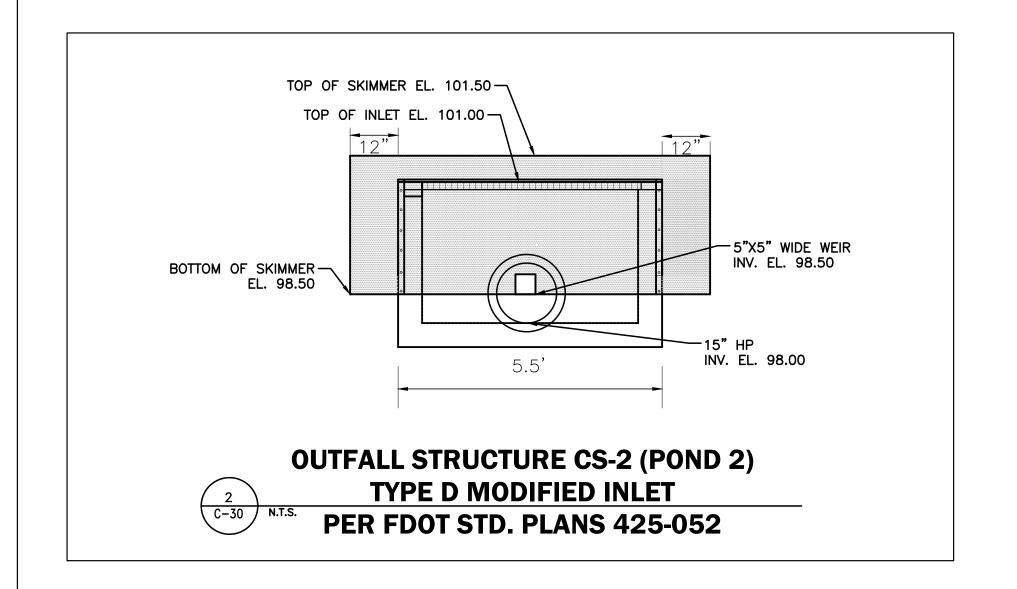
-UNDISTURBED SUB-BASE

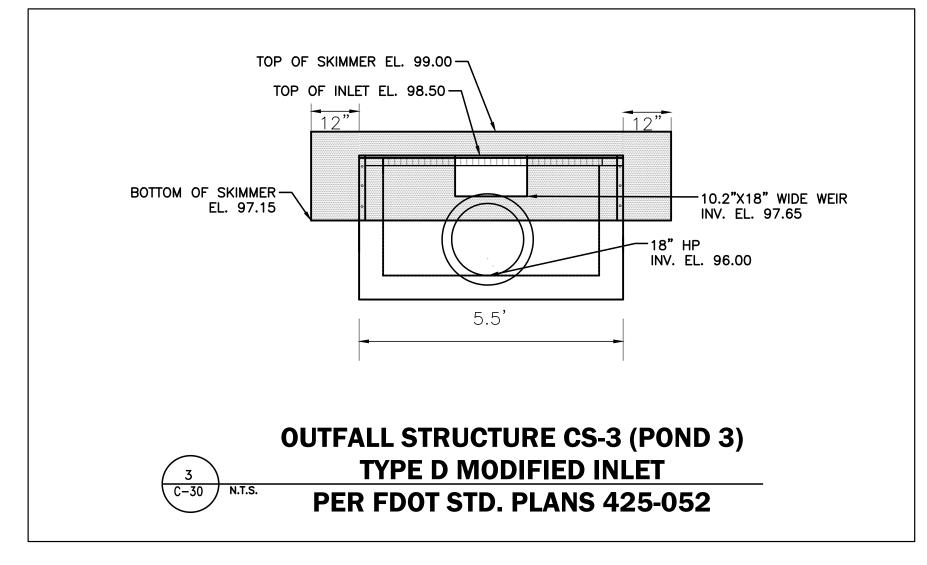
EXISTING BASE-7

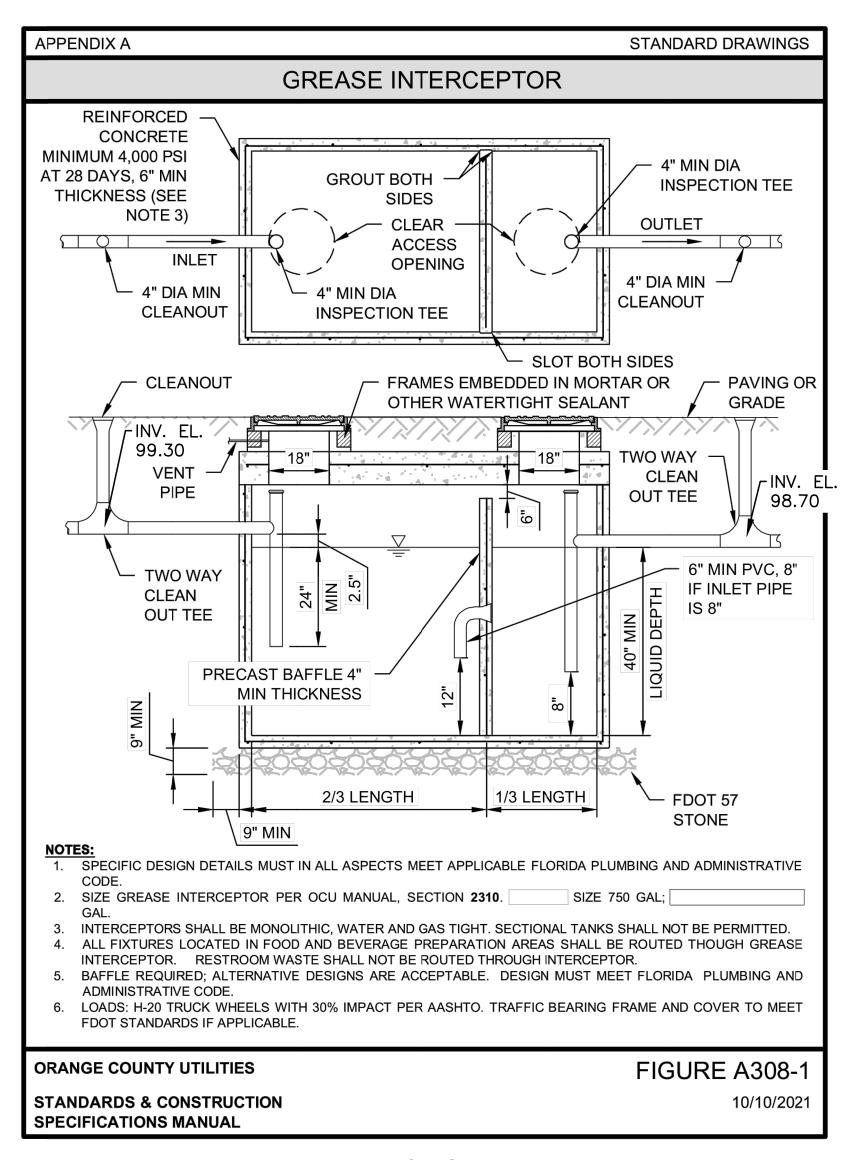
3" MAX.



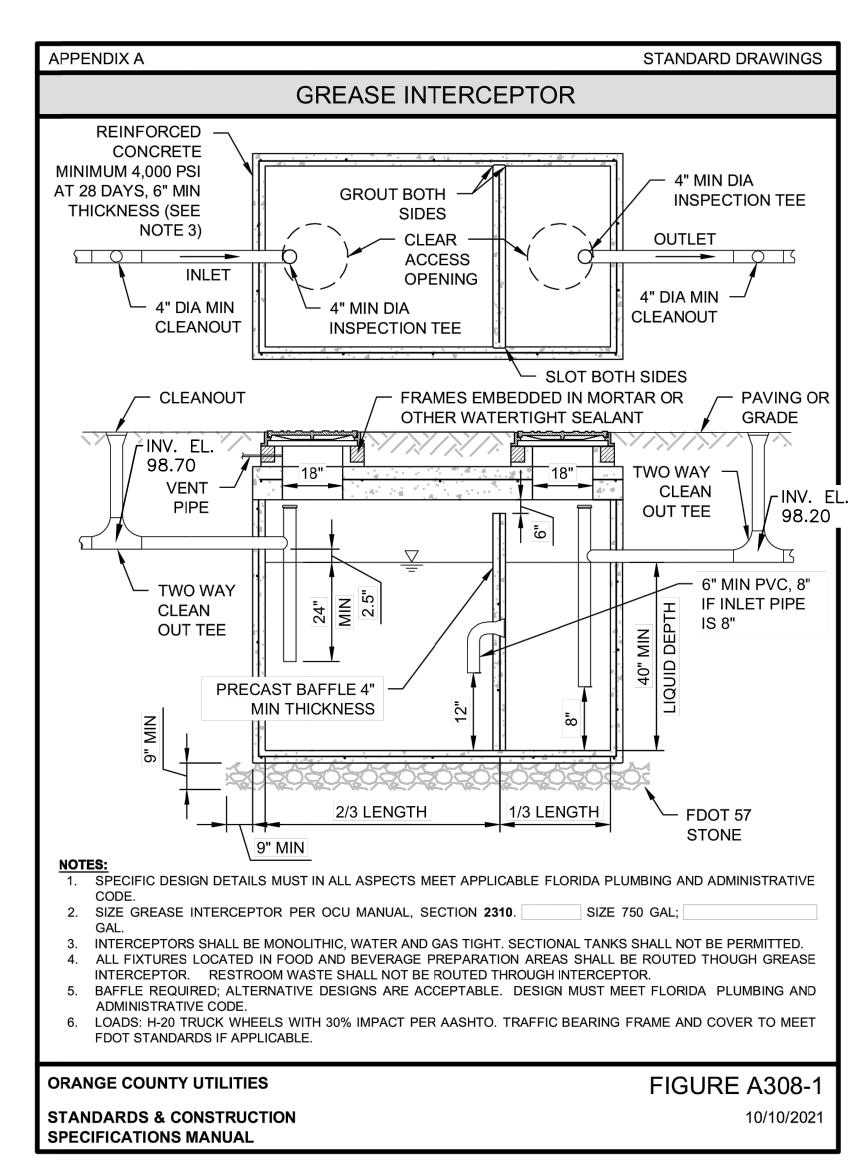












# GT-2 GREASE INTERCEPTOR N.T.S.

APPROVED BY

JAA

-			JAA	—
08/14/2023	REVISED PER ORANGE COUNTY FIRE DEPT. DATED 08/07/2023	VP/MS	JAA	
08/15/2023	REVISED PER SJRWMD COMMENTS DATED 07/24/2023	VP/MS	JAA	
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DATE	REVISIONS	BY	CHECKED	

CORNERSTONE CHARTER ACADEMY
CONSTRUCTION PLANS
CITY OF BELLE ISLE, FLORIDA



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DESIGNED BY

SITE CONSTRUCTION DETAILS (2 OF 2)

CHECKED BY

JAA

DRAWN BY

VP

PROJECT NO.

22-010

SCALE

N.T.S.

DATE

JUNE 23, 2023

SHEET NO.

C-30

HEET 30 OF 50

M. ABI-A

FLORIDA ENGINEERING GROUP INC

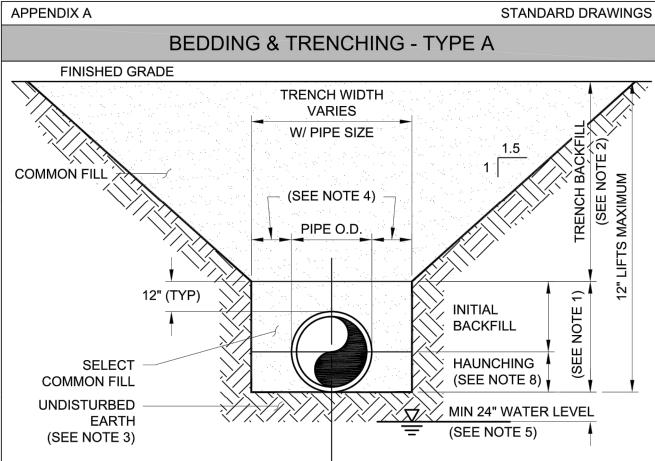
CERTIFICATE NO. EB-0006395

STATE OF

JUNE 23, 2023

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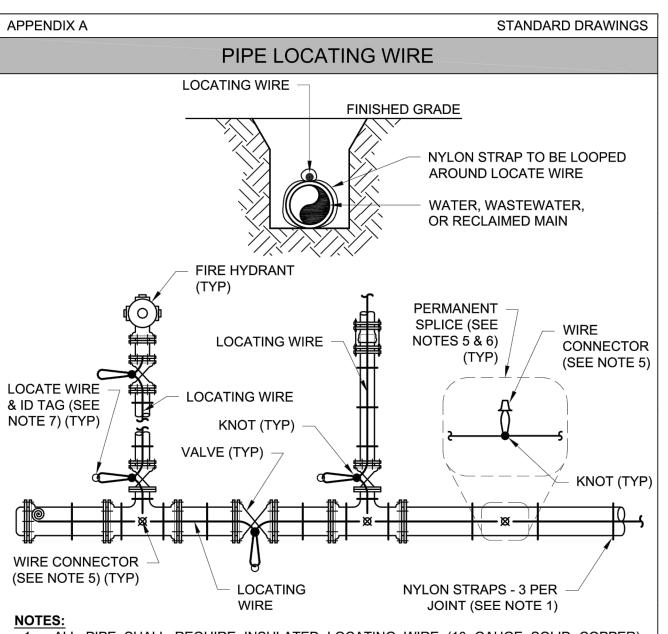
- INITIAL BACKFILL AND HAUNCHING: SELECT COMMON FILL COMPACTED TO MIN 95% (98% UNDER PAVEMENT OR FUTURE PAVEMENT) OF THE MAXIMUM DENSITY AS PER AASHTO
- 2. TRENCH BACKFILL: COMMON FILL COMPACTED TO MIN 95% (98% UNDER PAVEMENT OR FUTURE PAVEMENT) OF THE MAXIMUM DENSITY AS PER AASHTO T-180. 3. PIPE BEDDING UTILIZING SELECT COMMON FILL IN ACCORDANCE WITH "TYPE B" BEDDING
- 4. 15-IN MAX. (12-IN MIN.) FOR PIPE DIAMETER LESS THAN 24-IN AND 24-IN MAX (12-IN MIN) FOR PIPE DIAMETER 24-IN AND LARGER

AND TRENCHING DETAIL MAY BE REQUIRED AS DIRECTED BY UTILITIES.

- 5. WATER SHALL NOT BE PERMITTED IN THE TRENCH DURING CONSTRUCTION. DEWATERING AS REQUIRED.
- 6. ALL PIPE SHALL BE INSTALLED WITH BELL FACING UPSTREAM TO THE DIRECTION OF THE
- FINAL RESTORATION IN IMPROVED AREAS SHALL BE IN COMPLIANCE WITH ALL APPLICABLE REGULATIONS OF GOVERNING AGENCIES. SURFACE RESTORATION WITHIN ORANGE COUNTY RIGHT-OF-WAY SHALL COMPLY WITH REQUIREMENTS OF RIGHT-OF-WAY UTILIZATION REGULATIONS AND ROAD CONSTRUCTION SPECIFICATIONS.
- FOR GRAVITY SEWER, THE FIRST LIFT SHALL BE PLACED TO THE SPRING LINE OF THE PIPE AND COMPACTED BY HAND TAMP. CONTRACTOR SHALL USE BEDDING AND TRENCHING - TYPE B DETAIL FOR OVER

EXCAVATION AND WHEN UNSUITABLE MATERIALS ARE ENCOUNTERED IN THE **EXCAVATION** 

FIGURE A101 ORANGE COUNTY UTILITIES STANDARDS & CONSTRUCTION 10/10/2021 SPECIFICATIONS MANUAL



ALL PIPE SHALL REQUIRE INSULATED LOCATING WIRE (10 GAUGE SOLID COPPER) CAPABLE OF DETECTION BY A CABLE LOCATOR AND SHALL BE WRAPPED WITH NYLON STRAPS, LOOPED AND SECURED TO TOP CENTERLINE OF THE PIPE.

- LOCATING WIRE SHALL BE CONTINUOUS INSIDE VALVE BOXES AND SHALL EXTEND 12-IN ABOVE TOP OF COLLAR.
- WIRE INSULATION SHALL BE COLOR CODED FOR THE TYPE OF PIPE BEING INSTALLED. WIRE SHALL BE CONTINUOUS AND CONNECTED FOR LOCATING IN ALL DIRECTIONS. PERMANENT SPLICES MUST BE MADE IN THE LENGTH OF THE WIRE USING WIRE
- CONNECTORS SPECIFICALLY DESIGNED FOR DIRECT BURIAL, DIELECTRIC SILICONE GEL OR MOISTURE-RESISTANT GREASE FILLED. 6. AT ALL TRACING WIRE SPLICES, TEES, AND VALVE COLLARS, A KNOT IN THE WIRE
- SHALL BE MADE TO PREVENT THE WIRE FROM COMING APART. REFER TO VALVE DETAILS FOR LOCATE WIRE UP AND IN VALVE BOX

STANDARDS & CONSTRUCTION

SPECIFICATIONS MANUAL

ORANGE COUNTY UTILITIES FIGURE A114

/3\ REVISED PER ORANGE COUNTY FIRE DEPT. DATED 08/07/2023 VP/MS JAA 08/14/2023 08/15/2023 VP/MS JAA 4\ REVISED PER SJRWMD COMMENTS DATED 07/24/2023 VP/MS JAA REVISED PER OCU COMMENTS DATED 07/27/2023 08/16/2023 08/17/2023 REVISED PER CITY OF BELLE ISLE COMMENTS DATED 08/04/2023 VP/MS JAA VP/MS JAA REVISED PER FDOT COMMENTS DATED 07/11/2023 08/17/2023 VP/MS JAA 10/09/2023 REVISED PER CITY COMMENTS DATED 10/04/2023 BY CHECKED DATE **REVISIONS** 

APPENDIX A STANDARD DRAWINGS **BEDDING & TRENCHING - TYPE B** FINISHED GRADE TRENCH WIDTH VARIES W/ PIPE SIZE **COMMON FILL** (SEE NOTE 4) PIPE O.D. 12" (TYP) INITIAL BACKFILL (SEE NOTE 1) SELECT COMMON FILL HAUNCHING (SEE NOTE 8) **BEDDING MATERIAL** (SEE NOTE 10) BEDDING (SEE NOTES 9 & 10) **↓** UNDISTURBED EARTH 

(SEE NOTE 5) 1. INITIAL BACKFILL: SELECT COMMON FILL COMPACTED TO MIN 95% (98% UNDER PAVEMENT

- OR FUTURE PAVEMENT) OF THE MAXIMUM DENSITY AS PER AASHTO T-180. 2. TRENCH BACKFILL: COMMON FILL COMPACTED TO MIN 95% (98% UNDER PAVEMENT OR
- FUTURE PAVEMENT) OF THE MAXIMUM DENSITY AS PER AASHTO T-180. 3. PIPE BEDDING UTILIZING SELECT COMMON FILL IN ACCORDANCE WITH "TYPE B" BEDDING AND TRENCHING DETAIL MAY BE REQUIRED AS DIRECTED BY UTILITIES.
- 4. 15-IN MAX. (12-IN MIN.) FOR PIPE DIAMETER LESS THAN 24-IN AND 24-IN MAX (12-IN MIN) FOR PIPE DIAMETER 24-IN AND LARGER. 5. WATER SHALL NOT BE PERMITTED IN THE TRENCH DURING CONSTRUCTION. DEWATERING
- AS REQUIRED. 6. ALL PIPE SHALL BE INSTALLED WITH BELL FACING UPSTREAM TO THE DIRECTION OF THE
- 7. FINAL RESTORATION IN IMPROVED AREAS SHALL BE IN COMPLIANCE WITH ALL APPLICABLE REGULATIONS OF GOVERNING AGENCIES. SURFACE RESTORATION WITHIN ORANGE COUNTY RIGHT-OF-WAY SHALL COMPLY WITH REQUIREMENTS OF R/W UTILIZATION REGULATIONS AND ROAD CONSTRUCTION SPECIFICATIONS.
- 8. FOR GRAVITY SEWER, THE FIRST LIFT SHALL BE PLACED TO THE SPRING LINE OF THE PIPE AND COMPACTED BY HAND TAMP.
- 9. BEDDING DEPTH SHALL BE 4-IN MINIMUM FOR PIPE DIAMETER UP TO 12-IN AND 6-IN MINIMUM FOR PIPE DIAMETER 16-IN AND LARGER 10. DEPTH FOR REMOVAL OF UNSUITABLE MATERIAL SHALL GOVERN DEPTH OF REQUIRED BEDDING MATERIAL BELOW THE PIPE. UTILITIES SHALL DETERMINE REMOVAL OF

ORANGE COUNTY UTILITIES FIGURE A102 STANDARDS & CONSTRUCTION 10/10/2021 SPECIFICATIONS MANUAL

UNSUITABLE MATERIAL TO REACH SUITABLE FOUNDATION IN THE FIELD.

APPENDIX A STANDARD DRAWINGS HORIZONTAL PIPELINE SEPARATION REQUIREMENTS

**HORIZONTAL** SEPARATION REQUIREMENTS (NOTES 1 & 2)

POTABLE RECLAIMED WASTEWATER | SANITARY | STORM | FOUNDATION, WATER (SEE NOTE 7) | FORCEMAIN | SEWER | SEWER | WALLS, ETC. WATER MAIN (NOTE 3) PROPOSED UTILITY 4"-12" | 16"-UP | 4"-12" | 16"-UP | 4"-12" | 16"-UP | ALL SIZES | ALL SIZES SIZES POTABLE WATER (NOTE 3) 15' (NOTE 5) **RECLAIMED** WATER MAIN (SEE NOTE 7) 15' (NOTE 5) WASTEWATER **FORCEMAIN** 15' (NOTE 5)

SIZES

SANITARY

SEWER

1. DISTANCES GIVEN ARE FROM OUTSIDE OF PIPE TO OUTSIDE OF PIPE. 2. THIS SEPARATION REQUIREMENT IS TO PROVIDE ACCESSIBILITY FOR CONSTRUCTION AND MAINTENANCE. FOR PIPES INSTALLED AT GREATER DEPTHS THAN THE MINIMUM OCU DESIGN STANDARDS, PROVIDE AN ADDITIONAL FOOT OF SEPARATION FOR EACH ADDITIONAL FOOT OF DEPTH. 3. THIS SEPARATION REQUIREMENT COMPLIES WITH THE MINIMUM FDEP SEPARATION REQUIREMENTS OUTLINED IN 62-555.314, FAC. VARIANCES FROM THE FDEP REQUIREMENTS MUST COMPLY WITH

4. NO WATER PIPE SHALL PASS THROUGH OR COME IN CONTACT WITH ANY PART OF SANITARY OR STORM WATER MANHOLE OR STRUCTURE.

62-555.314(5), FAC AND MUST BE APPROVED INDIVIDUALLY BY BOTH FDEP AND UTILITIES PRIOR TO

EMBANKMENTS, RETAINING WALLS, BRIDGES, RAILROADS, HIGH VOLTAGE TRANSMISSION MAINS, GAS

- PRESSURE MAINS 16-IN TO 24-IN MAY HAVE 10-FT SEPARATION FROM STRUCTURAL FOUNDATION,
- WALLS, ETC IF NEW MAINS ARE RESTRAINED FOR THE ENTIRE LENGTH. REFERENCE FIGURE A116-2 FOR VERTICAL PIPELINE SEPARATION REQUIREMENTS
- RECLAIMED WATER REGULATED UNDER PART III OF CHAPTER 62-610, F.A.C. ADDITIONAL SEPARATION SHALL BE REQUIRED BY UTILITIES FOR CONSTRUCTION OF, INCLUDING, BUT NOT LIMITED TO: LIVE LOADS, MULTI-STORY COMMERCIAL BUILDINGS, SUPERSTRUCTURES,

**ORANGE COUNTY UTILITIES STANDARDS & CONSTRUCTION SPECIFICATIONS MANUAL** 

FIGURE A116-1

APPENDIX A RESTRAINED VERTICAL PIPE - WATER, WASTEWATER FORCE, & RECLAIMED WATER MAINS (150 PSI) PER VERTICAL TABLE DEPTH VARIES UPPER BEND ANGLE OF DIRECTION CHANGE LOWER BEND PER HORIZONTAL TABLE ANGLE OF (MIN) (SEE FIG **A104-1**) DIRECTION CHANGE

**PROFILE VIEW** 

# MINIMUM LENGTH (FT) TO BE RESTRAINED ON EACH SIDE OF FITTING(S)

																ĺ
	TYPE	PVC AND DUCTILE IRON PIPE SIZE (IN)											(			
	<u>-</u>	4	6	8	12	16	20	24	30	36	42	48	54	60	64	
۲)	90° BEND	43	59	78	109	139	167	277	330	415	424	465	506	529	551	
(UPPER)	45° BEND	18	25	32	45	58	69	115	137	172	176	193	210	219	229	
	22-1/2° BEND	9	12	16	22	28	34	56	66	83	85	93	101	106	110	
VERTICAL	11-1/4° BEND	5	6	8	11	14	17	28	33	41	42	46	50	53	55	,
>	5 5/8° BEND OR MJ SLEEVE	3	3	4	6	7	9	14	17	21	21	23	25	26	28	

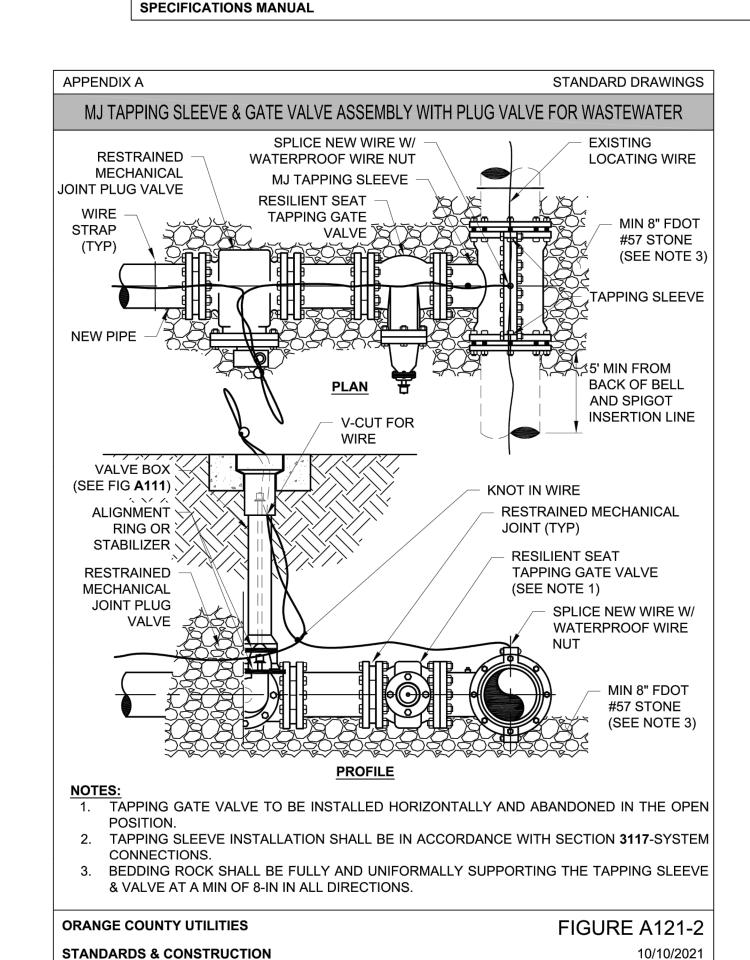
- FITTINGS SHALL HAVE RESTRAINED JOINTS UNLESS OTHERWISE INDICATED.
- 2. INSTALL FULL LENGTH JOINTS WITH TOTAL LENGTH EQUAL TO OR GREATER THAN LENGTH SHOWN IN THE TABLE.

STANDARD DRAWINGS

10/10/2021

- WHERE TWO OR MORE FITTINGS ARE IN SERIES, SELECT FITTING RESTRAINT LENGTH THAT YIELDS THE LONGEST RESTRAINT DISTANCE.
- ALL INLINE VALVES SHALL BE RESTRAINED. WHERE INTERNAL RESTRAINED JOINTS ARE USED, THE ENTIRE BELL
- SHALL BE PAINTED RED. 6. LENGTHS SHOWN IN THE TABLE WERE CALCULATED IN ACCORDANCE
- WITH PROCEDURES OUTLINED IN "THRUST RESTRAINT DESIGN FOR DUCTILE IRON PIPE" GUIDELINES PUBLISHED BY DIPRA, USING THE ASSUMPTIONS SHOWN BELOW:
  - WORKING PRESSURE: 150 PS SOIL DESIGNATION: SM (SAND SILT) LAYING CONDITIONS: DEPTH OF COVER:
  - SAFETY FACTOR: THE DESIGN ENGINEER SHALL INCREASE THE VALUES IN THE TABLE AS WARRANTED BY SITE-SPECIFIC PARAMETERS, SUCH AS SOIL DESIGNATIONS AND LAYING CONDITIONS.
- 7. 90° BENDS ON VERTICAL PIPE ARE SUBJECT TO REVIEW AND APPROVAL OF UTILITIES.
- 8. IF 4-IN THRU 20-IN PIPE IS POLYETHYLENE ENCASED, USE 1.25 MULTIPLIER ON RESTRAINT LENGTH.
- 9. RESTRAINING REQUIREMENTS APPLY TO BOTH EXISTING AND PROPOSED MAINS.

FIGURE A104-2



DESIGNED BY

**ORANGE COUNTY UTILITIES** 

**STANDARDS & CONSTRUCTION** 

APPENDIX A STANDARD DRAWINGS

## **OCU GENERAL NOTES**

THE CONTRACTOR SHALL EXERCISE EXTREME CALITION WHEN EXCAVATING IN PROXIMITY OF INCLUDING BUT NOT LIMITED TO: WATER MAINS, WASTEWATER FORCE MAINS, GRAVITY MAINS, RECLAIMED WATER MAINS. ELECTRIC, GAS, CABLE TV, TELECOMMUNICATIONS, STORM WATER, FIBER OPTIC AND OTHER UNDERGROUND FIELD VERIFYING EXISTING UTILITY LOCATIONS.

- SHOULD A PIPE EMERGENCY OCCUR, THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE OCU DISPATCH OPERATOR (407-836-2777) AND THE OCU INSPECTOR
- THE CONTRACTOR SHALL NOTIFY THE OCU CONSTRUCTION INSPECTION SECTION, FIELD SERVICES DIVISION AT LEAST 10 CALENDAR DAYS PRIOR TO COMMENCEMENT OF THE CONSTRUCTION PROJECT BY CALLING (407)
- "UTILITIES' SCHEDULE OF NOTIFICATIONS IN THIS MANUAL
- THE MATERIALS, PRODUCTS, AND CONSTRUCTION OF ALL UTILITIES CONNECTING TO THE OCU SYSTEM SHALL BE IN CONFORMANCE WITH THE STANDARDS, CONSTRUCTION SPECIFICATIONS, AND APPENDIX D IN THIS MANUAL. ALL EXISTING UTILITIES INCLUDING BUT NOT LIMITED TO: WATER MAINS, FORCE MAINS, RECLAIMED WATER MAIN. SANITARY GRAVITY PIPES, STORM WATER PIPES, ELECTRIC, TELEPHONE, GAS, POLES AND STAYS, CABLE TV AND OTHER UTILITY FACILITIES WITHIN THE LIMITS OF THE PROJECT WILL BE SUPPORTED AND PROTECTED AGAINST
- THE CONTRACTOR SHALL ADJUST ALL EXISTING OCU MAINS AND FACILITIES IN CONFLICT WITH NEW GRADE. NEW OR ALTERED ROADWAYS, SIDEWALKS, DRIVEWAYS, CURBS, OR STORM WATER IMPROVEMENTS, OCU FACILITIES TO BE ADJUSTED INCLUDE, BUT ARE NOT LIMITED TO: PIPELINES, PUMP STATIONS, VALVE BOXES, AIR RELEASE VALVES, FIRE HYDRANTS, MANHOLE COVERS, AND METERS, ALL ADJUSTMENTS SHALL BE MADE TO CURRENT
- ONLY OCU PERSONNEL SHALL OPERATE EXISTING OCU WATER, WASTEWATER, AND RECLAIMED WATER VALVES. THE CONTRACTOR IS RESPONSIBLE FOR OPERATING ANY NEWLY INSTALLED VALVE THAT HAS NOT BEEN CLEARED FOR USAGE BY FDEP AND OCU. THE CONTRACTOR SHALL COORDINATE VALVE OPERATION WITH THE OCU INSPECTOR FOR OPERATION OF MAINS NOT OWNED BY OCU IT IS THE CONTRACTOR'S RESPONSIBILITY TO
- COORDINATE WITH THE APPROPRIATE UTILITY REPRESENTATIVE CONSTRUCTION ACTIVITIES SHALL NOT CAUSE INTERRUPTIONS IN WATER, WASTEWATER, OR RECLAIMED WATER SERVICE. THE CONTRACTOR SHALL COORDINATE PRE-APPROVED INTERRUPTIONS OF SERVICE WITH THE OCU INSPECTOR 7 WORKING DAYS IN ADVANCE AND WRITTEN NOTICE SHALL BE GIVEN TO AFFECTED
- CUSTOMERS AT LEAST 4 WORKING DAYS IN ADVANCE. THE CONTRACTOR SHALL PROVIDE FOR BYPASSING AND / OR HAULING OF WASTEWATER DURING APPROVED. INTERRUPTIONS OF WASTEWATER FLOWS AND CONNECTIONS. THE CONTRACTOR SHALL SUBMIT A BYPASS OR
- HAUI PLAN REVIEWED AND APPROVED BY A PROFESSIONAL ENGINEER TO OCU DEVELOPMENT ENGINEERING AND TO THE INSPECTOR FOR APPROVAL PRIOR TO IMPLEMENTATION BY CONTRACTOR. CONSTRUCTION. KEEP VALVES ON ALL WET TAPS CLOSED UNTIL CLEARED BY FDEP. DO NOT CONNECT NEWLY
- CONSTRUCTED WATER MAINS TO ANY EXISTING WATER MAINS UNLESS CLEARED BY FDEP AND OCU 12. THE CONTRACTOR SHALL PROVIDE A JUMPER ASSEMBLY WITH AN APPROVED BACKFLOW PREVENTER FOR MAKING TEMPORARY CONNECTIONS TO AN EXISTING POTABLE WATER SOURCE IN ORDER TO CHLORINATE AND FLUSH NEW WATER MAINS WITH POTABLE WATER. ANY TEMPORARY POTABLE WATER CONNECTIONS TO RECLAIMED WATER OR FORCE MAIN SHALL ALSO BE EQUIPPED WITH AN APPROVED BACKFLOW PREVENTER.
- 13. FOR PVC PIPE, NO JOINT DEFLECTION OR PIPE BENDING IS ALLOWED. ALIGNMENT CHANGE SHALL BE MADE ONLY 14. FOR DIP PIPE, LONG RADIUS CURVES, EITHER HORIZONTAL OR VERTICAL, MAY BE INSTALLED WITH STANDARD PIPE BY DEFLECTIONS AT THE JOINTS. MAXIMUM DEFLECTIONS AT PIPE JOINTS, FITTINGS AND LAYING RADIUS FOR THE VARIOUS PIPE LENGTHS SHALL NOT EXCEED 75 PERCENT OF THE PIPE MANUFACTURER'S
- RECOMMENDATION
- AND/OR DEFLECTION SHALL NOT EXCEED THE PARAMETERS ESTABLISHED IN THIS MANUAL. 16. ALL DAMAGE TO ORANGE COUNTY INFRASTRUCTURE, PIPELINES, AND ASSETS SHALL BE REPAIRED IMMEDIATELY BY THE CONTRACTOR AT THE CONTRACTOR'S EXPENSE WITH AN APPROVED METHOD BY THE COUNTY. IF THE REPAIR IS NOT PERFORMED IN A TIMELY MANNER. AS DETERMINED BY THE ORANGE COUNTY UTILITY
- EXPENSES ASSOCIATED WITH THE REPAIR. 7. THE CONTRACTOR SHALL BE LIABLE FOR ANY AND ALL SANITARY SEWER OVERFLOWS (SSO) ASSOCIATED WITH THE WORK, REGARDLESS OF FAULT. THE CONTRACTOR WILL BE ASSESSED PENALTIES FOR ANY AND EACH SSO AS SPECIFIED IN SECTION 3110, GENERAL CONSTRUCTION REQUIREMENTS.

INSPECTOR, ORANGE COUNTY MAY PERFORM REPAIRS AND THE CONTRACTOR WILL BE CHARGED FOR ALL

**ORANGE COUNTY UTILITIES STANDARDS & CONSTRUCTION** 

22-010

SPECIFICATIONS MANUAL

FIGURE GN 10/10/2021

CORNERSTONE CHARTER ACADEMY CONSTRUCTION PLANS CITY OF BELLE ISLE, FLORIDA



**VARIES PER** 

5127 S. Orange Avenue, Suite 200 Orlando, FL 32809 Phone: 407-895-0324 Fax: 407-895-0325

**SPECIFICATIONS MANUAL** 

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ORANGE COUNTY UTILITY DETAILS (1 OF 2)

CHECKED BY

JAA

DRAWN BY

JUNE 23, 2023 C-31 APPROVED BY JAA

LORIDA ENGINEERING GROUP 1 CERTIFICATE NO. EB-0006595 No 45128

ELECTRONICALLY SIGNED AND SEALED BY (ENGINEER), P.E. ON (DATE) USING A SHA-1 AUTHENTICATION CODE.

PRINTED COPIES OF THIS DOCUMENT ARE NOT CONSIDEREI SIGNED AND SEALED AND THE SHA AUTHENTICATION CODE MUST BE VERIFIED ON ANY ELECTRONIC

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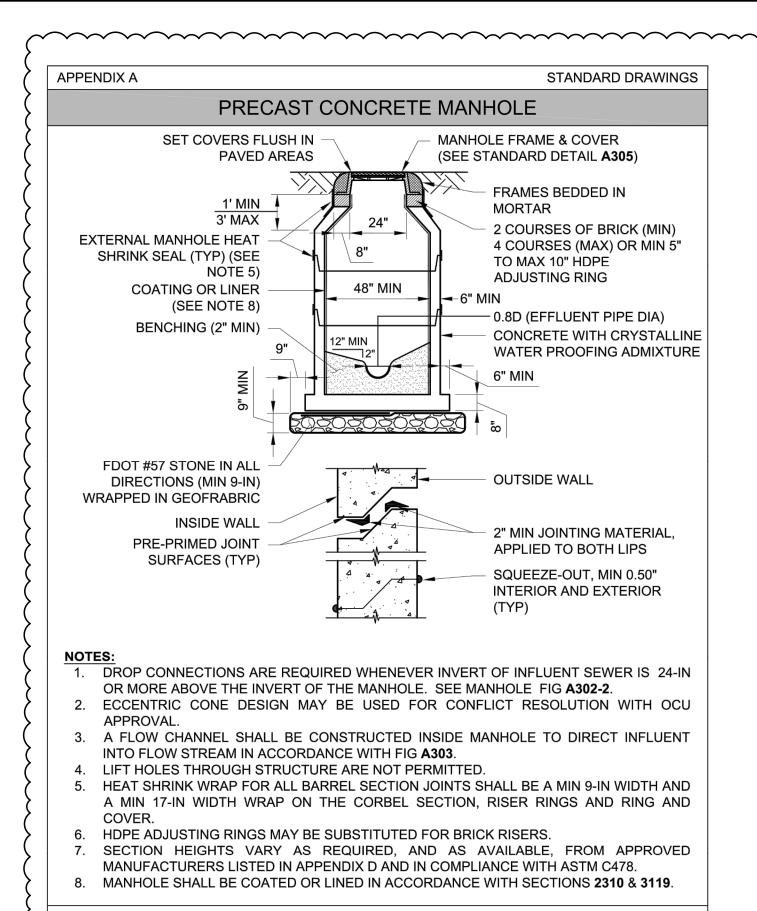


FIGURE A301

VP/MS JAA

VP/MS JAA

VP/MS JAA

BY CHECKED

ORANGE COUNTY UTILITIES

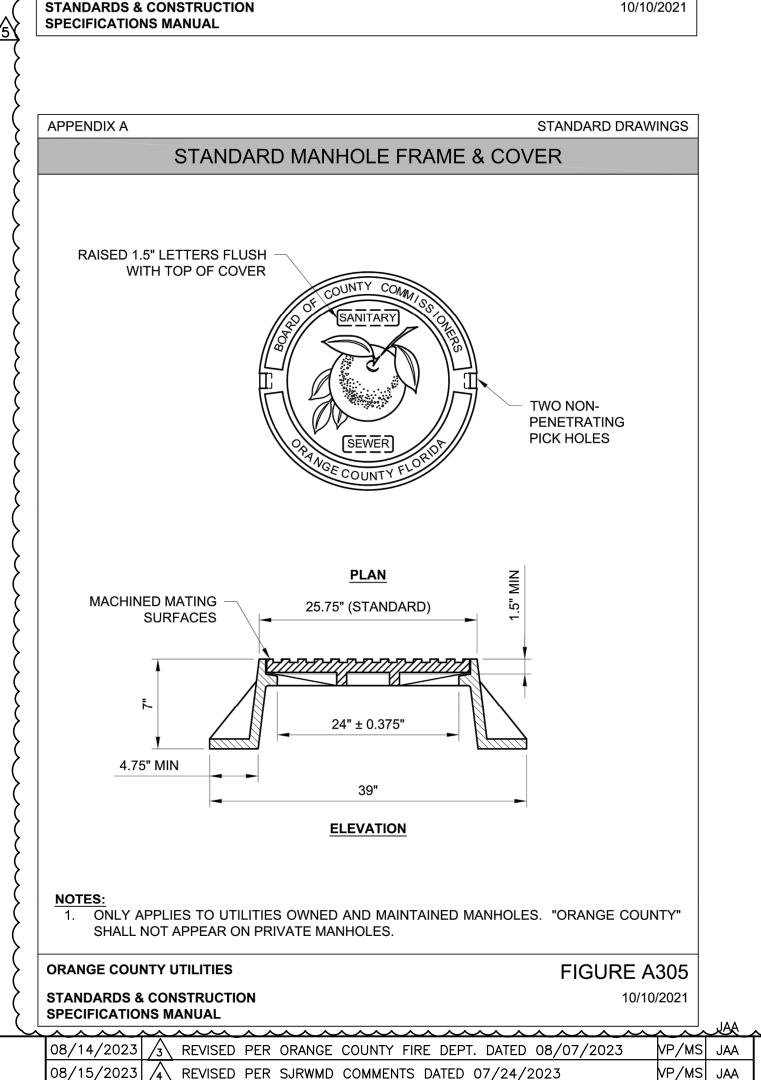
08/16/2023

08/17/2023

08/17/2023

10/09/2023

DATE



4\ REVISED PER SJRWMD COMMENTS DATED 07/24/2023

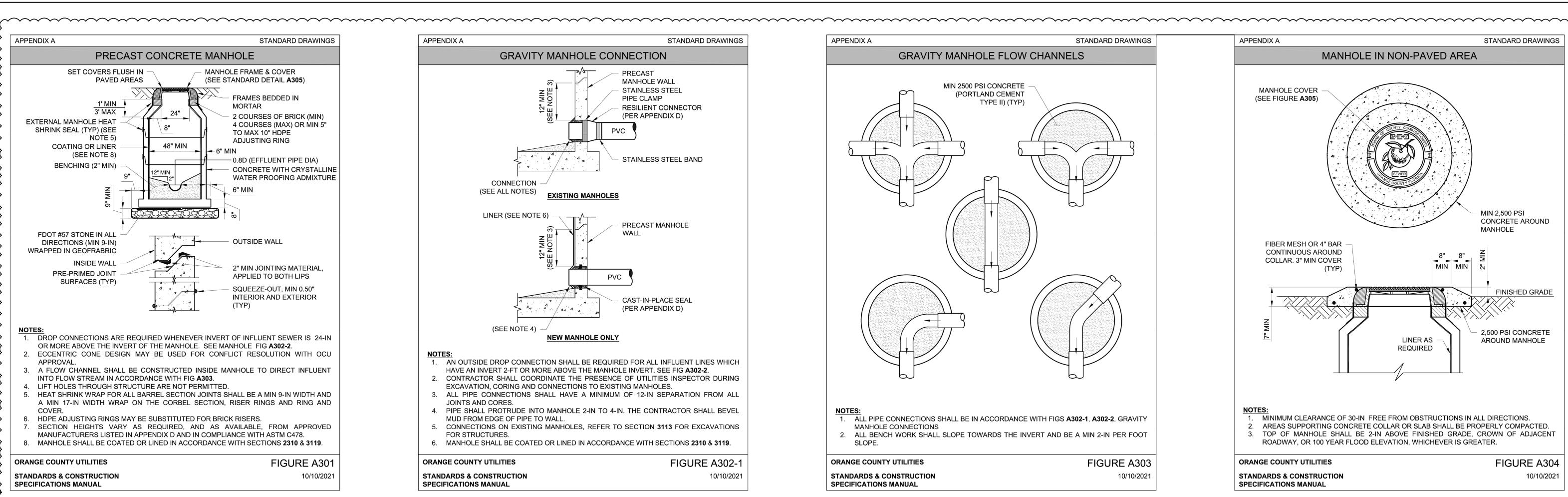
REVISED PER CITY OF BELLE ISLE COMMENTS DATED 08/04/2023 VP/MS JAA

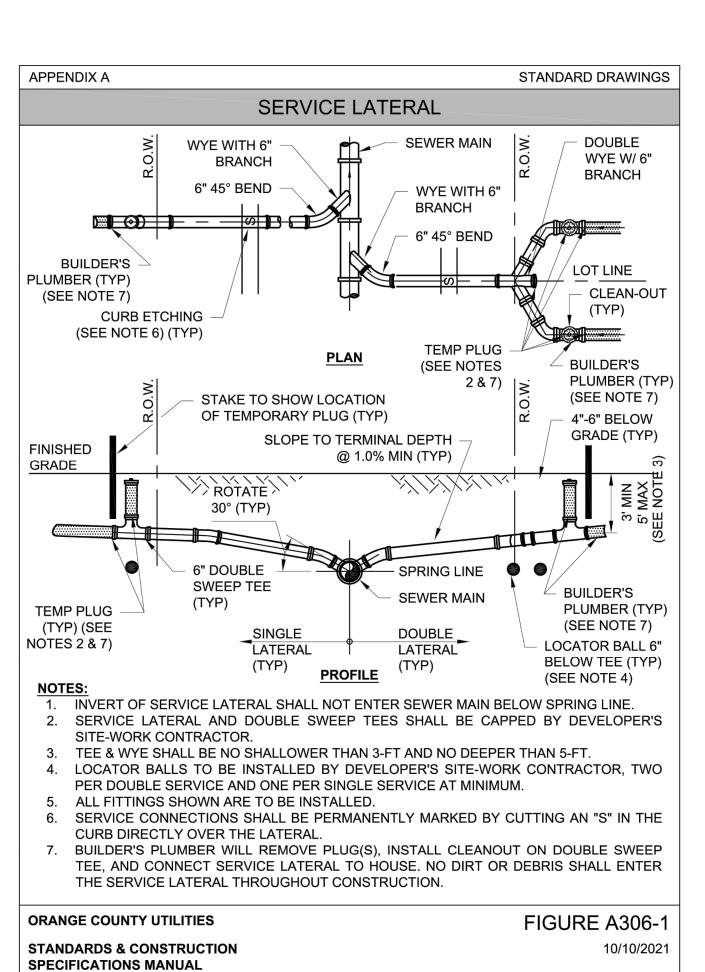
REVISED PER OCU COMMENTS DATED 07/27/2023

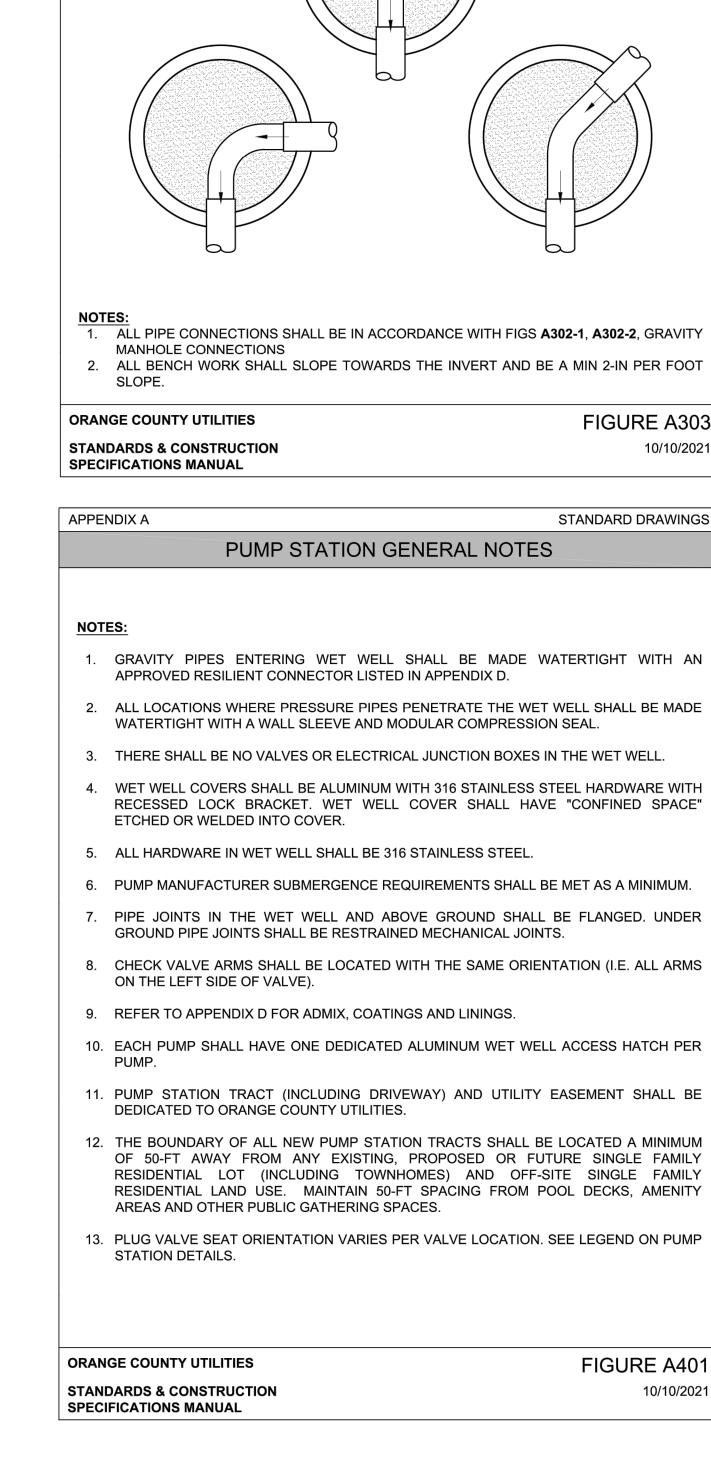
REVISED PER FDOT COMMENTS DATED 07/11/2023

**REVISIONS** 

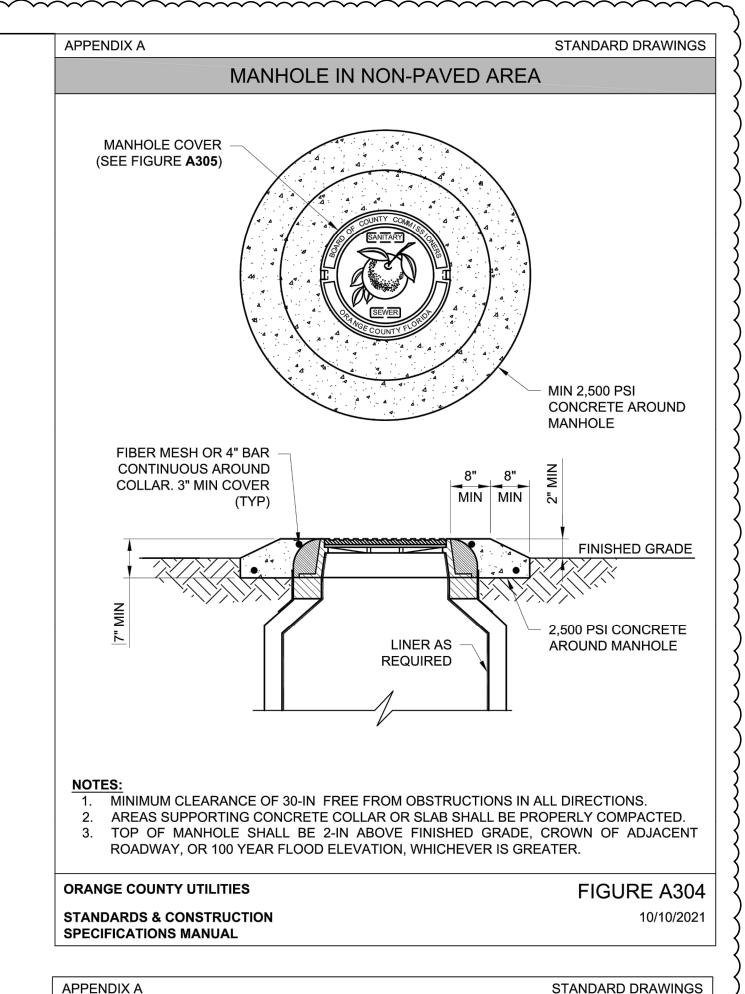
REVISED PER CITY COMMENTS DATED 10/04/2023

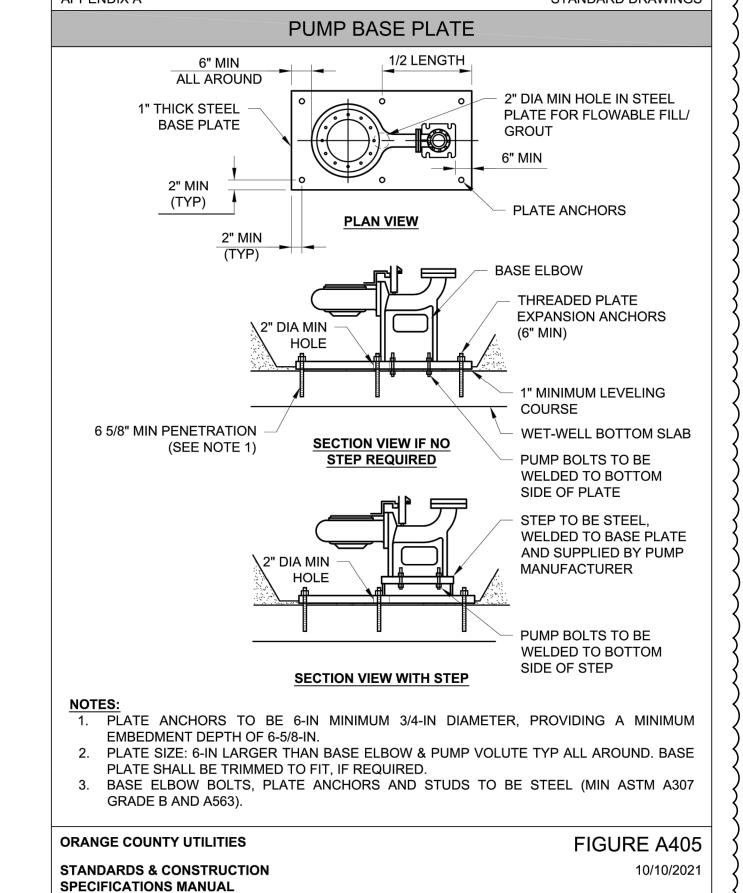




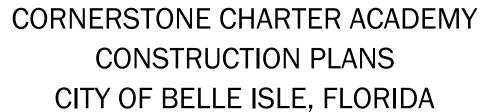


APPENDIX A





No 45128





Engineering the Future

5127 S. Orange Avenue, Suite 200 Orlando, FL 32809 Phone: 407-895-0324 Fax: 407-895-0325

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ORANGE COUNTY

LORIDA ENGINEERING GROUP 1 CERTIFICATE NO. EB-0006595 22-010 N.T.S. JUNE 23, 2023 APPROVED BY DRAWN BY CHECKED BY

ELECTRONICALLY SIGNED AND SEALED BY (ENGINEER), P.E. ON (DATE) USING A SHA-1 AUTHENTICATION CODE. PRINTED COPIES OF THIS DOCUMENT ARE NOT CONSIDEREI

22-010\_OCUDetails.dwg

UTILITY DETAILS (2 OF 2)

10/10/2021

STANDARD DRAWINGS

10/10/2021

**GRAVITY MANHOLE FLOW CHANNELS** 

MIN 2500 PSI CONCRETE

(PORTLAND CEMENT

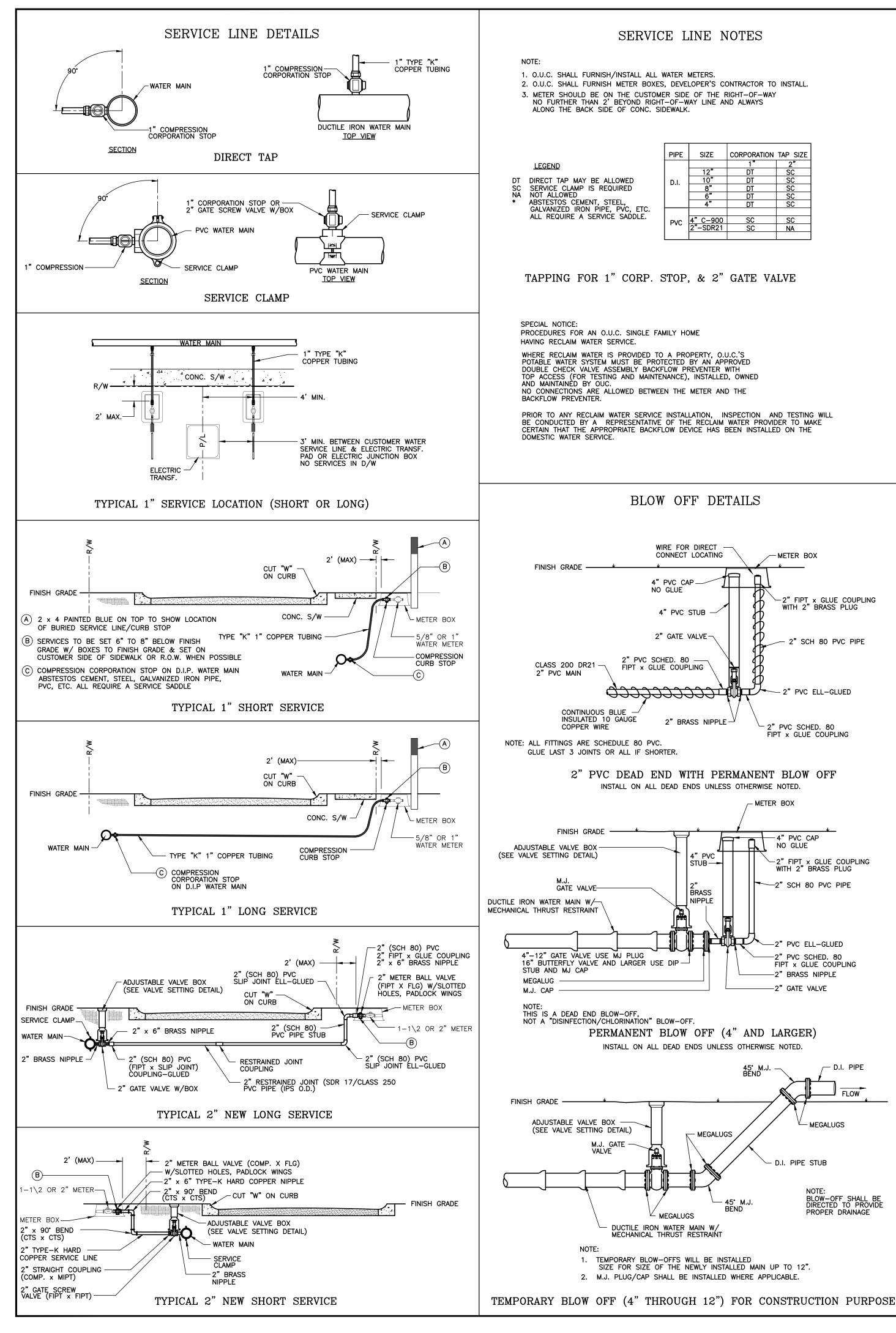
TYPE II) (TYP)

DESIGNED BY JAA JAA 32 OF

# VERIFIED ON ANY ELECTRONIC

SIGNED AND SEALED AND THE SHA

AUTHENTICATION CODE MUST BE



# SERVICE LINE NOTES

1. O.U.C. SHALL FURNISH/INSTALL ALL WATER METERS. 2. O.U.C. SHALL FURNISH METER BOXES, DEVELOPER'S CONTRACTOR TO INSTALL. 3. METER SHOULD BE ON THE CUSTOMER SIDE OF THE RIGHT-OF-WAY NO FURTHER THAN 2' BEYOND RIGHT-OF-WAY LINE AND ALWAYS ALONG THE BACK SIDE OF CONC. SIDEWALK.

SIZE CORPORATION TAP SIZE DT DIRECT TAP MAY BE ALLOWED SC SERVICE CLAMP IS REQUIRED NA NOT ALLOWED ABSTESTOS CEMENT, STEEL, GALVANIZED IRON PIPE, PVC, ETC. ALL REQUIRE A SERVICE SADDLE.

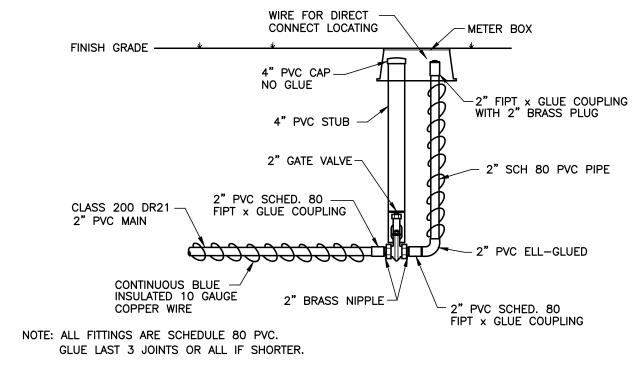
TAPPING FOR 1" CORP. STOP, & 2" GATE VALVE

SPECIAL NOTICE: PROCEDURES FOR AN O.U.C. SINGLE FAMILY HOME

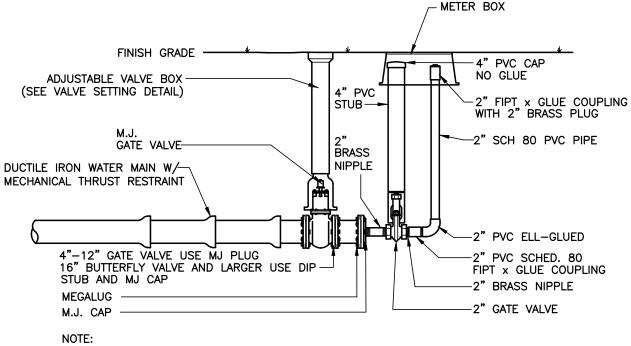
WHERE RECLAIM WATER IS PROVIDED TO A PROPERTY, O.U.C.'S POTABLE WATER SYSTEM MUST BE PROTECTED BY AN APPROVED DOUBLE CHECK VALVE ASSEMBLY BACKFLOW PREVENTER WITH TOP ACCESS (FOR TESTING AND MAINTENANCE), INSTALLED, OWNED AND MAINTAINÈD BY OUC NO CONNECTIONS ARE ALLOWED BETWEEN THE METER AND THE BACKFLOW PREVENTER.

PRIOR TO ANY RECLAIM WATER SERVICE INSTALLATION, INSPECTION AND TESTING WILL BE CONDUCTED BY A REPRESENTATIVE OF THE RECLAIM WATER PROVIDER TO MAKE CERTAIN THAT THE APPROPRIATE BACKFLOW DEVICE HAS BEEN INSTALLED ON THE DOMESTIC WATER SERVICE.

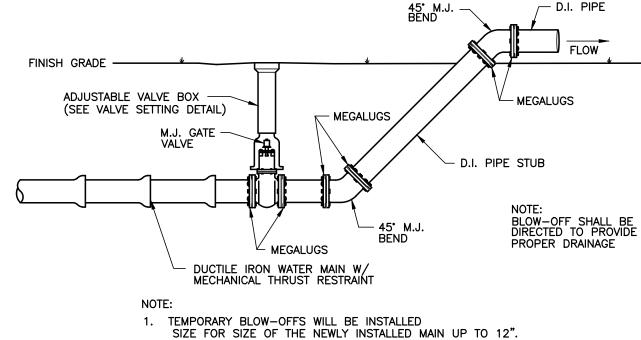
### BLOW OFF DETAILS



2" PVC DEAD END WITH PERMANENT BLOW OFF INSTALL ON ALL DEAD ENDS UNLESS OTHERWISE NOTED.



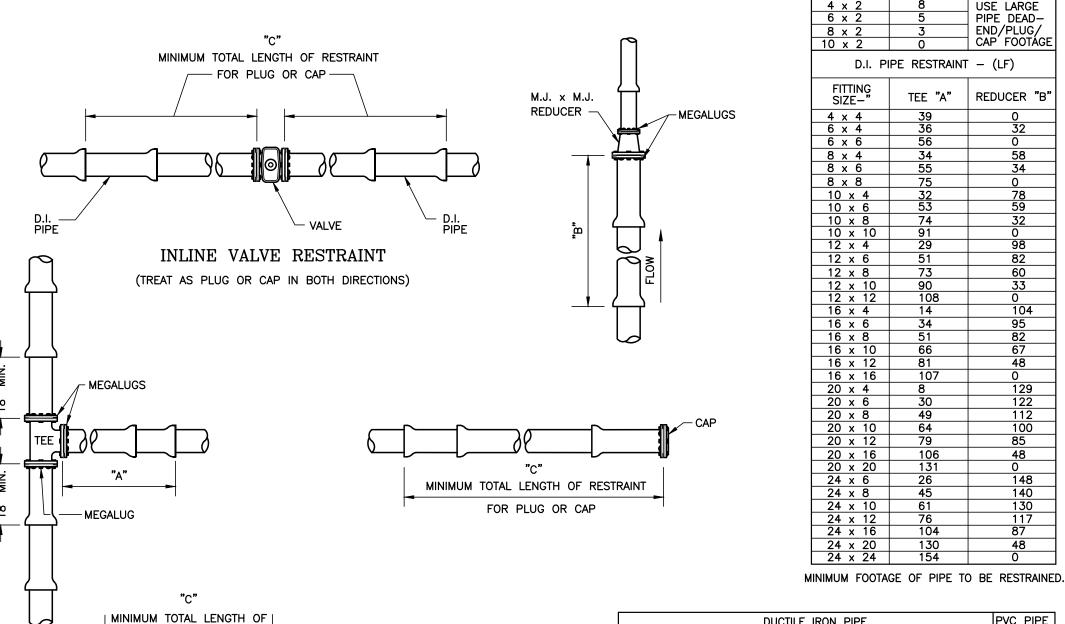
THIS IS A DEAD END BLOW-OFF, NOT A "DISINFECTION/CHLORINATION" BLOW-OFF. PERMANENT BLOW OFF (4" AND LARGER) INSTALL ON ALL DEAD ENDS UNLESS OTHERWISE NOTED.



2. M.J. PLUG/CAP SHALL BE INSTALLED WHERE APPLICABLE.

### RESTRAINED JOINT STANDARDS

CONTACT O.U.C. FOR SPECIAL RESTRAINT DETAILS FOR WORK ON EXISTING PIPING



DUCTILE IRON PIPE PVC PIPE RESTRAINT "C" (LF) 4" | 6" | 8" | 10" | 12" | 16" | 20" | 24" | 30" | 36" | 2 | 3 | 4 | 4 | 5 | 5 | 6 | 7 | 9 | 10' | 4 | 6 | 8 | 9 | 11 | 11 | 13 | 15 | 18 | 20' | 9 | 12 | 16 | 19 | 22 | 22 | 26 | 31 | 36 | 42' | 3 45° OFFSET 21 | 29 | 38 | 46 | 53 | 53 | 64 | 74 | 88 | 101' VALVE/PLUG/CAP | 44 | 61 | 80 | 96 | 113 | 112 | 136 | 159 | 191 | 221' | 13

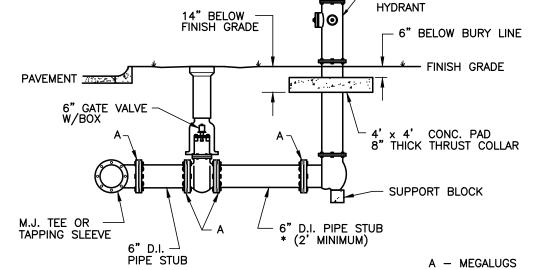
2" PVC - PIPE RESTRAINT (LF)

TEE "A"

REDUCER "B"

### MINIMUM FOOTAGE OF PIPE TO BE RESTRAINED.





A 6" ELL IS REQUIRED BETWEEN THE VALVE AND HYDRANT PARALLEL TO WATER MAIN WHEN:

1. TEE FACES TOWARD ROADWAY. 2. TEE FACES TOWARD BUILDING.

3. THE MAIN IS 12" OR LARGER.

\* LONG HYDRANT LATERALS OVER 20' MAY REQUIRE 2 VALVES \* HYDRANT BURIED LINE TO BE WITHIN 2" OF FINISH GRADE.

NO HYDRANT RISERS WILL BE PERMITTED ON NEWLY INSTALLED FIRE HYDRANTS.

### PVC PIPE DETAIL (REFER TO GENERAL MATERIAL SPECIFICATIONS FOR LIMITATIONS ON USE)

BURIED WATER LINE -36" (TYP.) WARNING TAPE CONTINUOUS BLUE INSULATED -10 GAUGE OR LARGER COPPER WIRE 12" (TYP.) PVC PIPE

RESTRAINT FOR BEND

MEGALUGS

. FITTINGS SHALL HAVE APPROPRIATE MECHANICAL THRUST RESTRAINT (WEDGE-

ACTION OR FULL CIRCUMFERENCE ARTICULTING WEDGE, EQUAL TO 1100

2. ALL COMPONENTS OF RESTRAINING MECHANISMS FOR PUSH-ON OR MECHANICAL

4. INSTALL FULL LENGTH JOINTS WITH TOTAL LENGTH EQUAL TO OR GREATER THAN SHOWN IN THE TABLE.

6. THROUGH RUN OF TEES OUTSIDE LIMITS OF RESTRAINED JOINTS FROM OTHER FITTINGS NEED NOT BE RESTRAINED UNLESS OTHERWISE INDICATED.

7. LENGTHS SHOWN IN THE TABLE HAVE BEEN CALCULATED IN ACCORDANCE WITH THE PROCEDURE OUTLINED IN "THRUST RESTRAINT DESIGN FOR DUCTILE IRON PIPE" SIXTH EDITION 2006 AS PUBLISHED BY DIPRA,

L BENDS ARE INSTALLED HORIZONTALLY

THE PIPE IS POLYWRAPPED

8. FOR PVC PIPE (4") MULTIPLY THE DUCTILE IRON FOOTAGE BY 1.1.

THE PIPE IS DUCTILE IRON PIPE

WITH THE FOLLOWING ASSUMPTIONS:

THE MAXIMUM TEST PRESSURE IS 150 P.S.I.

THE LAYING CONDITION IS TYPE 4 (BACKFILL COMPACTED TO TOP OF PIPE)

DIPRA SILT #1

JOINTS SHALL BE OF CORROSION RESISTANT MATERIAL OR SUITABLY PROTECTED

3. THE PIPE LENGTHS IMMEDIATELY ON EITHER SIDE OF A FITTING SHALL BE ADEQUATELY

5. WHERE TWO OR MORE FITTINGS ARE TOGETHER, USE FITTING WHICH YIELDS GREATEST

LENGTH RESTRAINED PIPE. ALL ROAD CROSSINGS SHALL BE RESTRAINED AT EACH JOINT.

DEPTH OF COVER IS ASSUMED TO BE 3 FEET FOR 12" AND SMALLER WATER MAINS DEPTH OF COVER IS ASSUMED TO BE 4 FEET FOR 16" AND LARGER WATER MAINS

9. ALL EXISTING PIPE SHALL BE RESTRAINED AS NEEDED AT EACH NEW CONNECTION.

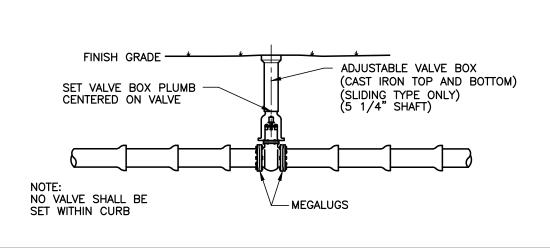
TOGETHER USING PROPRIETARY LOCKING GASKETS SUCH AS FIELD LOC OF

SERIES MEGALUG OR STAR-GRIP

AGAINST CORROSION.

FAST GRIP GASKETS.

VALVE SETTING RESTRAINT REQUIRED FOR INLINE VALVES (SEE RESTRAINED JOINT STANDARDS)



### MAXIMUM ALLOWABLE LEAKAGE

NOTE: 150 PSI TESTING, 2 HOUR LEAKAGE TESTS; MAXIMUM LEAKAGE ALLOWED PER 1000 LF OF PIPE.

	DUCTILE IRON PIPE	PVC PIPE
PIPE SIZE	GALLONS PER TWO (2) HOUR	GALLONS PER TWO (2) HOUR
2"	0.42	0.38
4"	0.72	0.65
6"	1.10	
8"	1.48	] \
10"	1.84	1 \
12"	2.20	] \ /
16"	2.94	] \ /
20"	3.68	N/A
24"	4.42	
30"	5.52	] / \
36"	6.62	] /
42"	7.73	] /
48"	8.83	1/

ANY PIPE LENGTH EQUAL TO OR LESS THEN 300' SHALL HAVE O LEAKAGE

- GENERAL SPECIFICATIONS IT SHALL BE THE RESPONSIBILITY OF THE DEVELOPER/CONTRACTOR TO ENSURE THAT ALL REQUIRED PERMITS ARE IN-HAND BEFORE BEGINNING ANY CONSTRUCTION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR LOCATING AND VERIFYING ALL EXISTING UTILITIES PRIOR TO CONSTRUCTION, AND FOR NOTIFYING THE VARIOUS UTILITY COMPANIES TO MAKE THE NECESSARY ARRANGEMENTS FOR ANY RELOCATION, TEMPORARY DISRUPTION OF SERVICE, OR CLARIFICATION OF ACTIVITY REGARDING SAID UTILITY. THE CONTRACTOR SHALL EXERCISE CAUTION WHEN CROSSING AN UNDERGROUND UTILITY, WHETHER SHOWN ON THESE PLANS OR FIELD LOCATED. CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTING ALL EXISTING STRUCTURES OR UTILITIES FROM CONSTRUCTION OF WATER FACILITIES.
  CONTRACTOR SHALL COORDINATE ANY NECESSARY ADJUSTMENTS AND COOPERATE WITH THE OWNER.
- ANY DELAY OR INCONVENIENCE OF THE VARIOUS UTILITIES SHALL BE INCIDENTAL TO THE CONTRACT AND NO EXTRA COMPENSATION WILL BE ALLOWED. ALL CONSTRUCTION OF THE WATER DISTRIBUTION SYSTEM SHALL MEET CURRENT ORLANDO UTILITIES COMMISSION SPECIFICATIONS FOR MATERIAL, INSTALLATION, AND DISINFECTION. ALL MATERIAL AND EQUIPMENT SHALL BE STORED, INSTALLED, AND USED IN
- ACCORDANCE WITH THE MANUFACTURERS RECOMMENDATIONS.
  ALL WATER FACILITIES WILL BE IN COMPLIANCE WITH THE CONDITIONS OF FDEP PERMIT FOR THE PROJECT.
- WATER MAIN SEPARATION FROM SEWER, STORM, AND RECLAIM LINES WILL BE IN COMPLIANCE WITH FDEP GUIDELINES. THE MINIMUM SEPARATION REQUIREMENTS FROM SANITARY FORCE MAINS, AT LEAST A 6' HORIZONTAL AND AN 12" VERTICAL SEPARATION AT CROSSINGS, MUST BE OBSERVED WITH NO STANDARD MITIGATION ALLOWED. A MINIMUM OF 18' SEPARATION FROM BUILDINGS AND STRUCTURES IS REQUIRED
- ALL CONDUIT TO BE A MINIMUM 2' FROM ALL WATER MAINS, AND APPURTENANCES. THE RECLAIMED WATER MAIN SHALL BE ON THE OPPOSITE SIDE OF THE STREET FROM THE POTABLE WATER MAIN WHERE PRACTICAL. IF IT IS NOT PRACTICAL, THE RECLAIMED WATER MAIN SHALL BE INSTALLED AT A MINIMUM HORIZONTAL DISTANCE OF 3 FEET (EDGE TO EDGE) FROM THE POTABLE WATER MAIN. RECLAIMED WATER MAINS SHALL BE BÉLOW POTABLE WATER MAINS WITH A
- MINIMUM VERTICAL SEPARATION OF 12". ALL HYDROSTATIC TESTING SHALL BE IN ACCORDANCE WITH ANSI/AWWA C600 FOR D.I. PIPE AND ANSI/AWWA C605 FOR PVC PIPE
- PROVISIONS ARE REQUIRED TO PROTECT EXISTING ACTIVE WATER MAINS FROM BACKFLOW CONTAMINATION DURING FILLING, FLUSHING, TESTING, AND MAINTAINING
- A PRESSURE IN THE NEW PIPING UNTIL A FDEP LETTER OF CLEARANCE IS OBTAINED. THE DISINFECTION OF WATER MAINS SHALL BE IN COMPLIANCE WITH "RULES OF THE DEPARTMENT OF ENVIRONMENTAL REGULATION - CHAPTER 62-555 "PERMITTING AND CONSTRUCTION OF PUBLIC WATER SYSTEMS." THE PROCEDURE WILL MEET AND EXCEED THE REQUIREMENTS SET FORTH IN ANSI/AWWA STANDARDS C651 CHLORINATION IS A 5 DAY PROCESS, STARTING ON MONDAYS UNLESS APPROVED BY O.U.C.
- CROSS CONNECTION CONTROL SHALL BE IN ACCORDANCE WITH RULES AND REQUIREMENTS OF THE DEPARTMENT OF ENVIRONMENTAL PROTECTION - CHAPTER 62-555 "PERMITTING AND CONSTRUCTION OF PUBLIC WATER SYSTEMS."
- BACKFLOW PREVENTERS SHALL BE LOCATED NO MORE THAN 10 FEET FROM POINT OF SERVICE UNLESS PRIOR APPROVAL HAS BEEN RECEIVED FROM OUC CROSS CONNECTION CONTROL DEPT.
- ALL PIPE WITH DIAMETER OF 12" OR LESS SHALL HAVE A MINIMUM BURIAL DEPTH OF 36" AND NOT TO EXCEED 48" DEEP UNLESS APPROVED BY OUC. ALL PIPE WITH DIAMETER OF 16" OR GREATER SHALL HAVE A MINIMUM BURIAL DEPTH OF 48" AND
- A PRE-CONSTRUCTION MEETING FOR THE INSTALLATION OF WATER FACILITIES IS REQUIRED. CONTACT: OUC WATER CONSTRUCTION 407-434-2535.
- ON NEWLY INSTALLED PIPE, ONLY ONE (1) REPAIR EVERY EIGHT—HUNDRED (800') FEET WILL BE PERMITTED. IF MORE THAN ONE REPAIR IS NECESSARY, THE PIPE WILL NEED TO BE REINSTALLED PER OUC STANDARDS. REPAIRS ARE TO BE MADE USING A MECHANICALLY RESTRAINED SLEEVE. BELL CLAMPS ARE NOT TO BE USED. ANY OTHER METHODS MUST BE APPROVED BY THE OUC ENGINEER.
- ALL TAPS ON ACTIVE WATER MAINS SHALL BE PERFORMED BY AN OUC APPROVED TAPPING CONTRACTOR

NOT TO EXCEED 60" DEEP UNLESS APPROVED BY OUC.

- ALL OUC OWNED SERVICES ASSEMBLIES SHALL HAVE A MINIMUM OF 10' SEPARATION FROM STRUCTURES AND TREES.
- THE CONNECTION OF GROUNDING SYSTEMS FOR NEW OR RENOVATION CONSTRUCTION TO OUC WATER SYSTEM FACILITIES IS PROHIBITED.

### GENERAL MATERIAL SPECIFICATIONS MATERIAL USED IN THE CONSTRUCTION OF THE WATER DISTRIBUTION SYSTEM SHALL

ADHERE TO THE REQUIREMENTS OUTLINED IN THE OUC WATER DISTRIBUTION'S SPECIFICATION STANDARDS MANUAL. THE FOLLOWING INFORMATION IS TO PROVIDE GENERAL GUIDANCE IN THE PREPARATION OF CONSTRUCTION PLANS AND SPECIFICATIONS, AND IN NO WAY LIMITS OUC'S RIGHTS TO APPROVE OR DISAPPROVE PLANS, SPECIFICATIONS OF INSTALLATIONS. MOST CENTRAL FLORIDA UTILITY SUPPLY COMPANIES HAVE A COPY OF OUC'S SPECIFICATION STANDARDS MANUAL.

- 1. THE TYPICAL O.U.C. DISTRIBUTION SYSTEM PIPE SIZES AND MATERIAL USED ARE: TWO INCH (2") WATER MAINS SHALL BE ASTM 2241 CLASS 200 SDR21 POLYVINYL CHLORIDE (PVC) PIPE.
- TWO INCH (2") WATER MAIN UNDER ROADWAY REQUIRES 2" RESTRAINT JOINT SDR 17/CLASS 250 PIPE FOUR INCH (4") WATER MAINS SHALL BE EITHER PRESSURE CLASS 350 DUCTILE IRON (D.I.) IN ACCORDANCE WITH ANSI/AWWA CI50/A21.50-96 AND
- SIX INCH (6") THROUGH TWENTY FOUR INCH (24") WATER MAINS SHALL BE PRESSURE CLASS 350 D.I. PIPE IN ACCORDANCE WITH ANSI/AWWA

ANSI/AWWA C151/A21.51 OR, AS CONDITIONS WARRANT, C900 SDR18

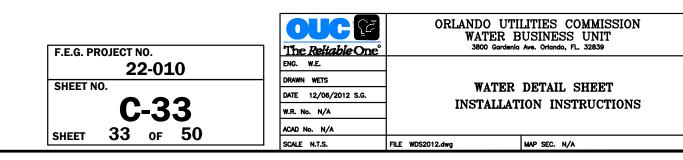
- C150/A21.50 AND ANSI/AWWA C151/A21.51.
- THIRTY INCH (30") AND LARGER WATER MAINS SHALL BE PRESSURE CLASS 250 D.I. PIPE IN ACCORDANCE WITH ANSI/AWWA C150/A21.50 AND ANSI/AWWA C151/A21.51.

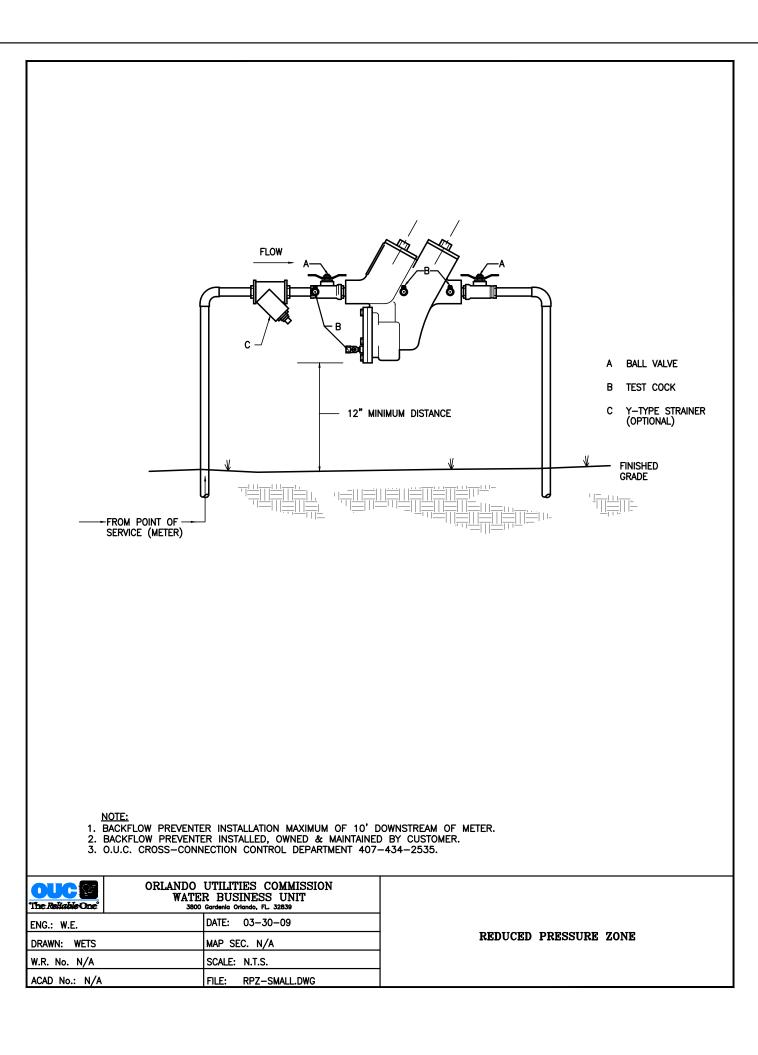
### 1. THE USE OF 2" AND/OR 4" PVC PIPE MUST BE APPROVED BY O.U.C. WATER ENGINEERING.

- 2. PVC PIPE MUST BE BLUE IN COLOR OR HAVING CONTINUOUS BLUE MARKINGS
- TO CONFORM TO AWWA COLORS WITH NSF LOGO FOR POTABLE WATER USE. 3. DUCTILE IRON POTABLE WATER MAINS REQUIRE SPECIAL IDENTIFICATION. SUCH IDENTIFICATION SHALL INCLUDE A MINIMUM OF 4 CONTINUOUS STRIPES SPACED AT NO MORE THAN 90° AROUND THE PIPE .THE STRIPE SHALL BE MINIMUM TWO INCHES IN WIDTH FOR PIPE 4-12 INCH IN DIAMETER AND FOUR (4) INCHES IN WIDTH FOR LARGER PIPE, AND SHALL BE BLUE IN COLOR. BACKFILL SHALL NOT BE PLACED FOR AT LEAST 30 MINUTES FOLLOWING PAINT APPLICATION.
- ALL PIPE FITTINGS 4" UP TO 30" SHALL BE CEMENT OR EPOXY LINED (CLASS 350) AWWA CI53 "COMPACT" DUCTILE IRON, WITH MECHANICAL JOINT ENDS. ALL PIPE FITTINGS 30" OR LARGER SHALL BE CEMENT LINED (CLASS 250) DUCTILE IRON, WITH MECHANICAL
- 3. A SERVICE MATERIAL FOR AND 1" SHALL INCLUDE SOFT ANNEALED TYPE-K
- COPPER TUBING. B SERVICE MATERIAL FOR 2" SHORT SIDE SERVICES SHALL INCLUDE 2" CTS TYPE-K HARD COPPER PIPE. SERVICE MATERIAL FOR 2" LONG SIDE SERVICES SHALL INCLUDE 2" RESTRAINED JOINT (SDR 17/CLASS 250) PVC PIPE (IPS-O.D.).
- SERVICE MATERIAL (CORP. STOPS, CURB STOPS, ETC.) FOR 1", AND 2" SERVICES SHALL BE BRASS COMPRESSION FITTINGS IN ACCORDANCE W/AWWA C800. FLARED FITTINGS ARE ACCEPTABLE UNDER CONTROLLED CONDITIONS. AN AWWA (CC) THREADING IS REQUIRED ON ALL 1" CORPORATION STOPS USED WITH DIRECT PIPE TAPPING ON DUCTILE IRON PIPE OR WITH SERVICE CLAMPS ON PVC PIPE. INSTALLATION OF 2" SERVICES REQUIRE SERVICE CLAMPS AND TO ACCOMMODATE 1 1/2" OR 2" METERS, 2" BALL ANGLE METER VALVES (CTS X FLANGE) WITH SLOTTED HOLES ON THE FLANGE FACE ARE REQUIRED. PADLOCK WINGS MUST BE INCLUDED ON EACH CURB STOP OR BALL METER VALVE.
- 5. FIRE HYDRANTS SHALL BE TRAFFIC DRY BARREL TYPE AND MEET OUC SPECIFICATIONS.
- ALL VALVES 4" THROUGH 12" SHALL BE RESILIENT SEAT/WEDGE GATE VALVES WITH EPOXY COATING INTERNALLY/EXTERNALLY AND CONFORM TO ANSI/AWWA STANDARD C509 OR LATEST REVISION. ALL VALVES 16" AND LARGER SHALL BE BUTTERFLY, HAVE EPOXY COATING AND CONFORM TO ANSI/AWWA C504 OR LATEST REVISION.
- 7. ALL VALVE BOXES SHALL BE CAST IRON SLIDING TYPE ONLY.
- 8. FOR VALVES OVER 5' DEEP A PIECE OF 6" SCH 40 BLUE PVC PIPE SHALL BE INSTALLED BETWEEN THE VALVE BOX TOP AND BOTTOM.

### SPECIAL NOTICE:

OUC'S SPECIFICATIONS OFTEN ADD TO THE MANUFACTURER'S SPECIFICATIONS. IF YOU HAVE ANY QUESTIONS REGARDING MATERIAL SPECIFICATIONS OR CONSTRUCTION STANDARD SPECIFICATIONS, PLEASE CONTACT OUC'S WATER DELIVERY DEPARTMENT AT 407-434-2535 OR VISIT OUR WED SITE AT http://www.ouc.com/en/commercial/water/manuals\_reports.aspx





### OUC Water Engineering Notes (Rev. 10/30/13):

The developer/customer shall accomplish all water main and service work through the point of service/control valve and water meters and deed to OUC. OUC will own and operate up to and including the OUC point of service/control valve and meters only. The required work shall be performed per current OUC guidelines, OUC Water Distribution Standard Specifications and OUC Water Distribution Material Specifications and water detail sheet under OUC inspection. The developer/customer must contact OUC Inspection at 407-649-4428 to schedule a pre-construction meeting prior to any water construction.

A minimum 4' clearance (including landscaping) must be maintained around meter assembly.

Domestic/fire master meter assembly will be provided by OUC at the developer/customers expense and shall be installed by the developer/customer. After payment, allow 30 days for receipt of the meter by OUC. The developer/customer shall arrange pickup from the OUC warehouse facility through the OUC inspector.

Contact OUC Inspection department for approved material and construction specifications pertaining to the installation of ductile iron pipe via directional or jack and bore method.

The developer/customer shall field verify the horizontal and vertical location of existing OUC water facilities before commencement of construction.

### For water wet taps, use only OUC approved tapping contractors:

Action Industries, Inc. 352-732-6941 or 800-216-4464
Central Florida Tapping and Construction Services, Inc. 407-834-8271
Mac Tapping, Inc. 407-468-0557
Rangeline Tapping Services, Inc. 800-346-5971
TDW Services, Inc. 407-843-2800
T & R Tapping Service, Inc. 407-339-3685
EA Services 407-880-6786

### Easements:

All on-site OUC water facilities (mains, services, meters, and fire hydrants) shall be located within a utility easement in accordance with current OUC private property guidelines. The developer is to furnish all necessary information, including legal description(s) to prepare and document this easement. Water metes and fire services will not be activated until the final easement(s) have been received and approved by OUC. Any questions or comments please contact OUC Property and Right of Way department at 407-434-2158.

### Connection to Existing valve

Contractor to verify location, condition and pressure test existing valve prior to connection. If valve does not hold required pressure test additional valve will be required at developers/contractor's expense.

### OUC Backflow Prevention Requirements:

Backflow devices will be owned and maintained by customer unless otherwise noted. Any questions contact OUC Backflow Prevention Department at 407-649-4428.

### Domestic and Irrigation

The Developer/Customer is responsible for the required Reduced Pressure Backflow Preventer. Residential domestic backflow preventers are required in areas where reclaimed or other water supply, i.e. well, is provided to the site.

### Fire Line:

The Developer/Customer is responsible for the required Reduced Pressure Detector Check Assembly w/Monitoring meter for backflow prevention.

### As - Built Drawings

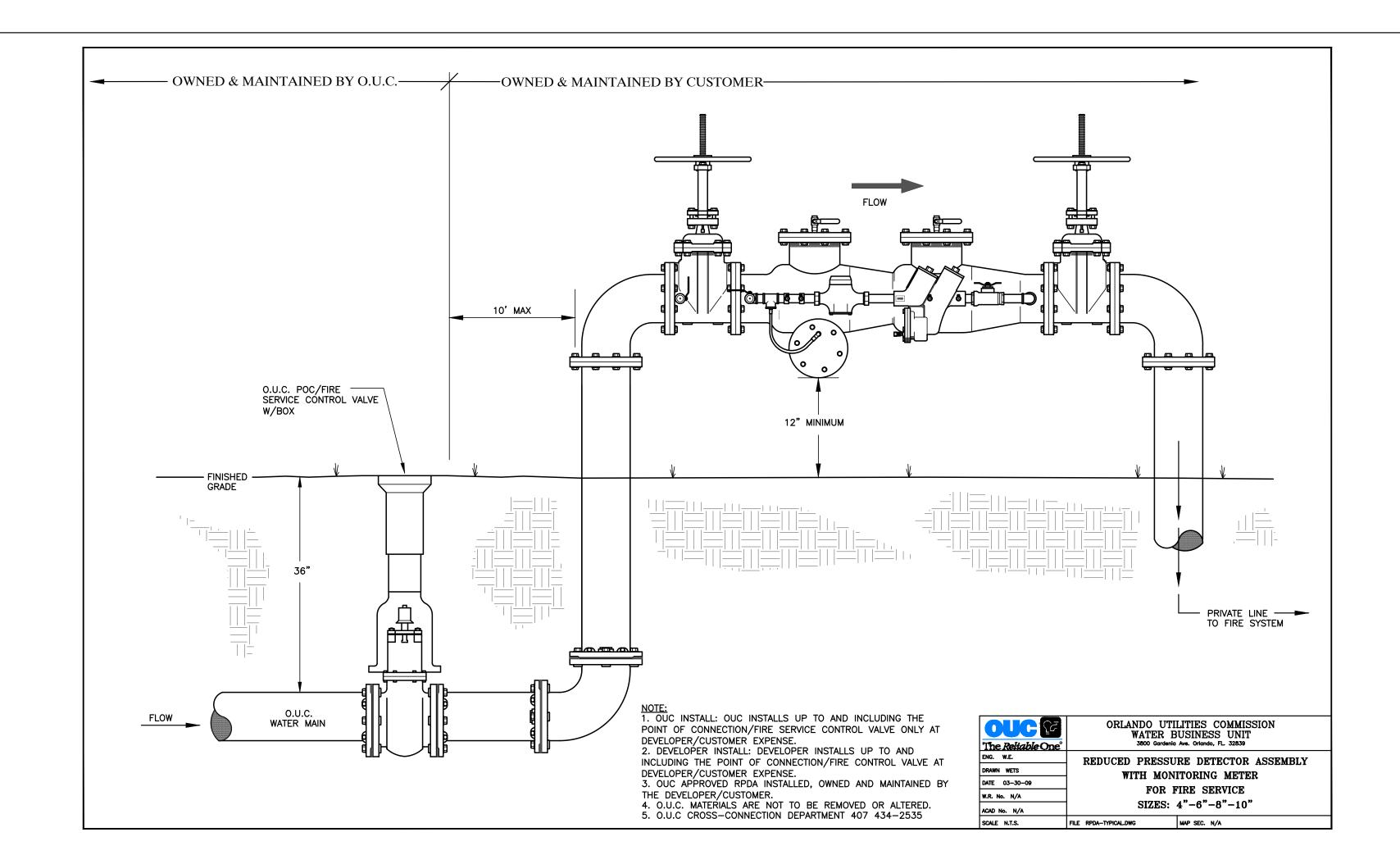
The customer/developer shall provide vertical and horizontal as-built information relative to all constructed utilities and structures. The submittal will include a signed and sealed drawing and a CD with the as built information in AutoCAD 2004 format.

State Planes Coordinates, East Florida, NAD 1983-90 is the preferred coordinate system. If a project coordinate system is used, all drawings will be based on this system and existing features i.e. edge of pavement, road intersections, buildings must be referenced to aid in the locating of project infrastructure in OUC's Geographic Information System. If no existing features are shown at least 2 State Plane Coordinate points must be surveyed and bench marked.

As-Built information for the water system shall include, but not be limited to, the following:

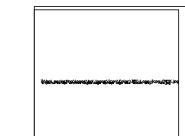
- 1. Location of all valves, fittings, hydrants, and services.
- 2. Location of the water main tied horizontally to the back of curb or edge of pavement.
- Certification as to the system meeting the minimum cover requirements.
- Horizontal and vertical data for any construction which deviates from the approved engineering plans.

The contractor shall cut "W" in the top curb of each water service and a "V" at all valve locations. Cut W's and V's shall be highlighted with blue paint.



F.E.G. PROJECT NO.
22-010
SHEET NO.

C-34
SHEET 34 OF 50



# BARNEY'S PUMPS, INC.

PO BOX 3529, LAKELAND, FL 33802 PHONE: (863) 665-8500 FAX: (863) 666-3858

# DUPLEX FIBERGLASS GRINDER LIFT STATION

### **GENERAL NOTES**

PUMPS SHALL BE OF THE SUBMERSIBLE TYPE (MANUFACTURED BY HYDROMATIC OR HOMA). EACH PUMP SHALL BE MOUNTED ON A Ø2\* RAIL SYSTEM. THE RAIL SYSTEM SHALL BE SELF ENGAGING RESULTING IN A LEAKPROOF COUPLING. THE RAIL SYSTEM SHALL INCLUDE THE BASE ELBOW, DISCHARGE FLANGE ASSEMBLY, 316SS GUIDE RAILS, 316SS UPPER GUIDE BRACKET, 316SS LIFTING BAIL AND CABLE, AND A SIX-HOOK 316SS CABLE HOLDER. THE RAIL SYSTEM SHALL BE MOUNTED AND PRE-PIPED BY THE PUMP SUPPLIER.

PUMP CONSTRUCTION
THE PUMP VOLUTE, MOTOR AND SEAL HOUSING SHALL BE CONSTRUCTED OF CAST IRON. ALL EXTERNAL FASTENERS SHALL BE SERIES 300 STAINLESS STEEL. THE PUMP SHAFT SHALL BE CONSTRUCTED OF SERIES 416 STAINLESS STEEL.

IMPELLER
THE IMPELLER SHALL BE OF MULTI-VANE, SEMI-OPEN CONSTRUCTION. THE IMPELLER SHALL BE STATICALLY AND HYDRAULICALLY

CUTTERS

A CUTTER ASSEMBLY SHALL BE MOUNTED ON THE SUCTION SIDE OF THE PUMP WITH DIRECT DISCHARGE INTO THE PUMP IMPELLER. THE GRINDER SHALL BE CAPABLE OF GRINDING MATERIALS FOUND IN NORMAL, DOMESTIC SEWAGE. BOTH THE STATIONARY AND ROTATING CUTTERS SHALL BE CONSTRUCTED OF HARDENED STEEL.

MOTOR
THE MOTOR SHALL BE MOUNTED IN A SEALED, SUBMERSIBLE TYPE HOUSING. THE STATOR SHALL BE SECURELY HELD IN PLACE WITH A REMOVABLE END RING AND THREADED FASTENERS FOR EASE OF REMOVAL WITHOUT THE USE OF HEAT OR A PRESS. THE MOTOR WILL HAVE TWO HEAVY-DUTY BALL BEARINGS; ONE UPPER (RADIAL) AND ONE LOWER (THRUST), TO SUPPORT THE SHAFT. THE MOTOR SHALL BE EQUIPPED WITH A WINDING THERMOSTAT THAT IS WIRED TO SHUT THE MOTOR OFF IN CASE OF MOTOR OVERHEATING.

SEAL CHAMBER
THE PUMP SHALL HAVE TWO MECHANICAL SEALS, MOUNTED IN TANDEM WITH AN OIL CHAMBER BETWEEN THE SEALS. THE PUMP SHALL

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THE PUMP SHALL HAVE TWO MECHANICAL SEALS, MOUNTED IN TANDEM WITH AN OIL CHAMBER BETWEEN THE SEALS. BE EQUIPPED WITH A SEAL LEAK DETECTION PROBE AND WARNING SYSTEM BY USING A SEAL FAILURE SENSOR INSTALLED IN THE SEAL

THE PUMP SUPPLIER SHALL PROVIDE THE WET WELL. THIS GLASS FIBER-REINFORCED POLYESTER BASIN SHALL BE CONSTRUCTED OF A COMMERCIAL GRADE OF GLASS FIBER AND SHALL BE PROVIDED WITH FILLET AND AN ANTI-FLOTATION RING WITH A MINIMUM DIAMETER OF THREE INCHES LARGER THAN THE BASIN DIAMETER. THE RAIL SYSTEM, INTERNAL PIPING AND DISCHARGE CONNECTIONS SHALL BE PRE-INSTALLED BY THE PUMP SUPPLIER. WET WELL SHALL MEET ASTM STANDARD NO. D3753.

### HATCH COVER

THE HATCH COVER SHALL BE 2/3 HINGED TO ALLOW FOR MAXIMUM ACCESS TO THE WET WELL. THE HATCH COVER SHALL BE ALUMINUM WITH STAINLESS STEEL HARDWARE, RATED FOR 300 PSF OR GREATER. THE HATCH COVER SHALL INCLUDE A SINGLE OR DUAL DOOR OF DIMENSIONS SPECIFIED BY THE PUMP MANUFACTURER FOR PROPER PUMP CLEARANCE. THE COVER SHALL BE MANUFACTURED BY USF FABRICATION. OR EQUAL.

### VALVE BOX

THE VALVE BOX IS FIBERGLASS WITH ALUMINUM LOCKABLE COVER. STANDARD SIZE VALVE BOX IS 32"x30"x25".

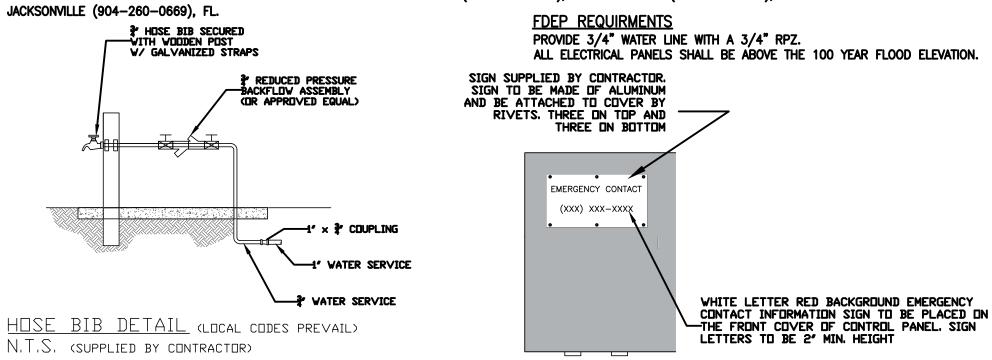
VALVES SHALL BE SEWAGE SWING CHECK WITH CLEAN-OUT PORTS AND BRASS GATE VALVES. <u>FLOATS</u> FLOATS SHALL BE ANCHOR SCIENTIFIC ROTO—FLOATS OR EQUAL.

<u>CONTROLS</u>
THE CONTROL PANEL SHALL BE UL508 LISTED. ENCLOSURE SHALL BE PROVIDED IN 4X POLYCARBONATE. THE PANEL SHALL INCLUDE AN ALTERNATING CONTROL SCHEME (DUPLEX AND ABOVE), MAIN CIRCUIT BREAKER, GENERATOR RECEPTACLE, HIGH LEVEL ALARM LIGHT AND HORN, ELAPSED TIME METERS, VOLTAGE OR PHASE MONITOR, SEAL FAILURE AND OVERLOAD SENSORS. THE LIGHTNING ARRESTOR SHALL BE PROVIDED BY BARNEY'S PUMPS AND INSTALLED BY CONTRACTOR.

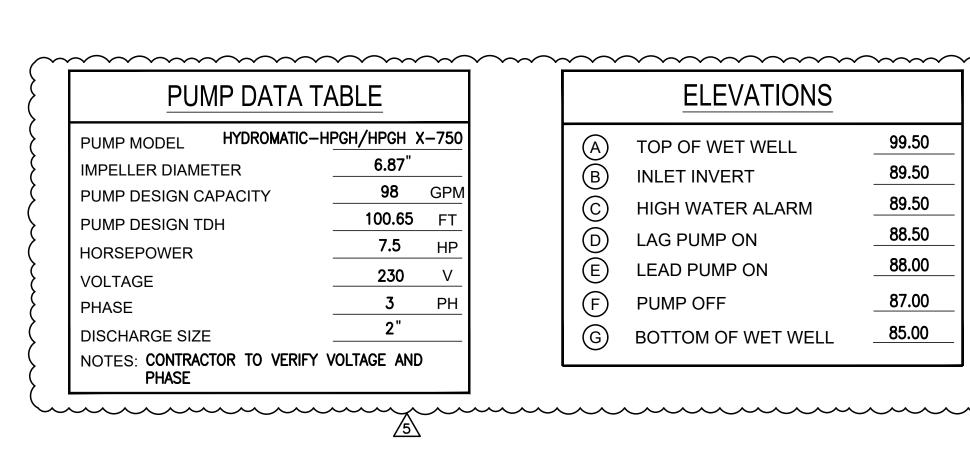
ALL ELECTRICAL WORK SHALL BE IN ACCORDANCE WITH LOCAL CODES.

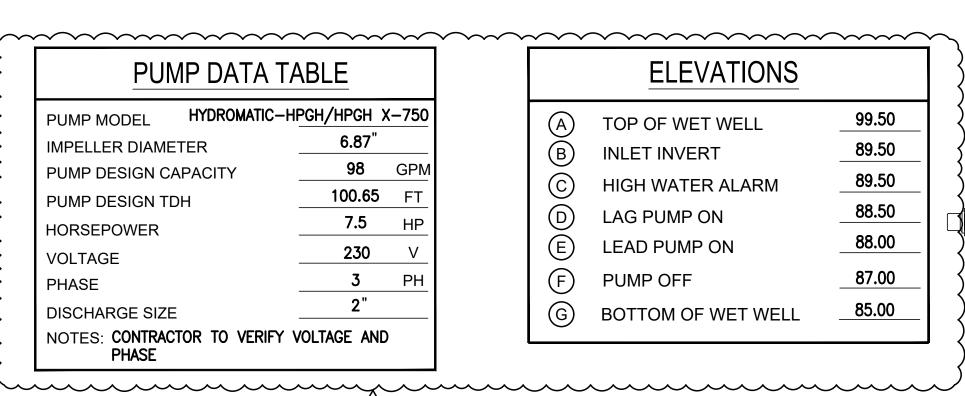
### SUPPLIER PUMP SUPPLIER SHALL PROVIDE SUBMERSIBLE PUMPS, SLIDE RAIL ASSEMBLIES, FIBERGLASS BASIN AND VALVE BOX, CONTROL PANEL, THE COMPLETE PACKAGE FLOAT SWITCHES, ALUMINUM HATCHES AND ACCESSORIES TO INSURE PROPER OPERATIONS AND WARRANTY. THE COMPLETE PACKAGE PUMPING STATION SHALL HAVE PUMP BASES, RAIL ASSEMBLIES, AND DISCHARGE PIPING ASSEMBLED BY BARNEY'S PUMPS INC. READY FOR FIELD INSTALLATION.

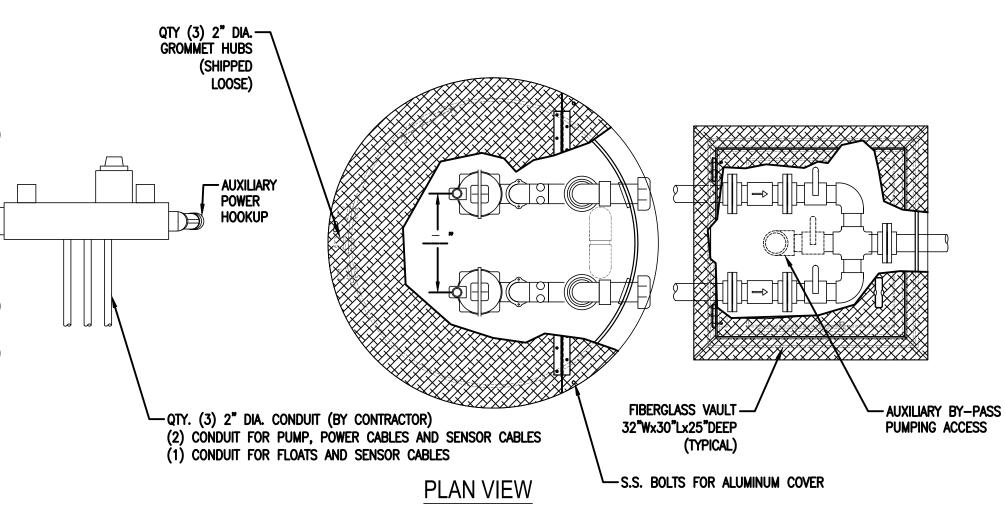
PUMP PACKAGE SHALL BE SUPPLIED BY BARNEY'S PUMPS INC. IN LAKELAND (863-665-8500), CORAL SPRINGS (954-346-0669), OR



CONTRACTOR IS TO PROVIDE AND POST AN UNOBSTRUCTED SIGN (12"X12" WITH 2" LETTERING) MADE OF DURABLE WEATHER RESISTANT MATERIAL AT A LOCATION VISIBLE TO THE PUBLIC WITH A TELEPHONE NUMBER FOR A POINT OF CONTACT IN CASE OF EMERGENCY AS







- ALUMINUM ACCESS

HASP, S.S.

LOADING

-S.S. GUIDE

RAIL BRACKETS

**COVER WITH LOCKING** 

HARDWARE-300LBS/FT

CONCRETE MOUNTING POST(S)

(BY CONTRACTOR)

-CONTROL PANEL WITH

LOCKING PROVISION

-PUSH TO SILENCE

(BY CONTRACTOR)

(BY OTHERS)

(INSTALL PER

LOCAL CODES)

A TOP OF WET WELL

 $\_8$  " DIA. INLET GROMMET —

24" MIN.

APPROVED BY

JAA

S.S. HOOK —

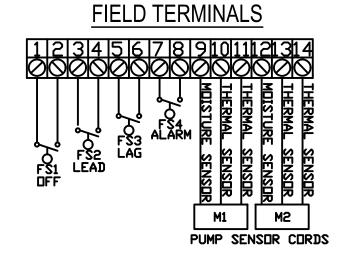
HOLDER

— SEAL—OFFS

LIGHT

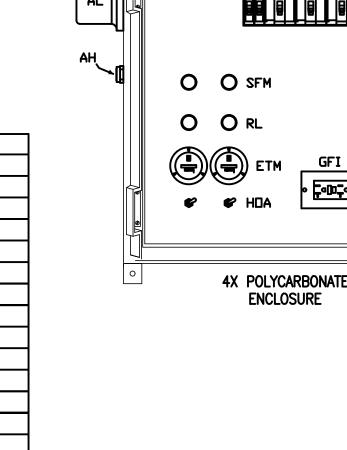
AND SERVICE DISCONNECT WITH LIGHTNING ARRESTOR PER LOCAL

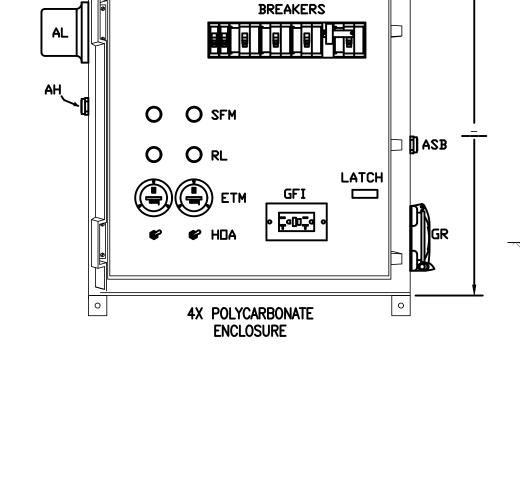
WET WELL/VALVE BOX LAYOUT



### **LEGEND**

ABBR.	DESCRIPTION
ENC	ENCLOSURE, POLYCARBONATE, NEMA 4X
MCB	MAIN CIRCUIT BREAKER
ECB	EMERGENCY CIRCUIT BREAKER
PCB1,2	PUMP CIRCUIT BREAKER
CCB	CONTROL CIRCUIT BREAKER
GFICB	GFI CIRCUIT BREAKER
GR	GENERATOR RECEPTACLE
GFI	GFI RECEPTACLE
AL	ALARM LIGHT
AH	ALARM HORN
ASB	ALARM SILENCE BUTTON
SFM	SEAL FAIL MODULE
HOA	HAND OFF AUTO SWITCH
RL	RUN LIGHT, GREEN
ETM	ELAPSED TIME METER





**ENCLOSURE AND DEADFRONT LAYOUT (TYPICAL)** 

(OUTER DOOR REMOVED)

METER BY OTHERS

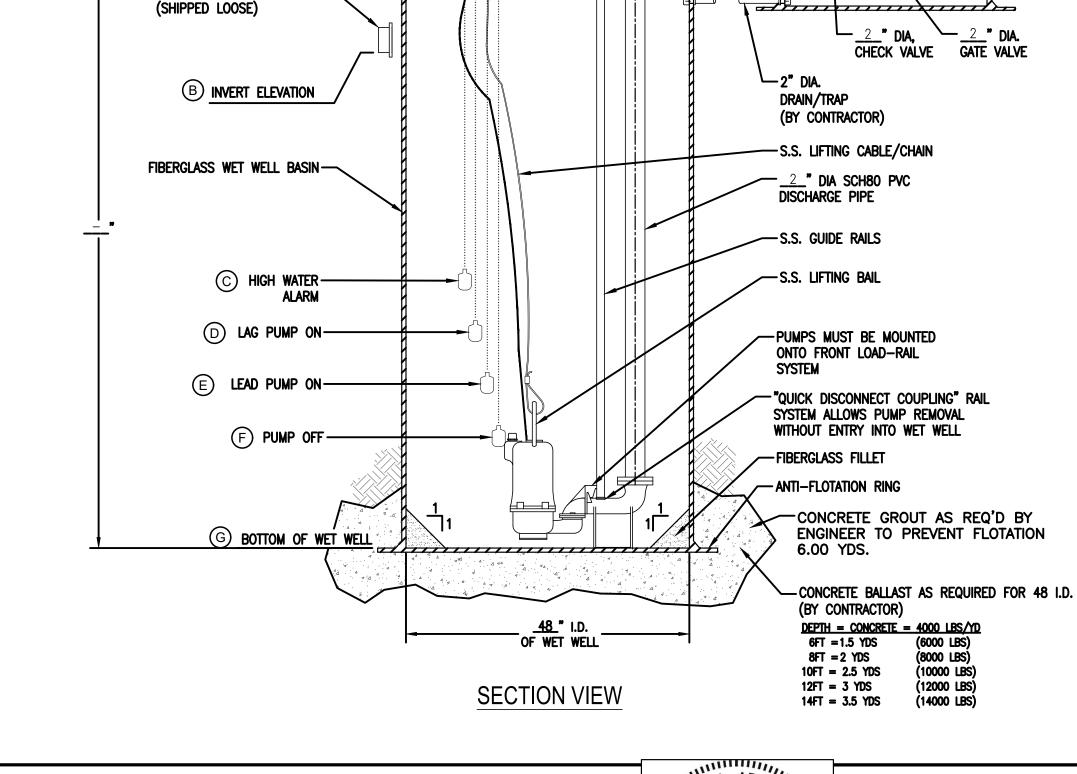
### PANEL NOTES

### ALL PANELS SHALL BE UL LISTED AND CONFORM TO FLORIDA DEP 62-604

- 1) GENERATOR RECEPTACLE WITH INTERLOCK FOR EMERGENCY POWER CONNECTION. 2) SURGE AND LIGHTNING PROTECTION SHALL BE PROVIDED BY CONTRACTOR AND MOUNTED EXTERNAL TO THE CONTROL PANEL.
- 3) PHASE OR VOLTAGE MONITOR SHALL BE PROVIDED IN CONTROL PANEL. 4) ALL PANELS, WET WELL, VALVE BOX, AND ACCESS DOORS SHALL HAVE LOCKABLE MECHANISMS.
- CONTRACTOR TO PROVIDE KEYED LOCKS. 5) POST UNOBSTRUCTED SIGN MADE OF DURABLE WEATHER RESISTANT MATERIAL WITH THE FOLLOWING:
- PUBLIC NOTICE: IN CASE OF EMERGENCY CONTACT:
- 6) THE CONTROL PANEL SHALL BE SUITABLY INSTALLED TO PREVENT SETTLING OR TIPPING.
- 7) FLOAT SWITCHES SHALL BE UL LISTED. 8) SHAFT SEAL FAIL DETECTION

### **SIGNAGE**

A SIGN SHALL BE POSTED AT THE LIFT STATION INDICATING AN EMERGENCY CONTACT NAME AND PHONE NUMBER.



				JAA
08/14/2023	3	REVISED PER ORANGE COUNTY FIRE DEPT. DATED 08/07/2023	VP/MS	JAA
08/15/2023	4	REVISED PER SJRWMD COMMENTS DATED 07/24/2023	VP/MS	JAA
08/16/2023	5	REVISED PER OCU COMMENTS DATED 07/27/2023	VP/MS	JAA
08/17/2023	6	REVISED PER CITY OF BELLE ISLE COMMENTS DATED 08/04/2023	VP/MS	JAA
08/17/2023	$\overline{\mathcal{A}}$	REVISED PER FDOT COMMENTS DATED 07/11/2023	VP/MS	JAA
10/09/2023	8	REVISED PER CITY COMMENTS DATED 10/04/2023	VP/MS	JAA
DATE		REVISIONS	BY	CHECKED

CORNERSTONE CHARTER ACADEMY CONSTRUCTION PLANS CITY OF BELLE ISLE, FLORIDA



5127 S. Orange Avenue, Suite 200 Orlando, FL 32809 Phone: 407-895-0324 Fax: 407-895-0325

www.feg-inc.us

LIFTSTATION -LS-1 DETAILS DESIGNED BY DRAWN BY CHECKED BY

M. ABI FLORIDA ENGINEERING GROUP, IN CERTIFICATE NO. EB-0006995 22-010 No 45128 N.T.S. JUNE 23, 2023 STATE OF JEAN MOABIAQUE, P.E. LICENSE NO 45128 50 неет 35 оғ

ELECTRONICALLY SIGNED AND SEALED BY (ENGINEER), P.E. ON (DATE) USING A SHA-1 AUTHENTICATION CODE. PRINTED COPIES OF THIS DOCUMENT ARE NOT CONSIDERED SIGNED AND SEALED AND THE SHA AUTHENTICATION CODE MUST BE

-2" DIA. VENT W/ S.S. BUG

DISCHARGE

COUPLING

CONNECTION

-WET WELL/VALVE BOX

- ALUMINUM

HASP

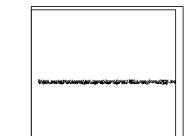
**ACCESS COVER** 

WITH LOCKING

(BY CONTRACTOR)

COPIES. 22-010\_LiftStationDetails-LS1.dwg

VERIFIED ON ANY ELECTRONIC



# BARNEY'S PUMPS, INC.

PO BOX 3529, LAKELAND, FL 33802 PHONE: (863) 665-8500 FAX: (863) 666-3858

# DUPLEX FIBERGLASS GRINDER LIFT STATION

### **GENERAL NOTES**

PUMPS SHALL BE OF THE SUBMERSIBLE TYPE (MANUFACTURED BY HYDROMATIC OR HOMA). EACH PUMP SHALL BE MOUNTED ON A Ø2\* RAIL SYSTEM. THE RAIL SYSTEM SHALL BE SELF ENGAGING RESULTING IN A LEAKPROOF COUPLING. THE RAIL SYSTEM SHALL INCLUDE THE BASE ELBOW, DISCHARGE FLANGE ASSEMBLY, 316SS GUIDE RAILS, 316SS UPPER GUIDE BRACKET, 316SS LIFTING BAIL AND CABLE, AND A SIX-HOOK 316SS CABLE HOLDER. THE RAIL SYSTEM SHALL BE MOUNTED AND PRE-PIPED BY THE PUMP SUPPLIER.

PUMP CONSTRUCTION
THE PUMP VOLUTE, MOTOR AND SEAL HOUSING SHALL BE CONSTRUCTED OF CAST IRON. ALL EXTERNAL FASTENERS SHALL BE SERIES 300 STAINLESS STEEL. THE PUMP SHAFT SHALL BE CONSTRUCTED OF SERIES 416 STAINLESS STEEL.

IMPELLER
THE IMPELLER SHALL BE OF MULTI-VANE, SEMI-OPEN CONSTRUCTION. THE IMPELLER SHALL BE STATICALLY AND HYDRAULICALLY

CUTTERS

A CUTTER ASSEMBLY SHALL BE MOUNTED ON THE SUCTION SIDE OF THE PUMP WITH DIRECT DISCHARGE INTO THE PUMP IMPELLER. THE GRINDER SHALL BE CAPABLE OF GRINDING MATERIALS FOUND IN NORMAL, DOMESTIC SEWAGE. BOTH THE STATIONARY AND ROTATING CUTTERS SHALL BE CONSTRUCTED OF HARDENED STEEL.

MOTOR
THE MOTOR SHALL BE MOUNTED IN A SEALED, SUBMERSIBLE TYPE HOUSING. THE STATOR SHALL BE SECURELY HELD IN PLACE WITH A REMOVABLE END RING AND THREADED FASTENERS FOR EASE OF REMOVAL WITHOUT THE USE OF HEAT OR A PRESS. THE MOTOR WILL HAVE TWO HEAVY-DUTY BALL BEARINGS; ONE UPPER (RADIAL) AND ONE LOWER (THRUST), TO SUPPORT THE SHAFT. THE MOTOR SHALL BE EQUIPPED WITH A WINDING THERMOSTAT THAT IS WIRED TO SHUT THE MOTOR OFF IN CASE OF MOTOR OVERHEATING.

SEAL CHAMBER
THE PUMP SHALL HAVE TWO MECHANICAL SEALS, MOUNTED IN TANDEM WITH AN OIL CHAMBER BETWEEN THE SEALS. THE PUMP SHALL

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THE PUMP SHALL HAVE TWO MECHANICAL SEALS, MOUNTED IN TANDEM WITH AN OIL CHAMBER BETWEEN THE SEALS. BE EQUIPPED WITH A SEAL LEAK DETECTION PROBE AND WARNING SYSTEM BY USING A SEAL FAILURE SENSOR INSTALLED IN THE SEAL

THE PUMP SUPPLIER SHALL PROVIDE THE WET WELL. THIS GLASS FIBER-REINFORCED POLYESTER BASIN SHALL BE CONSTRUCTED OF A COMMERCIAL GRADE OF GLASS FIBER AND SHALL BE PROVIDED WITH FILLET AND AN ANTI-FLOTATION RING WITH A MINIMUM DIAMETER OF THREE INCHES LARGER THAN THE BASIN DIAMETER. THE RAIL SYSTEM, INTERNAL PIPING AND DISCHARGE CONNECTIONS SHALL BE PRE-INSTALLED BY THE PUMP SUPPLIER. WET WELL SHALL MEET ASTM STANDARD NO. D3753.

### HATCH COVER

THE HATCH COVER SHALL BE 2/3 HINGED TO ALLOW FOR MAXIMUM ACCESS TO THE WET WELL. THE HATCH COVER SHALL BE ALUMINUM WITH STAINLESS STEEL HARDWARE, RATED FOR 300 PSF OR GREATER. THE HATCH COVER SHALL INCLUDE A SINGLE OR DUAL DOOR OF DIMENSIONS SPECIFIED BY THE PUMP MANUFACTURER FOR PROPER PUMP CLEARANCE. THE COVER SHALL BE MANUFACTURED BY USF FABRICATION, OR EQUAL.

### VALVE BOX

THE VALVE BOX IS FIBERGLASS WITH ALUMINUM LOCKABLE COVER. STANDARD SIZE VALVE BOX IS 32"x30"x25".

VALVES SHALL BE SEWAGE SWING CHECK WITH CLEAN-OUT PORTS AND BRASS GATE VALVES.

### FLOATS SHALL BE ANCHOR SCIENTIFIC ROTO-FLOATS OR EQUAL.

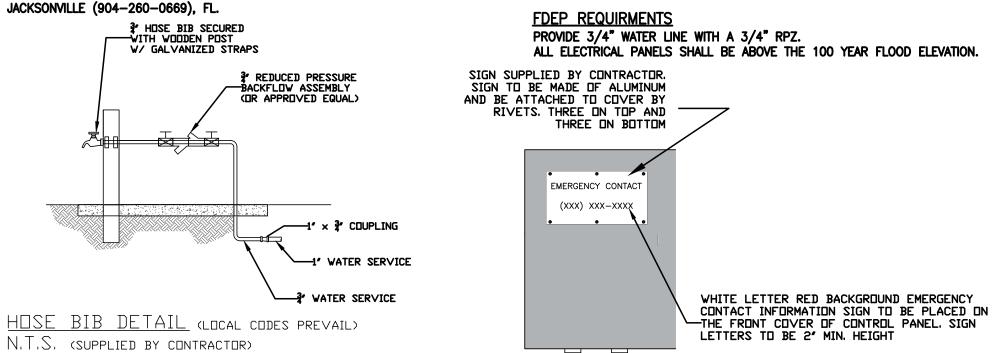
<u>CONTROLS</u>
THE CONTROL PANEL SHALL BE UL508 LISTED. ENCLOSURE SHALL BE PROVIDED IN 4X POLYCARBONATE. THE PANEL SHALL INCLUDE AN ALTERNATING CONTROL SCHEME (DUPLEX AND ABOVE), MAIN CIRCUIT BREAKER, GENERATOR RECEPTACLE, HIGH LEVEL ALARM LIGHT AND HORN, ELAPSED TIME METERS, VOLTAGE OR PHASE MONITOR, SEAL FAILURE AND OVERLOAD SENSORS. THE LIGHTNING ARRESTOR

ALL ELECTRICAL WORK SHALL BE IN ACCORDANCE WITH LOCAL CODES.

SHALL BE PROVIDED BY BARNEY'S PUMPS AND INSTALLED BY CONTRACTOR.

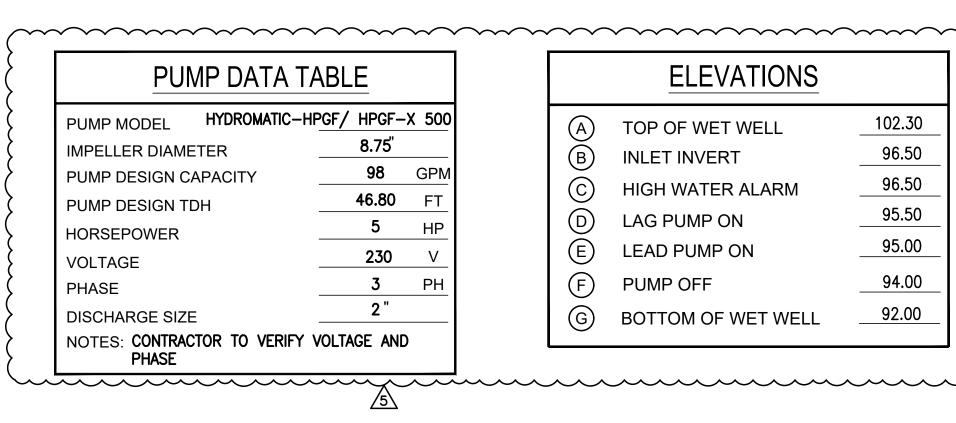
SUPPLIER
PUMP SUPPLIER SHALL PROVIDE SUBMERSIBLE PUMPS, SLIDE RAIL ASSEMBLIES, FIBERGLASS BASIN AND VALVE BOX, CONTROL PANEL,
THE COMPLETE PACKAGE FLOAT SWITCHES, ALUMINUM HATCHES AND ACCESSORIES TO INSURE PROPER OPERATIONS AND WARRANTY. THE COMPLETE PACKAGE PUMPING STATION SHALL HAVE PUMP BASES, RAIL ASSEMBLIES, AND DISCHARGE PIPING ASSEMBLED BY BARNEY'S PUMPS INC. READY FOR FIELD INSTALLATION.

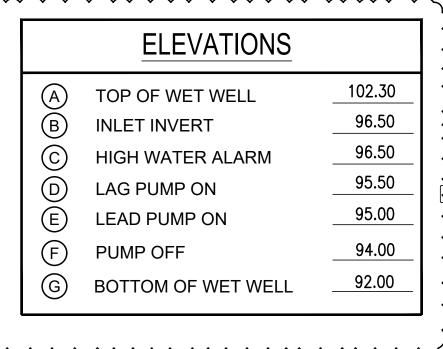
PUMP PACKAGE SHALL BE SUPPLIED BY BARNEY'S PUMPS INC. IN LAKELAND (863-665-8500), CORAL SPRINGS (954-346-0669), OR

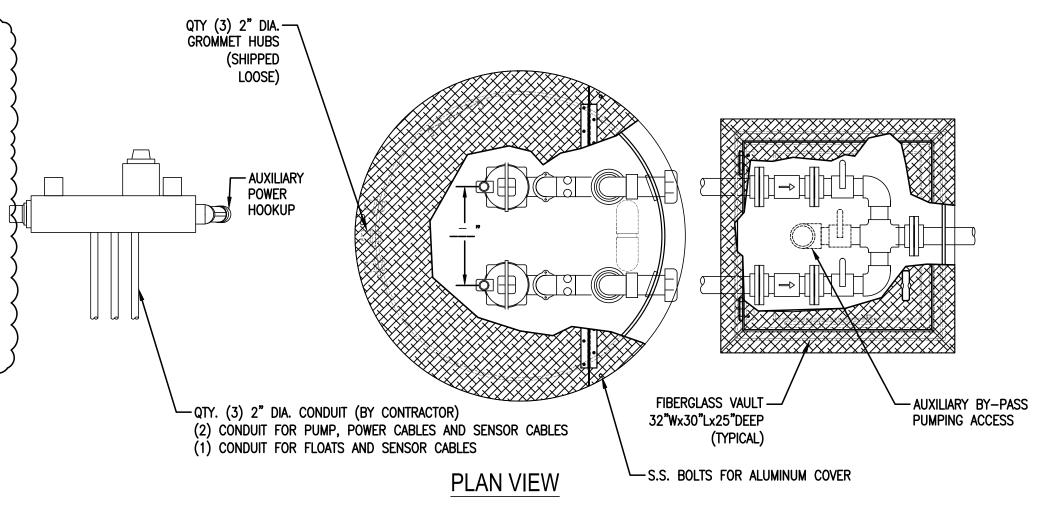


JAA

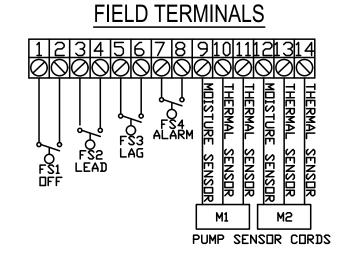
CONTRACTOR IS TO PROVIDE AND POST AN UNOBSTRUCTED SIGN (12"X12" WITH 2" LETTERING) MADE OF DURABLE WEATHER RESISTANT MATERIAL AT A LOCATION VISIBLE TO THE PUBLIC WITH A TELEPHONE NUMBER FOR A POINT OF CONTACT IN CASE OF EMERGENCY AS





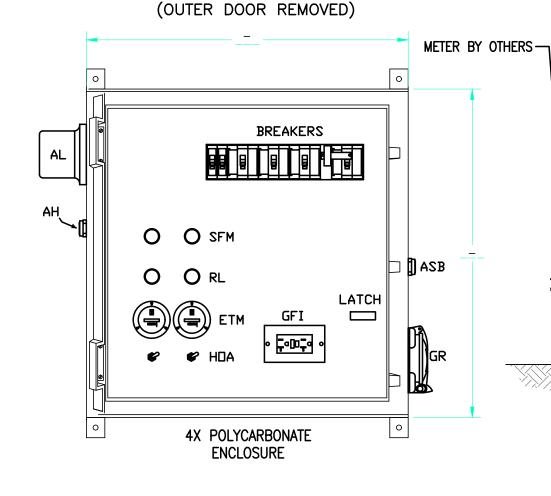


WET WELL/VALVE BOX LAYOUT

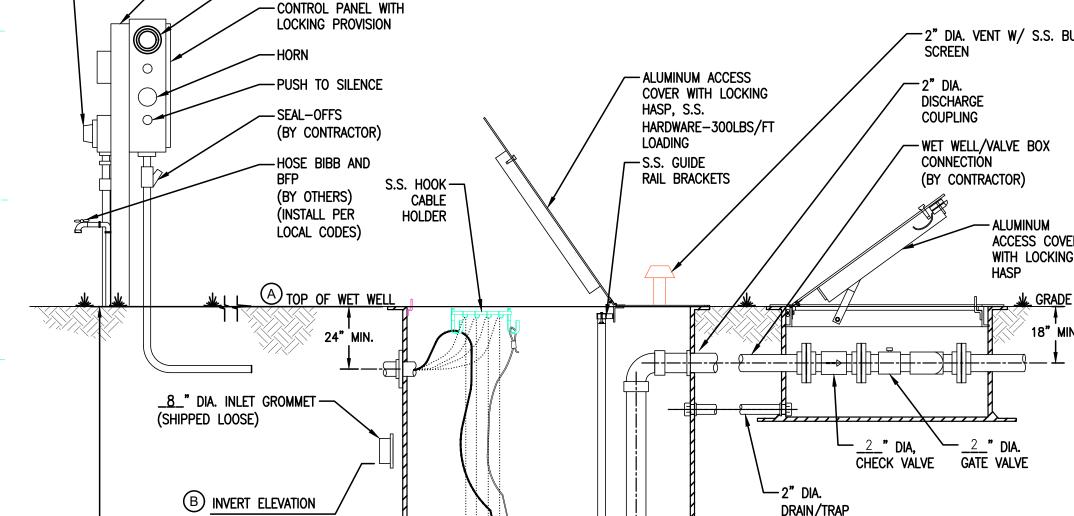


### **LEGEND**

ABBR.	DESCRIPTION
ENC	ENCLOSURE, POLYCARBONATE, NEMA 4X
MCB	MAIN CIRCUIT BREAKER
ECB	EMERGENCY CIRCUIT BREAKER
PCB1,2	PUMP CIRCUIT BREAKER
CCB	CONTROL CIRCUIT BREAKER
GFICB	GFI CIRCUIT BREAKER
GR	GENERATOR RECEPTACLE
GFI	GFI RECEPTACLE
AL	ALARM LIGHT
AH	ALARM HORN
ASB	ALARM SILENCE BUTTON
SFM	SEAL FAIL MODULE
HOA	HAND OFF AUTO SWITCH
RL	RUN LIGHT, GREEN
ETM	ELAPSED TIME METER



**ENCLOSURE AND DEADFRONT LAYOUT (TYPICAL)** 



CONCRETE MOUNTING POST(S)

(BY CONTRACTOR)

- ALARM

LIGHT

FIBERGLASS WET WELL BASIN-

C HIGH WATER-

APPROVED BY

JAA

AND SERVICE DISCONNECT WITH LIGHTNING ARRESTOR PER LOCAL

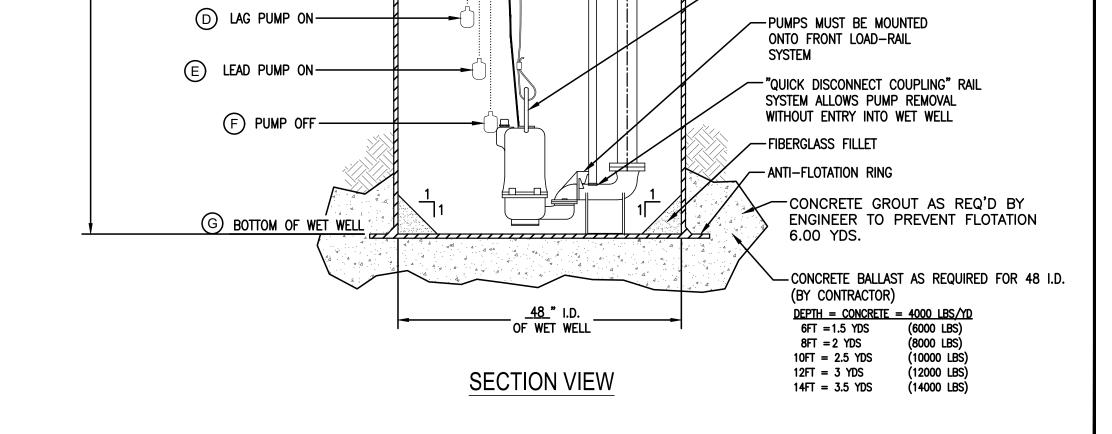
### PANEL NOTES

### ALL PANELS SHALL BE UL LISTED AND CONFORM TO FLORIDA DEP 62-604

- 1) GENERATOR RECEPTACLE WITH INTERLOCK FOR EMERGENCY POWER CONNECTION. 2) SURGE AND LIGHTNING PROTECTION SHALL BE PROVIDED BY CONTRACTOR AND MOUNTED EXTERNAL TO THE CONTROL PANEL.
- 3) PHASE OR VOLTAGE MONITOR SHALL BE PROVIDED IN CONTROL PANEL. 4) ALL PANELS, WET WELL, VALVE BOX, AND ACCESS DOORS SHALL HAVE LOCKABLE MECHANISMS.
- CONTRACTOR TO PROVIDE KEYED LOCKS. 5) POST UNOBSTRUCTED SIGN MADE OF DURABLE WEATHER RESISTANT MATERIAL WITH THE FOLLOWING:
- PUBLIC NOTICE: IN CASE OF EMERGENCY CONTACT:
- 6) THE CONTROL PANEL SHALL BE SUITABLY INSTALLED TO PREVENT SETTLING OR TIPPING.
- 7) FLOAT SWITCHES SHALL BE UL LISTED. 8) SHAFT SEAL FAIL DETECTION

### **SIGNAGE**

A SIGN SHALL BE POSTED AT THE LIFT STATION INDICATING AN EMERGENCY CONTACT NAME AND PHONE NUMBER.



			••••
08/14/2023	REVISED PER ORANGE COUNTY FIRE DEPT. DATED 08/07/2023	VP/MS	JAA
08/15/2023	REVISED PER SJRWMD COMMENTS DATED 07/24/2023	VP/MS	JAA
08/16/2023	REVISED PER OCU COMMENTS DATED 07/27/2023	VP/MS	JAA
08/17/2023	REVISED PER CITY OF BELLE ISLE COMMENTS DATED 08/04/2023	VP/MS	JAA
08/17/2023	REVISED PER FDOT COMMENTS DATED 07/11/2023	VP/MS	JAA
10/09/2023	REVISED PER CITY COMMENTS DATED 10/04/2023	VP/MS	JAA
DATE	REVISIONS	BY	CHECKED

CORNERSTONE CHARTER ACADEMY **CONSTRUCTION PLANS** CITY OF BELLE ISLE, FLORIDA



5127 S. Orange Avenue, Suite 200 Orlando, FL 32809 Phone: 407-895-0324 Fax: 407-895-0325

www.feg-inc.us

DESIGNED BY

LIFTSTATION -
LIFISTATION -
LS-2 DETAILS

CHECKED BY

DRAWN BY

VP

M. ABI FLORIDA ENGINEERING GROUP, 10 CERTIFICATE NO. EB-0006595 22-010 No 45128 N.T.S. JUNE 23, 2023 STATE OF JEAN MOABIAQUELPA LICENSE NO AB128 HEET 36 OF 50

ELECTRONICALLY SIGNED AND SEALED BY (ENGINEER), P.E. ON (DATE) USING A SHA-1 AUTHENTICATION CODE. PRINTED COPIES OF THIS DOCUMENT ARE NOT CONSIDERED SIGNED AND SEALED AND THE SHA AUTHENTICATION CODE MUST BE

-2" DIA. VENT W/ S.S. BUG

SCREEN

DISCHARGE

COUPLING

 $-\underline{2}$  DIA,  $\underline{2}$  DIA. CHECK VALVE GATE VALVE

(BY CONTRACTOR)

DISCHARGE PIPE

-S.S. GUIDE RAILS

— S.S. LIFTING BAIL

-S.S. LIFTING CABLE/CHAIN

\_2\_" DIA SCH80 PVC

CONNECTION

- WET WELL/VALVE BOX

— ALUMINUM

HASP

ACCESS COVER

WITH LOCKING

(BY CONTRACTOR)

22-010\_LiftStation-LS-2 Details.dwg

VERIFIED ON ANY ELECTRONIC

COPIES.

#### PROJECT SUMMARY

#### **CALCULATION DETAILS**

• LOADING = HS20/HS25

#### STORAGE SUMMARY

- PIPE STORAGE VOLUME = 15.619 CF
- BACKFILL STORAGE VOLUME = 5,131 CF
- TOTAL STORAGE PROVIDED = 20,750 CF
- STONE VOID = 40%

#### PIPE DETAILS

- DIAMETER = 34"
- CORRUGATION = 2 2/3x1/2
- INVERT = 97.00
- COATING = ALT2
- WALL TYPE = XFILTRATION
- BARREL SPACING = 12"

<u>KEY</u>	
	XFILTRATION
	CONTAINMENT BASIN

#### **NOTES**

- ALL RISER AND STUB DIMENSIONS ARE TO CENTERLINE. ALL ELEVATIONS, DIMENSIONS, AND LOCATIONS OF RISERS AND INLETS, SHALL BE VERIFIED BY THE ENGINEER OF RECORD PRIOR TO RELEASING FOR FABRICATION.
- ALL FITTINGS AND REINFORCEMENT COMPLY WITH **ASTM A998.**
- ALL RISERS AND STUBS ARE 2\%\" x \frac{1}{2}\" CORRUGATION AND 16 GAGE UNLESS OTHERWISE NOTED.
- RISERS TO BE FIELD TRIMMED TO GRADE.
- QUANTITY OF PIPE SHOWN DOES NOT PROVIDE EXTRA PIPE FOR CONNECTING THE SYSTEM TO EXISTING PIPE OR DRAINAGE STRUCTURES. OUR SYSTEM AS DETAILED PROVIDES NOMINAL INLET AND/OR OUTLET PIPE STUB FOR CONNECTION TO EXISTING DRAINAGE FACILITIES. IF ADDITIONAL PIPE IS NEEDED IT IS THE RESPONSIBILITY OF THE CONTRACTOR.
- BAND TYPE TO BE DETERMINED UPON FINAL DESIGN. • THE PROJECT SUMMARY IS REFLECTIVE OF THE DYODS DESIGN, QUANTITIES ARE APPROX. AND SHOULD BE VERIFIED UPON FINAL DESIGN AND APPROVAL. FOR EXAMPLE, TOTAL EXCAVATION DOES NOT CONSIDER ALL VARIABLES SUCH AS SHORING AND ONLY ACCOUNTS FOR MATERIAL WITHIN THE
- ESTIMATED EXCAVATION FOOTPRINT. • THESE DRAWINGS ARE FOR CONCEPTUAL PURPOSES AND DO NOT REFLECT ANY LOCAL PREFERENCES OR REGULATIONS. PLEASE CONTACT YOUR LOCAL CONTECH REP FOR MODIFICATIONS.

DATE

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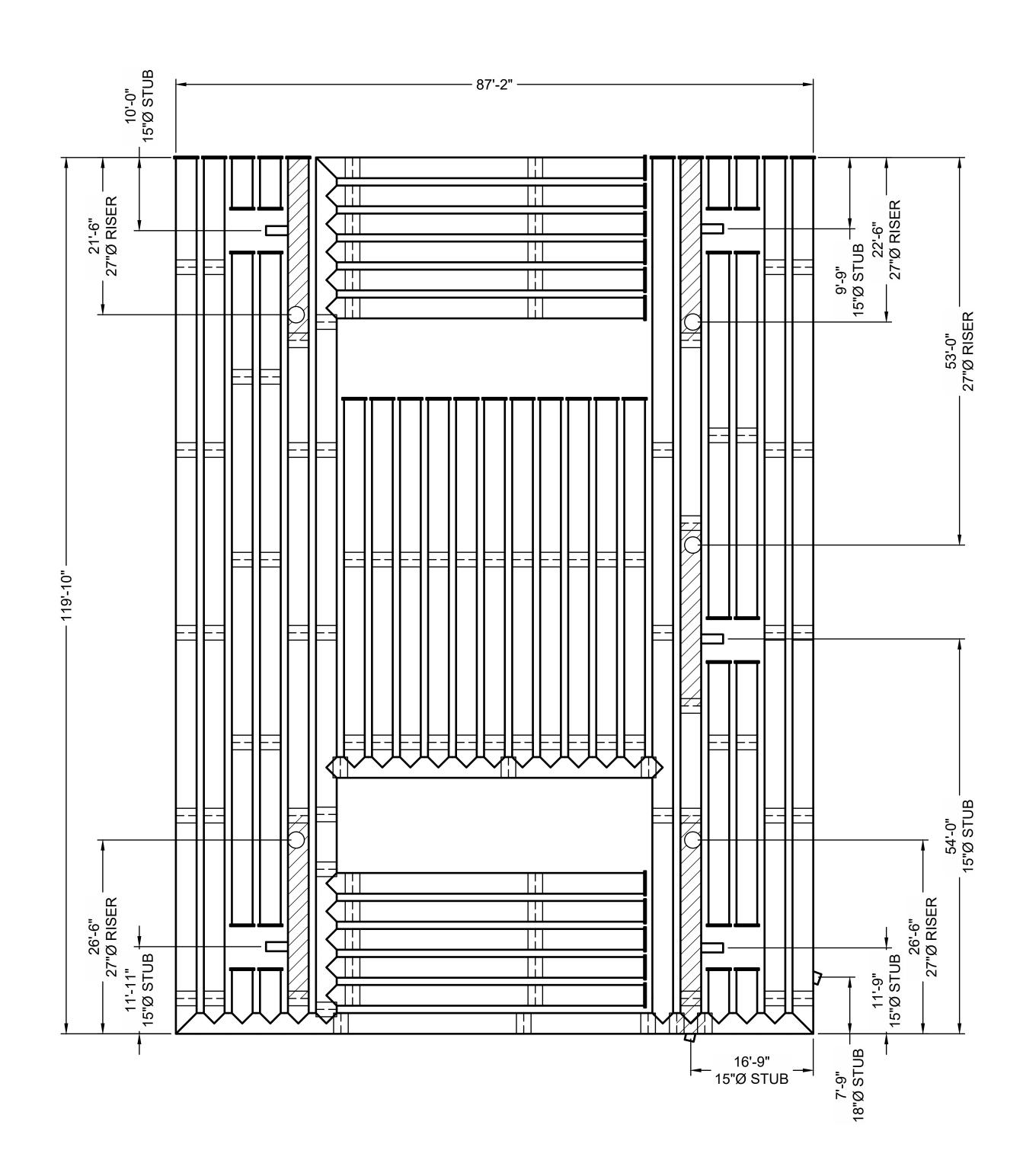
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**ASSEMBLY** SCALE: 1" = 20' C-37

CIN	<b>TECH</b> *
<b>ENGINEERED SC</b>	DLUTIONS LLC

9025 800-



**DYODS** 

DRAWING

754118-010 Cornerstone Charter Academy Exfiltration 1 34" CMP Belle Isle, FL

PROJECT No.:	SEQ. No.:		DATE:
754118	010		6/20/2023
DESIGNED:	DRAW		'N:
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CHECKED:		APPR	OVED:
DYO			DYO
SHEET NO.:			_
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0-338-1122	513-645-7000	513-645-7993 FAX			

		I	P Perforated Drainage Pipe
Material Location	Description	Material Designation	Designation
Rigid or Flexible Paveme (if applicable)	nt		
Road Base (if applicable			
Geotextile Layer	Non-Woven Geotextile	CONTECH C-40 or C-45	Engineer Decision for consideration to prevent soil migration into varying soil types. Wrap the trench only
Backfill	Infiltration pipe systems have a pipe perforation sized of 3/8" diameter. An open graded, free draining stone, with a particle size of ½" – 2 ½" diameter is recommended.	AASHTO M 145- A-1 or AASHTO M 43 - 3, 4	Material shall be worked into the pipe haunches by means of shovel-slicing, rodding, air-tamper, vibrator rod, or other effective methods. Compaction of all placed fill material is necessary and shall be considered adequate when no further yielding of the material is observed under the compactor, or under foot, and the Project Engineer or his representative is satisfied with the level of compaction"
Bedding Stone	Well graded granular bedding material w/maximum particle size of 3"	AASHTO M43 - 3,357,4,467, 5, 56, 57	For soil aggregates larger than 3/8" a dedicated bedding layer is not required for CMP. Pipe may be placed on the trench bottom comprised of native suitable well graded & granular material. For Arch pipes it is recommended to be shaped to a relatively flat bottom or fine-grade the foundation to a slight v-shape. Soil aggregates less than 3/8" and unsuitab material should be over-excavated and re-placed with a 4"-6" layer of well graded & granular stone per the material designation.
Geotextile Layer	None	None	Contech does not recommend geotextiles be placed under the invert of Infilitration systems due to the propensity for geotextiles to clog over time.

Note: The listed AASHTO designations are for gradation only. The stone must also be angular and clean.

MINIMUM WIDTH DEPENDS ON SITE CONDITIONS AND ENGINEERING JUDGEMENT.

#### FOUNDATION/BEDDING PREPARATION

PRIOR TO PLACING THE BEDDING, THE FOUNDATION MUST BE CONSTRUCTED TO A UNIFORM AND STABLE GRADE. IN THE EVENT THAT UNSUITABLE FOUNDATION MATERIALS ARE ENCOUNTERED DURING EXCAVATION, THEY SHALL BE REMOVED AND BROUGHT BACK TO THE GRADE WITH A FILL MATERIAL AS APPROVED BY THE ENGINEER.

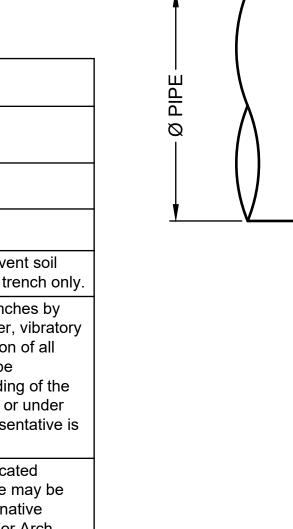
HAUNCH ZONE MATERIAL SHALL BE PLACED AND UNIFORMLY COMPACTED WITHOUT SOFT SPOTS.

#### **BACKFILL**

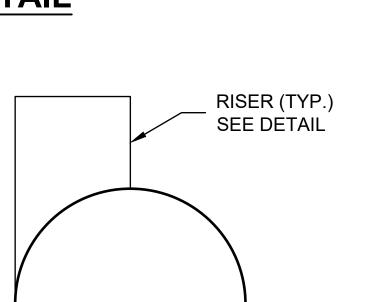
MATERIAL SHALL BE PLACED IN 8"-10" MAXIMUM LIFTS. INADEQUATE COMPACTION CAN LEAD TO EXCESSIVE DEFLECTIONS WITHIN THE SYSTEM AND SETTLEMENT OF THE SOILS OVER THE SYSTEM. BACKFILL SHALL BE PLACED SUCH THAT THERE IS NO MORE THAN A TWO-LIFT DIFFERENTIAL BETWEEN THE SIDES OF ANY PIPE IN THE SYSTEM AT ALL TIMES DURING THE BACKFILL PROCESS. BACKFILL SHALL BE ADVANCED ALONG THE LENGTH OF THE SYSTEM AT THE SAME RATE TO AVOID DIFFERENTIAL LOADING ON ANY PIPES IN THE SYSTEM.

EQUIPMENT USED TO PLACE AND COMPACT THE BACKFILL SHALL BE OF A SIZE AND TYPE SO AS NOT TO DISTORT, DAMAGE, OR DISPLACE THE PIPE. ATTENTION MUST BE GIVEN TO PROVIDING ADEQUATE MINIMUM COVER FOR SUCH EQUIPMENT. MAINTAIN BALANCED LOADING ON ALL PIPES IN THE SYSTEM DURING ALL SUCH OPERATIONS.

OTHER ALTERNATE BACKFILL MATERIAL MAY BE ALLOWED DEPENDING ON SITE SPECIFIC CONDITIONS. REFER TO TYPICAL BACKFILL DETAIL FOR MATERIAL REQUIRED.







NOTE:
MANWAY DETAIL APPLICABLE FOR CMP

LARGER. MANWAYS MAY BE REQUIRED ON SMALLER SYSTEMS DEPENDING ON ACTUAL SITE SPECIFIC CONDITIONS.

SYSTEMS WITH DIAMETERS 48" AND

**FRONT** 

#### **ELEVATION**

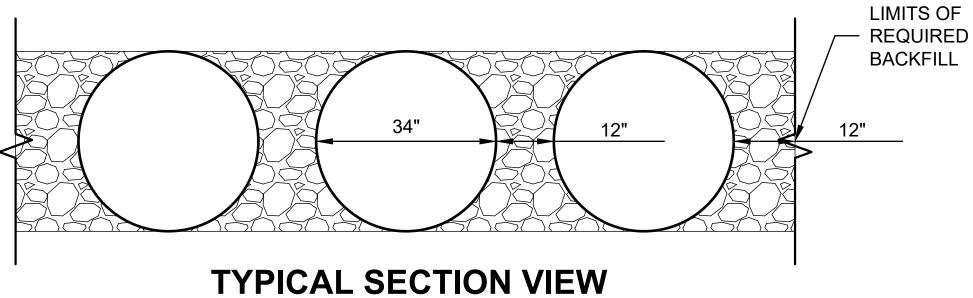
2'-6" --

−Ø PIPE —

## TYPICAL RISER DETAIL SCALE: N.T.S.

#### **END**

NOTE:
LADDERS ARE OPTIONAL AND ARE NOT
REQUIRED FOR ALL SYSTEMS.



SCALE: N.T.S.

C-38<sub>50</sub>

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CMP DETENTION SYSTEMS

CONTECH
DYODS
DRAWING

754118-010 Cornerstone Charter Academy
Exfiltration 1 34" CMP
Belle Isle, FL

PROJECT No.: 754118	SEQ. No.: 010		·		·		DATE: 6/20/2023
DESIGNED:		DRAW	/N:				
DYO			DYO				
CHECKED:		APPR	OVED:				
DYO			DYO				
SHEET NO.:			2				

FOR TEMPORARY CONSTRUCTION VEHICLE LOADS, AN EXTRA AMOUNT OF COMPACTED COVER MAY BE REQUIRED OVER THE TOP OF THE PIPE. THE HEIGHT-OF-COVER SHALL MEET THE MINIMUM REQUIREMENTS SHOWN IN THE TABLE BELOW. THE USE OF HEAVY CONSTRUCTION EQUIPMENT NECESSITATES GREATER PROTECTION FOR THE PIPE THAN FINISHED GRADE COVER MINIMUMS FOR NORMAL HIGHWAY TRAFFIC.

PIPE SPAN, INCHES	AXLE LOADS (kips)				
INCHES	18-50	50-75	75-110	110-150	
	MINIMUM COVER (FT)				
12-42	2.0	2.5	3.0	3.0	
48-72	3.0	3.0	3.5	4.0	
78-120	3.0	3.5	4.0	4.0	
126-144	3.5	4.0	4.5	4.5	

\*MINIMUM COVER MAY VARY, DEPENDING ON LOCAL CONDITIONS. THE CONTRACTOR MUST PROVIDE THE ADDITIONAL COVER REQUIRED TO AVOID DAMAGE TO THE PIPE. MINIMUM COVER IS MEASURED FROM THE TOP OF THE PIPE TO THE TOP OF THE MAINTAINED CONSTRUCTION ROADWAY SURFACE.

### CONSTRUCTION LOADING DIAGRAM SCALE: N.T.S.

#### SPECIFICATION FOR DESIGNED DETENTION SYSTEM:

#### SCOPI

THIS SPECIFICATION COVERS THE MANUFACTURE AND INSTALLATION OF THE DESIGNED DETENTION SYSTEM DETAILED IN THE PROJECT PLANS.

#### MATERIAL

THE MATERIAL SHALL CONFORM TO THE APPLICABLE REQUIREMENTS LISTED BELOW:

ALUMINIZED TYPE 2 STEEL COILS SHALL CONFORM TO THE APPLICABLE REQUIREMENTS OF AASHTO M-274 OR ASTM A-92.

THE GALVANIZED STEEL COILS SHALL CONFORM TO THE APPLICABLE REQUIREMENTS OF AASHTO M-218 OR ASTM A-929

THE POLYMER COATED STEEL COILS SHALL CONFORM TO THE APPLICABLE REQUIREMENTS OF AASHTO M-246 OR ASTM A-742

THE ALUMINUM COILS SHALL CONFORM TO THE APPLICABLE REQUIREMENTS OF AASHTO M-197 OR ASTM B-744.

#### CONSTRUCTION LOADS

CONSTRUCTION LOADS MAY BE HIGHER THAN FINAL LOADS. FOLLOW THE MANUFACTURER'S OR NCSPA GUIDELINES.

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**CONSTRUCTION LOADS** 

#### PIPE

THE PIPE SHALL BE MANUFACTURED IN ACCORDANCE TO THE APPLICABLE REQUIREMENTS LISTED BELOW:

ALUMINIZED TYPE 2: AASHTO M-36 OR ASTM A-760

GALVANIZED: AASHTO M-36 OR ASTM A-760

POLYMER COATED: AASHTO M-245 OR ASTM A-762

ALUMINUM: AASHTO M-196 OR ASTM B-745

#### HANDLING AND ASSEMBLY

SHALL BE IN ACCORDANCE WITH NCSP'S (NATIONAL CORRUGATED STEEL PIPE ASSOCIATION) FOR ALUMINIZED TYPE 2, GALVANIZED OR POLYMER COATED STEEL. SHALL BE IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS FOR ALUMINUM PIPE.

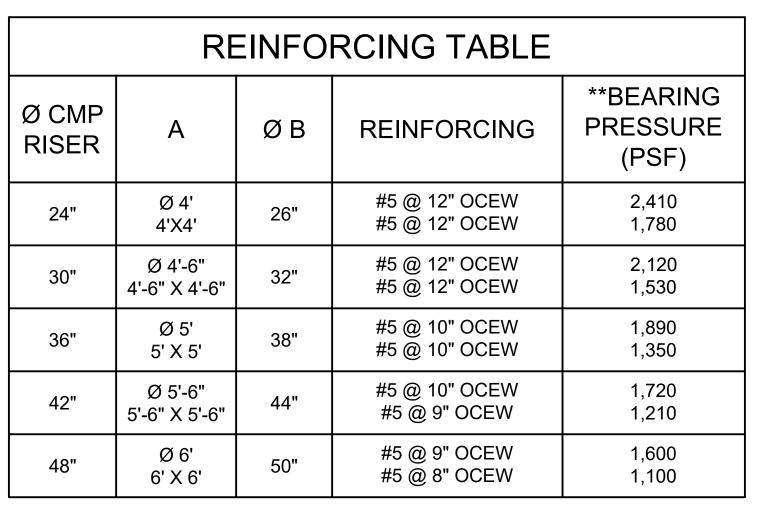
#### INSTALLATION

SHALL BE IN ACCORDANCE WITH AASHTO STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES, SECTION 26, DIVISION II DIVISION II OR ASTM A-798 (FOR ALUMINIZED TYPE 2, GALVANIZED OR POLYMER COATED STEEL) OR ASTM B-788 (FOR ALUMINUM PIPE) AND IN CONFORMANCE WITH THE PROJECT PLANS AND SPECIFICATIONS. IF THERE ARE ANY INCONSISTENCIES OR CONFLICTS THE CONTRACTOR SHOULD DISCUSS AND RESOLVE WITH THE SITE ENGINEER.

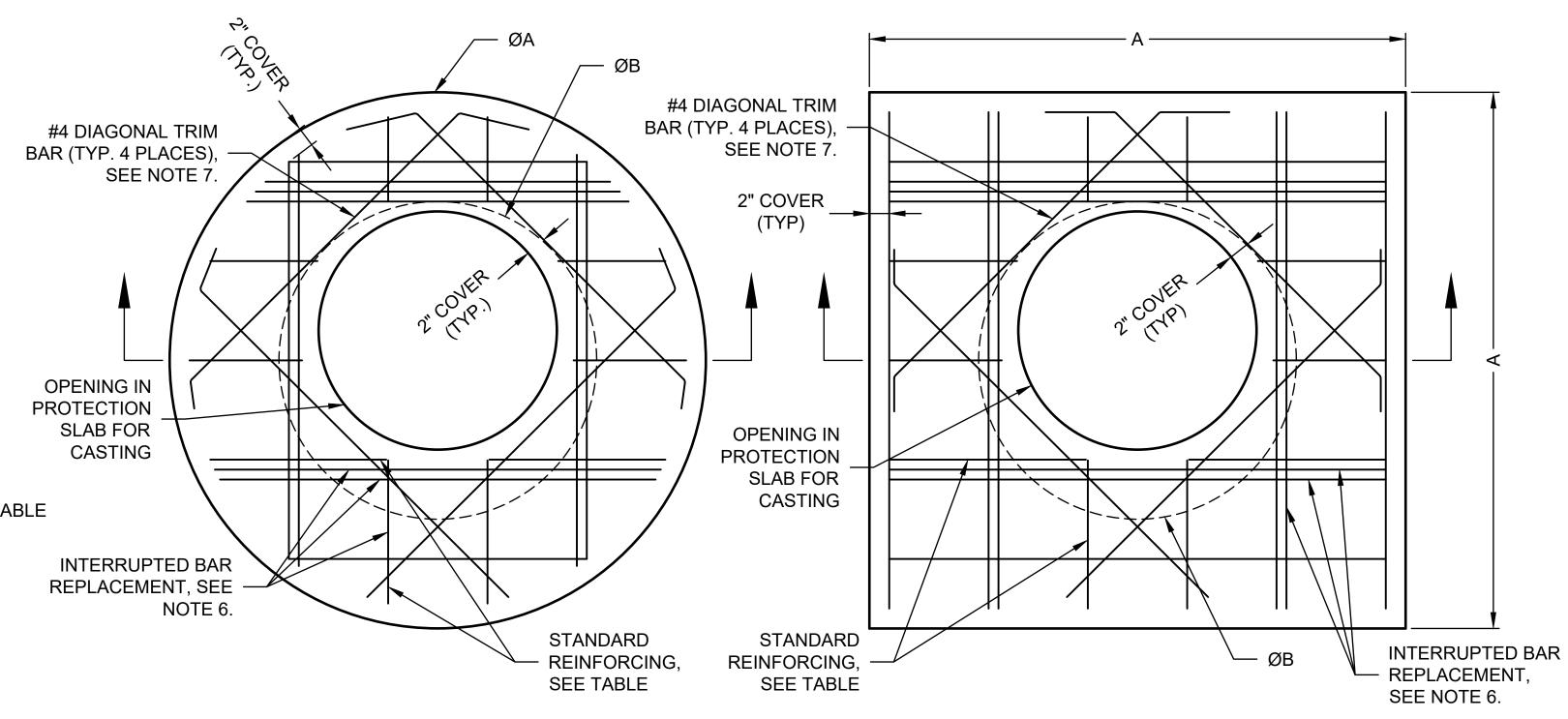
IT IS ALWAYS THE RESPONSIBILITY OF THE CONTRACTOR TO FOLLOW OSHA GUIDELINES FOR SAFE PRACTICES.

# GASKET MATERIAL SUFFICIENT TO PREVENT SLAB FROM BEARING ON RISER TO BE PROVIDED BY CONTRACTOR. GASKET MATERIAL SUFFICIENT TO PREVENT SLAB FROM BEARING ON RISER TO BE PROVIDED BY CONTRACTOR.

#### SECTION VIEW



\*\* ASSUMED SOIL BEARING CAPACITY



#### **ROUND OPTION PLAN VIEW**

#### NOTES:

- 1. DESIGN IN ACCORDANCE WITH AASHTO, 17th EDITION.
- 2. DESIGN LOAD HS25.
- 3. EARTH COVER = 1' MAX.
- 4. CONCRETE STRENGTH = 3,500 psi
- 5. REINFORCING STEEL = ASTM A615, GRADE 60.
- PROVIDE ADDITIONAL REINFORCING AROUND OPENINGS EQUAL TO THE BARS INTERRUPTED, HALF EACH SIDE. ADDITIONAL BARS TO BE IN THE SAME PLANE.

#### SQUARE OPTION PLAN VIEW

- 7. TRIM OPENING WITH DIAGONAL #4 BARS, EXTEND BARS A MINIMUM OF 12" BEYOND OPENING, BEND BARS AS REQUIRED TO MAINTAIN BAR COVER.
- 8. PROTECTION SLAB AND ALL MATERIALS TO BE PROVIDED AND INSTALLED BY CONTRACTOR.
- 9. DETAIL DESIGN BY DELTA ENGINEERING, BINGHAMTON, NY.

#### MANHOLE CAP DETAIL

SCALE: N.T.S.

C-39<sub>50</sub>

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CAP DETENTION SYSTEMS

CONTECH
DYODS
DRAWING

754118-010 Cornerstone Charter Academy Exfiltration 1 34" CMP Belle Isle, FL

PROJECT No.:	SEQ. I	No.:	DATE:
754118	0′	10	6/20/2023
DESIGNED:		DRAW	/N:
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CHECKED:		APPR	OVED:
DYO			DYO
SHEET NO.:			
			3

#### PROJECT SUMMARY

#### **CALCULATION DETAILS**

• LOADING = HS20/HS25

#### STORAGE SUMMARY

- PIPE STORAGE VOLUME = 18,246 CF
- BACKFILL STORAGE VOLUME = 7,301 CF
- TOTAL STORAGE PROVIDED = 25,547 CF
- STONE VOID = 40%

#### PIPE DETAILS

- DIAMETER = 24"
- CORRUGATION = 2 2/3x1/2
- INVERT = 98.00
- COATING = ALT2
- WALL TYPE = XFILTRATION
- BARREL SPACING = 12"

## **KEY**

XFILTRATION

CONTAINMENT BASIN

#### **NOTES**

- ALL RISER AND STUB DIMENSIONS ARE TO CENTERLINE. ALL ELEVATIONS, DIMENSIONS, AND LOCATIONS OF RISERS AND INLETS, SHALL BE VERIFIED BY THE ENGINEER OF RECORD PRIOR TO RELEASING FOR FABRICATION.
- ALL FITTINGS AND REINFORCEMENT COMPLY WITH **ASTM A998.**
- ALL RISERS AND STUBS ARE 2\%" x 1/2" CORRUGATION AND 16 GAGE UNLESS OTHERWISE NOTED.
- RISERS TO BE FIELD TRIMMED TO GRADE.
- QUANTITY OF PIPE SHOWN DOES NOT PROVIDE EXTRA PIPE FOR CONNECTING THE SYSTEM TO EXISTING PIPE OR DRAINAGE STRUCTURES. OUR SYSTEM AS DETAILED PROVIDES NOMINAL INLET AND/OR OUTLET PIPE STUB FOR CONNECTION TO EXISTING DRAINAGE FACILITIES. IF ADDITIONAL PIPE IS NEEDED IT IS THE RESPONSIBILITY OF THE CONTRACTOR.
- BAND TYPE TO BE DETERMINED UPON FINAL DESIGN.
- THE PROJECT SUMMARY IS REFLECTIVE OF THE DYODS DESIGN, QUANTITIES ARE APPROX. AND SHOULD BE VERIFIED UPON FINAL DESIGN AND APPROVAL. FOR EXAMPLE, TOTAL EXCAVATION DOES NOT CONSIDER ALL VARIABLES SUCH AS SHORING AND ONLY ACCOUNTS FOR MATERIAL WITHIN THE ESTIMATED EXCAVATION FOOTPRINT.
- THESE DRAWINGS ARE FOR CONCEPTUAL PURPOSES AND DO NOT REFLECT ANY LOCAL PREFERENCES OR REGULATIONS. PLEASE CONTACT YOUR LOCAL CONTECH REP FOR MODIFICATIONS.

DATE

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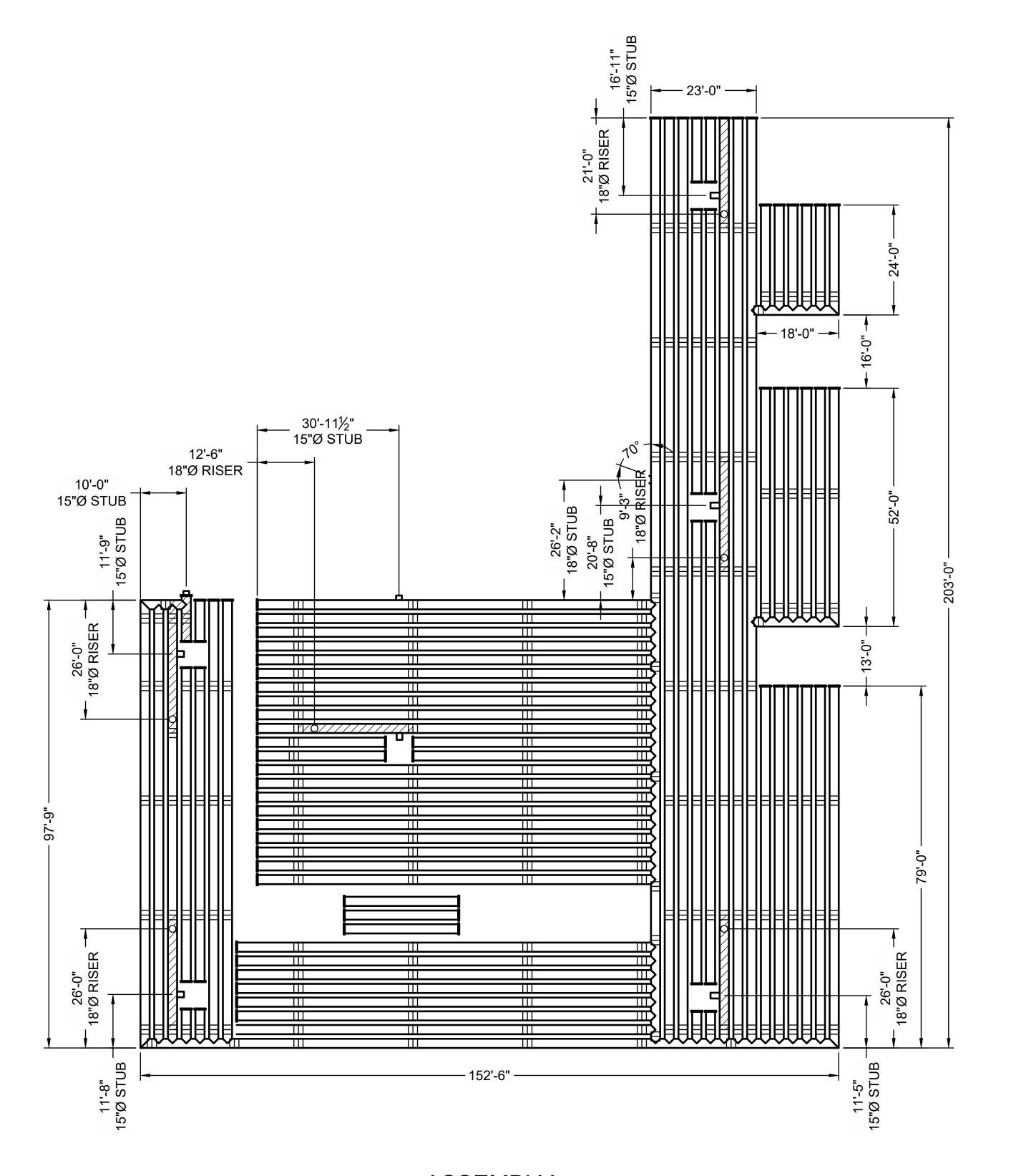
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**ASSEMBLY** SCALE: 1" = 30' C-40<sub>5</sub>

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9025 Centre Pointe D	
800-338-1122 5	

BY

**REVISION DESCRIPTION** 

CHIECH CMP DETENTION SYSTEMS

**DYODS** 

DRAWING

754118-015 Cornerstone Charter Academy Exfiltration 2 24" CMP Belle Isle, FL

PROJECT No.: 754118	SEQ. No.: 020		DATE: 6/20/2023
DESIGNED:		DRAW	N:
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**NTECH**° **RED SOLUTIONS LLC** .ContechES.com , Suite 400, West Chester, OH 45069 513-645-7000 513-645-7993 FAX

Material Location	Description	Material Designation	Designation
Rigid or Flexible Paveme (if applicable)	nt		
Road Base (if applicable			
Geotextile Layer	Non-Woven Geotextile	CONTECH C-40 or C-45	Engineer Decision for consideration to prevent soil migration into varying soil types. Wrap the trench on
Backfill	Infiltration pipe systems have a pipe perforation sized of 3/8" diameter. An open graded, free draining stone, with a particle size of ½" – 2 ½" diameter is recommended.	AASHTO M 145- A-1 or AASHTO M 43 - 3, 4	Material shall be worked into the pipe haunches by means of shovel-slicing, rodding, air-tamper, vibrato rod, or other effective methods. Compaction of all placed fill material is necessary and shall be considered adequate when no further yielding of the material is observed under the compactor, or under foot, and the Project Engineer or his representative satisfied with the level of compaction"
Bedding Stone	Well graded granular bedding material w/maximum particle size of 3"	AASHTO M43 - 3,357,4,467, 5, 56, 57	For soil aggregates larger than 3/8" a dedicated bedding layer is not required for CMP. Pipe may be placed on the trench bottom comprised of native suitable well graded & granular material. For Arch pipes it is recommended to be shaped to a relatively flat bottom or fine-grade the foundation to a slight v-shape. Soil aggregates less than 3/8" and unsuital material should be over-excavated and re-placed wir a 4"-6" layer of well graded & granular stone per the material designation.
Geotextile Layer	None	None	Contech does not recommend geotextiles be placed under the invert of Infilitration systems due to the propensity for geotextiles to clog over time.

(1) MINIMUM WIDTH DEPENDS ON SITE CONDITIONS AND ENGINEERING JUDGEMENT.

#### FOUNDATION/BEDDING PREPARATION

PRIOR TO PLACING THE BEDDING, THE FOUNDATION MUST BE CONSTRUCTED TO A UNIFORM AND STABLE GRADE. IN THE EVENT THAT UNSUITABLE FOUNDATION MATERIALS ARE ENCOUNTERED DURING EXCAVATION, THEY SHALL BE REMOVED AND BROUGHT BACK TO THE GRADE WITH A FILL MATERIAL AS APPROVED BY THE ENGINEER.

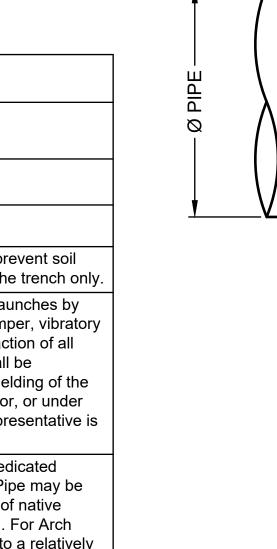
HAUNCH ZONE MATERIAL SHALL BE PLACED AND UNIFORMLY COMPACTED WITHOUT

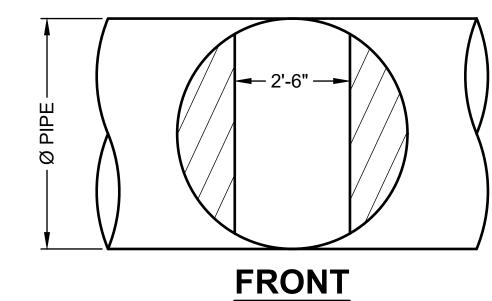
#### **BACKFILL**

MATERIAL SHALL BE PLACED IN 8"-10" MAXIMUM LIFTS. INADEQUATE COMPACTION CAN LEAD TO EXCESSIVE DEFLECTIONS WITHIN THE SYSTEM AND SETTLEMENT OF THE SOILS OVER THE SYSTEM. BACKFILL SHALL BE PLACED SUCH THAT THERE IS NO MORE THAN A TWO-LIFT DIFFERENTIAL BETWEEN THE SIDES OF ANY PIPE IN THE SYSTEM AT ALL TIMES DURING THE BACKFILL PROCESS. BACKFILL SHALL BE ADVANCED ALONG THE LENGTH OF THE SYSTEM AT THE SAME RATE TO AVOID DIFFERENTIAL LOADING ON ANY PIPES IN THE SYSTEM.

EQUIPMENT USED TO PLACE AND COMPACT THE BACKFILL SHALL BE OF A SIZE AND TYPE SO AS NOT TO DISTORT, DAMAGE, OR DISPLACE THE PIPE. ATTENTION MUST BE GIVEN TO PROVIDING ADEQUATE MINIMUM COVER FOR SUCH EQUIPMENT. MAINTAIN BALANCED LOADING ON ALL PIPES IN THE SYSTEM DURING ALL SUCH OPERATIONS.

OTHER ALTERNATE BACKFILL MATERIAL MAY BE ALLOWED DEPENDING ON SITE SPECIFIC CONDITIONS. REFER TO TYPICAL BACKFILL DETAIL FOR MATERIAL REQUIRED.





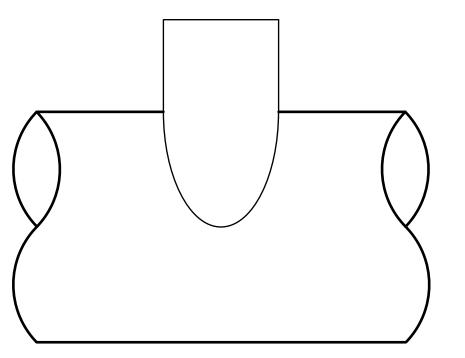
NOTE:
MANWAY DETAIL APPLICABLE FOR CMP SYSTEMS WITH DIAMETERS 48" AND LARGER. MANWAYS MAY BE REQUIRED ON SMALLER SYSTEMS DEPENDING ON ACTUAL SITE SPECIFIC CONDITIONS.

**PLAN** 

2'-6" --

−Ø PIPE —

**TYPICAL MANWAY DETAIL** SCALE: N.T.S.



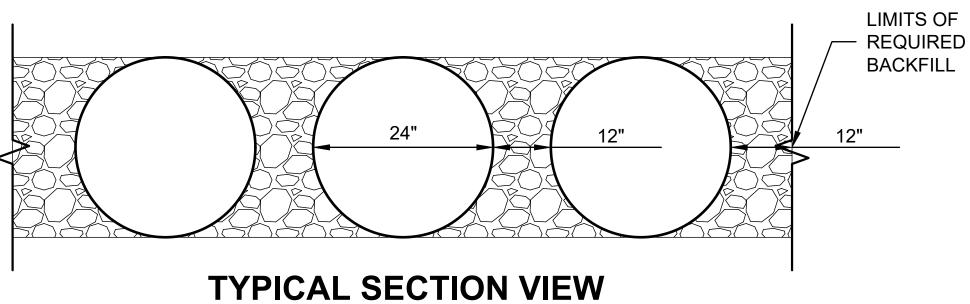
RISER (TYP.) SEE DETAIL

**ELEVATION** 

**TYPICAL RISER DETAIL** SCALE: N.T.S.

**END** 

NOTE:
LADDERS ARE OPTIONAL AND ARE NOT



SCALE: N.T.S.

C-41<sub>50</sub>

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CHIECH CMP DETENTION SYSTEMS

**DYODS** DRAWING

754118-015 Cornerstone Charter Academy Exfiltration 2 24" CMP Belle Isle, FL

PROJECT No.:	SEQ. I	No.:	DATE:
754118	02	20	6/20/2023
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SHEET NO.:			
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FOR TEMPORARY CONSTRUCTION VEHICLE LOADS, AN EXTRA AMOUNT OF COMPACTED COVER MAY BE REQUIRED OVER THE TOP OF THE PIPE. THE HEIGHT-OF-COVER SHALL MEET THE MINIMUM REQUIREMENTS SHOWN IN THE TABLE BELOW. THE USE OF HEAVY CONSTRUCTION EQUIPMENT NECESSITATES GREATER PROTECTION FOR THE PIPE THAN FINISHED GRADE COVER MINIMUMS FOR NORMAL HIGHWAY TRAFFIC.

PIPE SPAN, INCHES	AXLE LOADS (kips)					
INCHES	18-50	50-75	75-110	110-150		
	MI	NIMUM C	OVER (F	<del>-</del> T)		
12-42	2.0	2.5	3.0	3.0		
48-72	3.0	3.0	3.5	4.0		
78-120	3.0	3.5	4.0	4.0		
126-144	3.5	4.0	4.5	4.5		

\*MINIMUM COVER MAY VARY, DEPENDING ON LOCAL CONDITIONS. THE CONTRACTOR MUST PROVIDE THE ADDITIONAL COVER REQUIRED TO AVOID DAMAGE TO THE PIPE. MINIMUM COVER IS MEASURED FROM THE TOP OF THE PIPE TO THE TOP OF THE MAINTAINED CONSTRUCTION ROADWAY SURFACE.

### CONSTRUCTION LOADING DIAGRAM SCALE: N.T.S.

#### SPECIFICATION FOR DESIGNED DETENTION SYSTEM:

#### SCOPI

THIS SPECIFICATION COVERS THE MANUFACTURE AND INSTALLATION OF THE DESIGNED DETENTION SYSTEM DETAILED IN THE PROJECT PLANS.

#### MATERIAL

THE MATERIAL SHALL CONFORM TO THE APPLICABLE REQUIREMENTS LISTED BELOW:

ALUMINIZED TYPE 2 STEEL COILS SHALL CONFORM TO THE APPLICABLE REQUIREMENTS OF AASHTO M-274 OR ASTM A-92.

THE GALVANIZED STEEL COILS SHALL CONFORM TO THE APPLICABLE REQUIREMENTS OF AASHTO M-218 OR ASTM A-929

THE POLYMER COATED STEEL COILS SHALL CONFORM TO THE APPLICABLE REQUIREMENTS OF AASHTO M-246 OR ASTM A-742

THE ALUMINUM COILS SHALL CONFORM TO THE APPLICABLE REQUIREMENTS OF AASHTO M-197 OR ASTM B-744.

#### CONSTRUCTION LOADS

CONSTRUCTION LOADS MAY BE HIGHER THAN FINAL LOADS. FOLLOW THE MANUFACTURER'S OR NCSPA GUIDELINES.

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**CONSTRUCTION LOADS** 

#### PIPE

THE PIPE SHALL BE MANUFACTURED IN ACCORDANCE TO THE APPLICABLE REQUIREMENTS LISTED BELOW:

ALUMINIZED TYPE 2: AASHTO M-36 OR ASTM A-760

GALVANIZED: AASHTO M-36 OR ASTM A-760

POLYMER COATED: AASHTO M-245 OR ASTM A-762

ALUMINUM: AASHTO M-196 OR ASTM B-745

#### HANDLING AND ASSEMBLY

SHALL BE IN ACCORDANCE WITH NCSP'S (NATIONAL CORRUGATED STEEL PIPE ASSOCIATION) FOR ALUMINIZED TYPE 2, GALVANIZED OR POLYMER COATED STEEL. SHALL BE IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS FOR ALUMINUM PIPE.

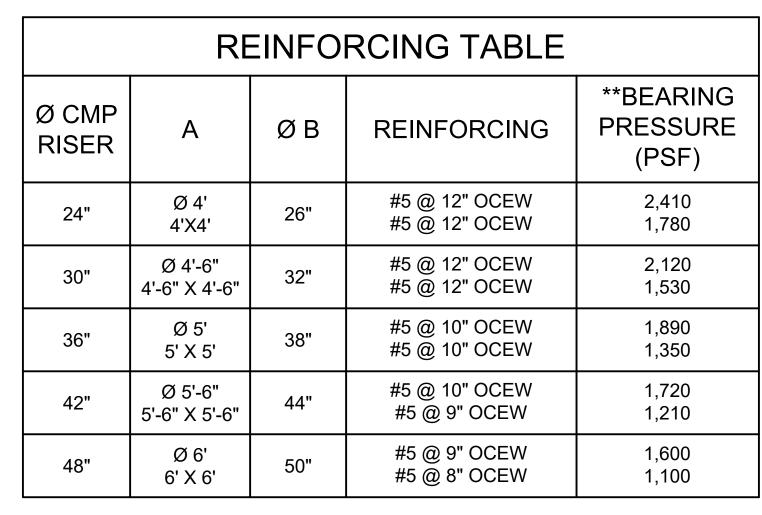
#### INSTALLATION

SHALL BE IN ACCORDANCE WITH AASHTO STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES, SECTION 26, DIVISION II DIVISION II OR ASTM A-798 (FOR ALUMINIZED TYPE 2, GALVANIZED OR POLYMER COATED STEEL) OR ASTM B-788 (FOR ALUMINUM PIPE) AND IN CONFORMANCE WITH THE PROJECT PLANS AND SPECIFICATIONS. IF THERE ARE ANY INCONSISTENCIES OR CONFLICTS THE CONTRACTOR SHOULD DISCUSS AND RESOLVE WITH THE SITE ENGINEER.

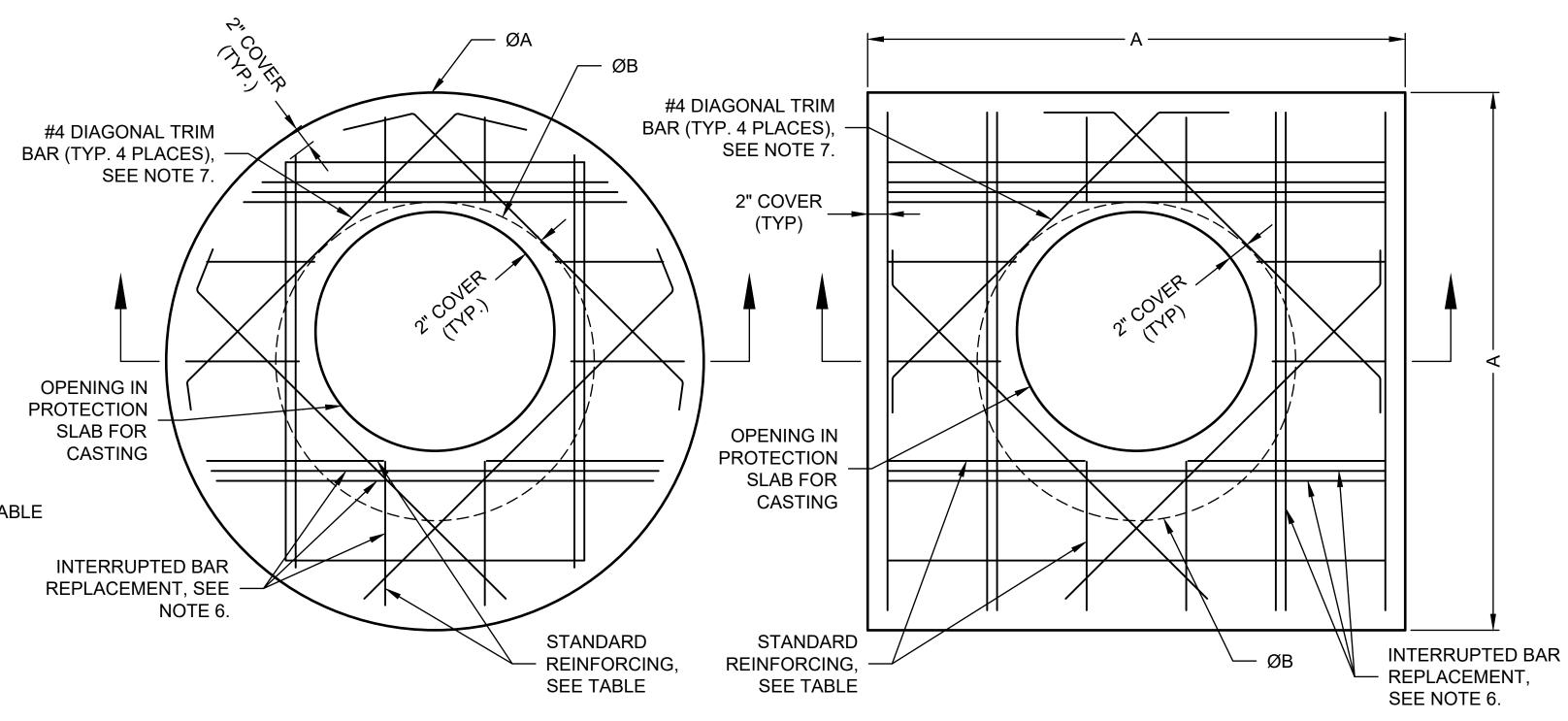
IT IS ALWAYS THE RESPONSIBILITY OF THE CONTRACTOR TO FOLLOW OSHA GUIDELINES FOR SAFE PRACTICES.

# GASKET MATERIAL SUFFICIENT TO PREVENT SLAB FROM BEARING ON RISER TO BE PROVIDED BY CONTRACTOR.

#### **SECTION VIEW**



\*\* ASSUMED SOIL BEARING CAPACITY



#### ROUND OPTION PLAN VIEW

#### NOTES:

- 1. DESIGN IN ACCORDANCE WITH AASHTO, 17th EDITION.
- 2. DESIGN LOAD HS25.
- 3. EARTH COVER = 1' MAX.
- 4. CONCRETE STRENGTH = 3,500 psi
- 5. REINFORCING STEEL = ASTM A615, GRADE 60.
- 6. PROVIDE ADDITIONAL REINFORCING AROUND OPENINGS EQUAL TO THE BARS INTERRUPTED, HALF EACH SIDE. ADDITIONAL BARS TO BE IN THE SAME PLANE.

#### SQUARE OPTION PLAN VIEW

- 7. TRIM OPENING WITH DIAGONAL #4 BARS, EXTEND BARS A MINIMUM OF 12" BEYOND OPENING, BEND BARS AS REQUIRED TO MAINTAIN BAR COVER.
- 8. PROTECTION SLAB AND ALL MATERIALS TO BE PROVIDED AND INSTALLED BY CONTRACTOR.
- 9. DETAIL DESIGN BY DELTA ENGINEERING, BINGHAMTON, NY.

#### MANHOLE CAP DETAIL

SCALE: N.T.S.

C-42<sub>50</sub>

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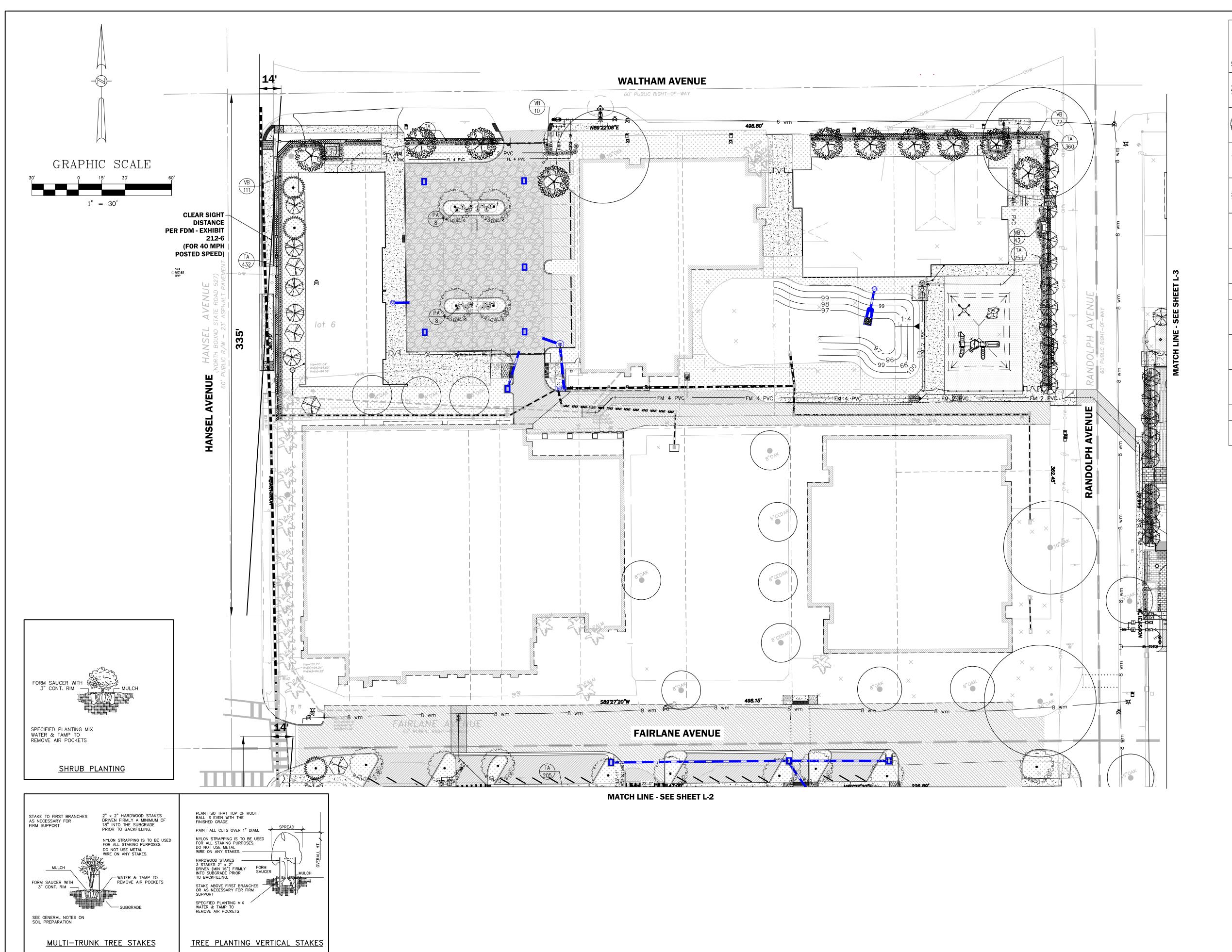
CMP DETENTION SYSTEMS

CONTECH
DYODS

DRAWING

754118-015 Cornerstone Charter Academy Exfiltration 2 24" CMP Belle Isle, FL

PROJECT No.:	SEQ. I	No.:	DATE:
754118	02	20	6/20/2023
DESIGNED:		DRAW	N:
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	FLORIDA NATIVE LANDSCAPE SCHEDULE						
			CAI	NOPY TREES			
SYMBOL	ABR.	BOTANICAL NAME	COMMON NAME	MINIMUM SIZE	QUANTITY	REMARKS	NATIVE
4 - 3 - 3 - 3 - 3 - 3 - 3 - 3 - 3 - 3 -	QV	QUERCUS VIRIGINIA 'HIGH RISE'	HIGH RISE LIVE OAK	12' HT. 4" CAL.	42	SPECIMEN	Y
	AR	ACER RUBRUM	RED MAPLE	10'-12' HT. 3" CAL.	1	SPECIMEN	Y
Salvana Salvan	UA	ULMUS ALATA	WINGED ELM	10'-12' HT. 3" CAL.	10	SINGLE STRAIGHT TRUNK	Y
20000000000000000000000000000000000000	LL	LIGUSTRUM LUCIDUM	TREE LIGUSTRUM	10'- HT.	10		Y
	IA	ILEX ATTENUATA 'EAGLESTON'	EAGLESTON HOLLY	6'-8'' HT. 3" CAL.	34		Y
	LI	LAGERSTROEMIA INDICA 'NATCHEZ'	NATCHEZ CRAPE MYRTLE	10' HT	7		Y
				SHRUBS			
	VB	VIBURNUM ODORATISSIMUM	VIBURNUM	30" HT. 36" O.C.	560		Y
	PA	PLUMBAGO AURICULATA	PLUMBAGO	3 GAL. 24" HT. 36" O.C.	16	8	Y
	TA	DWARF ASIATIC JASMINE	TRACHELOSPERMUM ASIATICUM	1 GAL. 12" O.C.	2,919		Y
			S	OD/MISC.		<i></i>	
*	SOD	BAHIA HYBRID		QTY. BY CONTRAC	CTOR		

08/14/2023 3 REVISED PER ORANGE COUNTY FIRE DEPT. DATED 08/07/2023 VP/MS JAA
08/15/2023 4 REVISED PER SJRWMD COMMENTS DATED 07/24/2023 VP/MS JAA
08/16/2023 5 REVISED PER OCU COMMENTS DATED 07/27/2023 VP/MS JAA
08/17/2023 6 REVISED PER CITY OF BELLE ISLE COMMENTS DATED 08/04/2023 VP/MS JAA
08/17/2023 7 REVISED PER FDOT COMMENTS DATED 07/11/2023 VP/MS JAA
10/09/2023 8 REVISED PER CITY COMMENTS DATED 10/04/2023 VP/MS JAA
DATE REVISIONS BY CHECKED

CORNERSTONE CHARTER ACADEMY
CONSTRUCTION PLANS
CITY OF BELLE ISLE, FLORIDA



5127 S. Orange Avenue, Suite 200 Orlando, FL 32809 Phone: 407-895-0324 Fax: 407-895-0325	
Fax: 407-895-0325	

www.feg-inc.us

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22-010

1" = 30'

JUNE 23, 2023

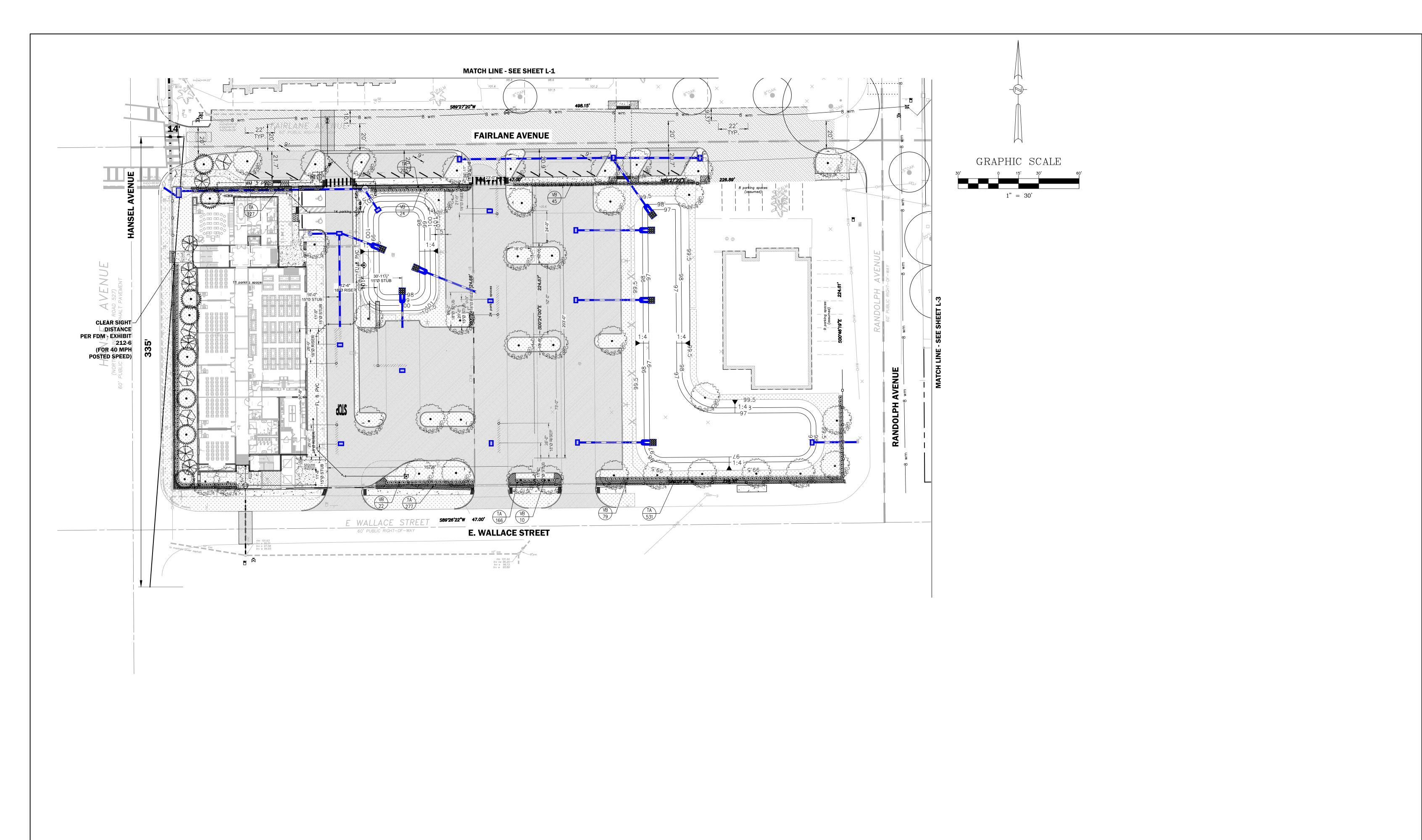
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08/16/2023	REVISED PER OCU COMMENTS DATED 07/27/2023	P/MS	JAA
08/17/2023	REVISED PER CITY OF BELLE ISLE COMMENTS DATED 08/04/2023 VF	P/MS	JAA
08/17/2023	REVISED PER FDOT COMMENTS DATED 07/11/2023	P/MS	JAA
10/09/2023	REVISED PER CITY COMMENTS DATED 10/04/2023	P/MS	JAA
DATE	REVISIONS	BY (	CHECKED

CORNERSTONE CHARTER ACADEMY CONSTRUCTION PLANS CITY OF BELLE ISLE, FLORIDA



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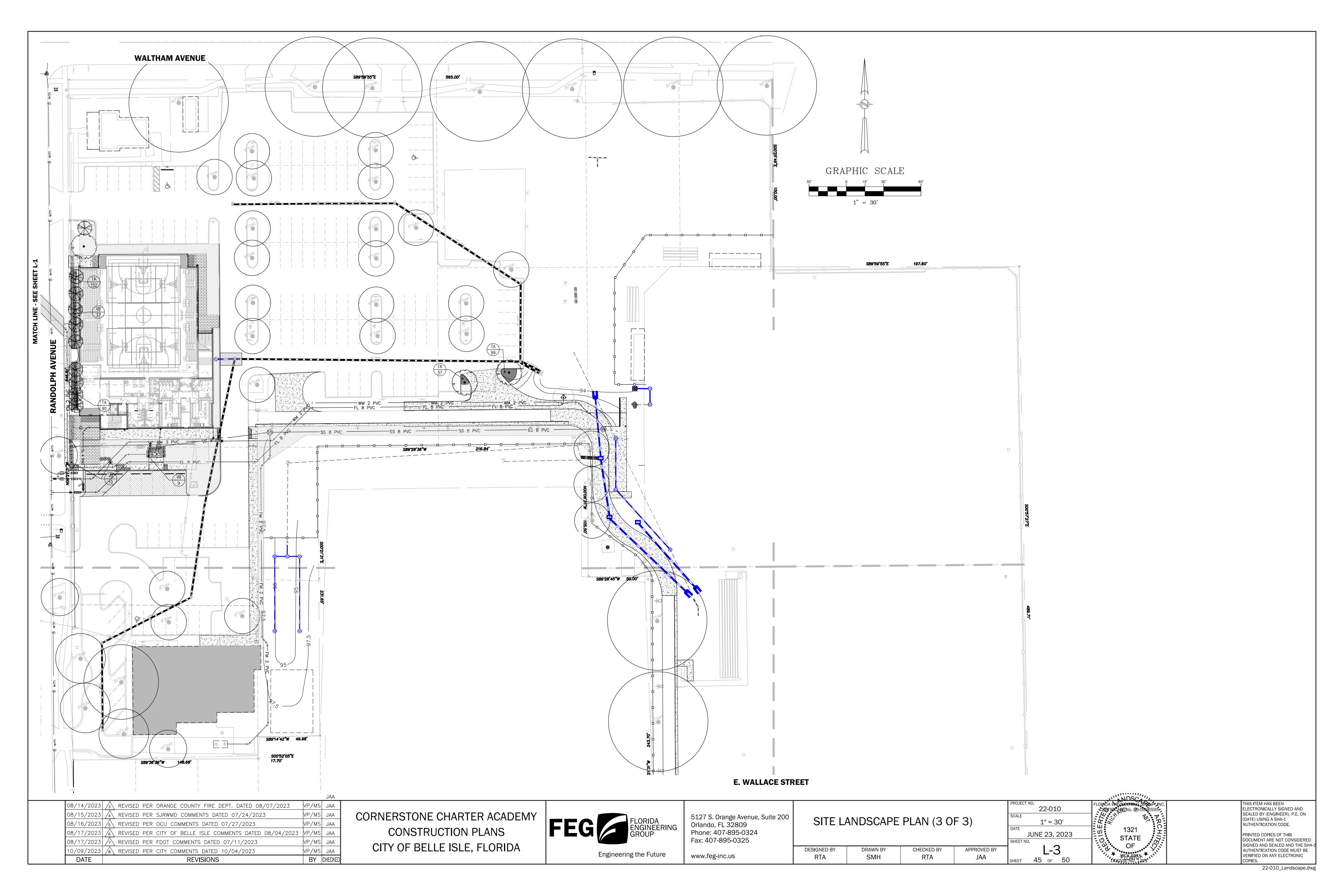
5127 S. Orange Avenue, Suite 200 Orlando, FL 32809 Phone: 407-895-0324 Fax: 407-895-0325	SITE LANDSCAPE PLAN (2 OF 3)			
	DESIGNED BY	DRAWN BY	CHECKED BY	APPRO
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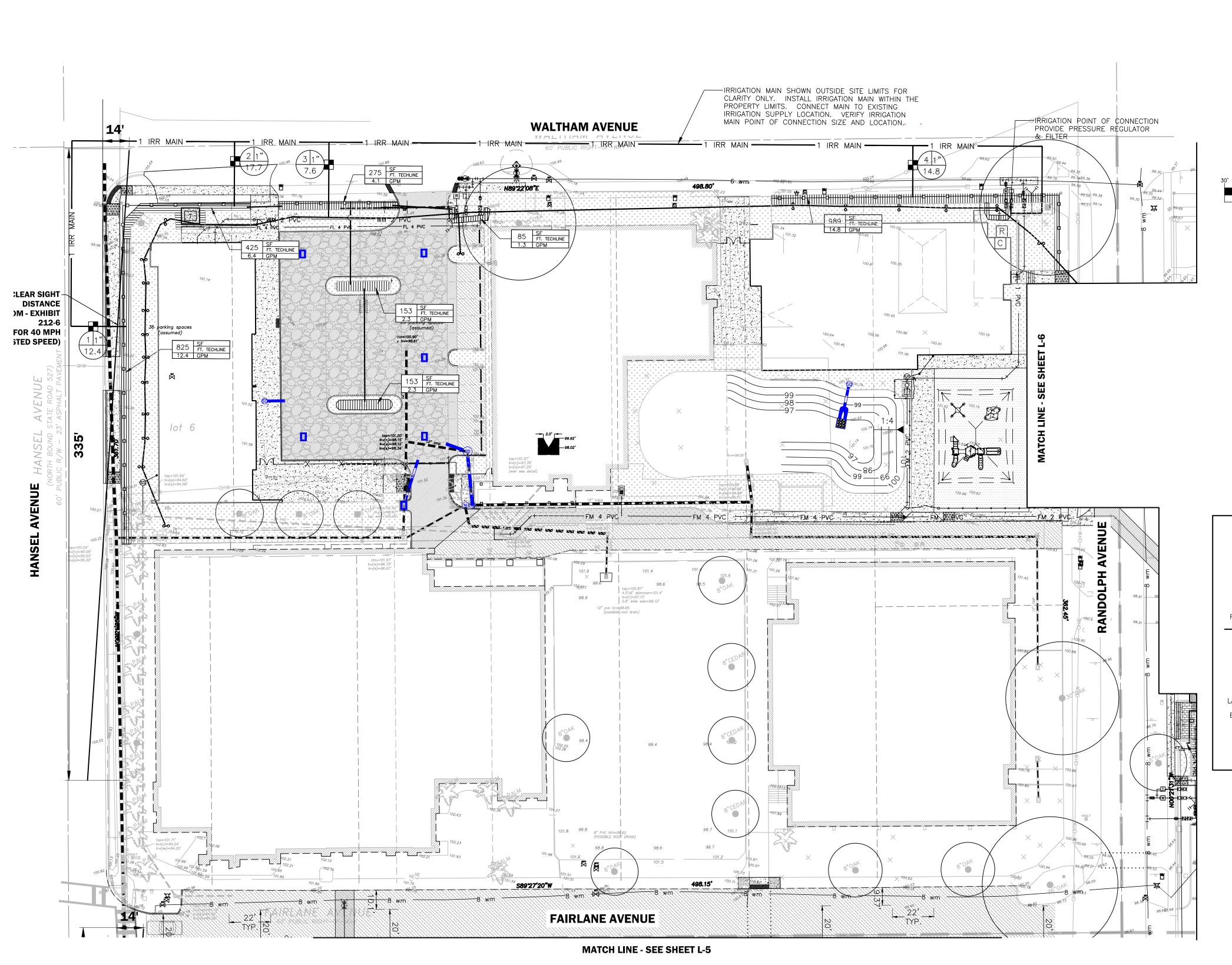
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JUNE 23, 2023	STATE
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SHEET 44 OF 50	LICENSE NO 1321

APPROVED BY

JAA

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#### **IRRIGATION NOTES:**

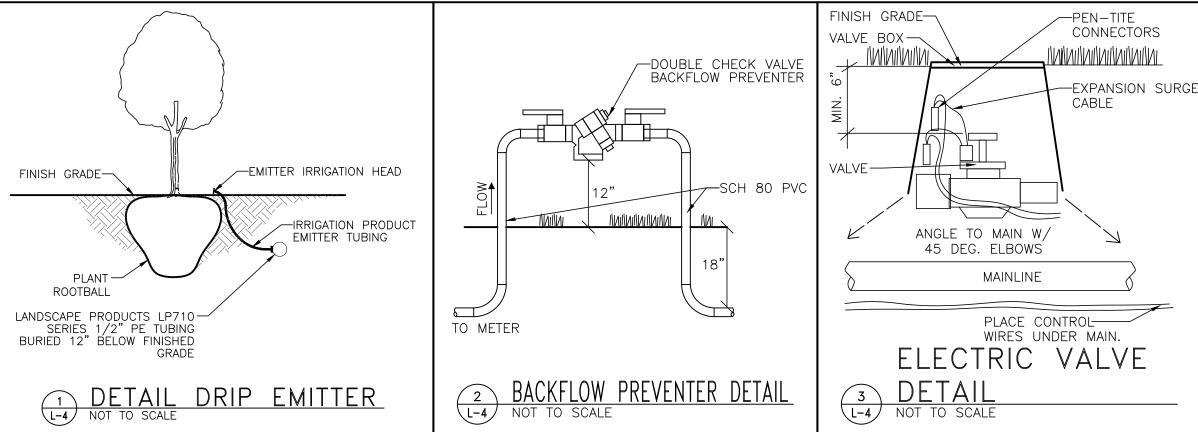
GRAPHIC SCALE

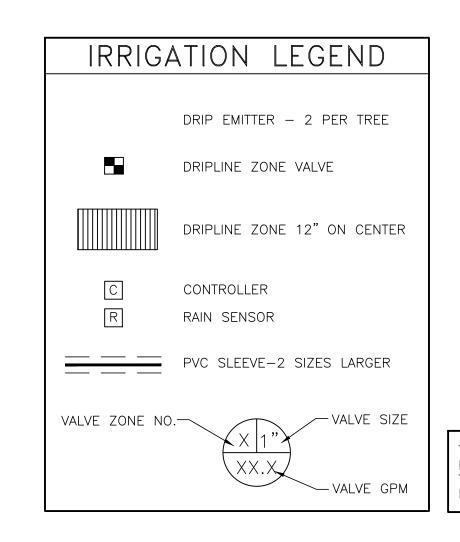
1" = 30'

- 1. CONTRACTOR SHALL INSTALL A COMPLETE IRRIGATION SYSTEM WHICH PROVIDES 100% COVERAGE OF ALL PLANTED AREAS PROVIDE ALL PIPING, VALVES, VALVE BOXES, & WIRING AS REQUIRED FOR A COMPLETE & OPERATIONAL IRRIGATION SYSTEM.
- 2. ALL IRRIGATION PIPING WHICH IS LOCATED UNDER PAVEMENT SHALL BE ENCASED IN A SLEEVE TWO SIZES LARGER THAN THE IRRIGATION LINE.
- 3. CONTRACTOR TO PROVIDE A DOUBLE DETECTOR CHECK VALVE AT THE POINT OF WATER SERVICE IN ADDITION TO AN IRRIGATION METER. COORDINATE LOCATION WITH OTHER UTILITIES & GENERAL CONTRACTOR.
- 4. CONTRACTOR IS RESPONSIBLE FOR OBTAINING ANY & ALL PERMITS REQUIRED FOR THE INSTALLATION OR CONSTRUCTION OF THE WORK INCLUDED IN THIS CONTRACT.
- 5. COORDINATE LOCATION OF IRRIGATION CONTROLLER WITH OWNER & GENERAL CONTRACTOR.
- 6. PROVIDE A RAIN SWITCH EQUIVALENT TO TORO RAIN SWITCH #850-74. MOUNT ON BUILDING IN AN INCONSPICUOUS LOCATION EXPOSED TO NORMAL RAINFALL & "PER MFRS. SUGGESTIONS.
- 7. OBTAIN INSPECTION & APPROVAL OF ALL BURIED PIPING PRIOR TO BACKFILLING.

FOR POWER REQUIREMENTS AND CONFIRM LOCATION WITH OWNER.

- ADJUST DESIGN OF SYSTEM WHERE NECESSARY TO AVOID CONFLICTS IN THE FIELD WITH LANDSCAPING
- OR UTILITY LINES. 9. IRRIGATION CONTROLLER IS HUNTER IRRIGATION CONTROLLER SIZED APPROPRIATELY TO SUPPORT THE SYSTEM DESIGN. GET APPROVAL FROM OWNER PRIOR TO IMNSTALLATION. COORDINATE WITH CONTRACTOR
- 10. PROGRAM IRRIGATION CONTROLLER TO PROVIDE 0.5 INCH OF WATER PER WEEK. SCHEDULE HEADS TO OPERATE DURING MORNING HOURS.
- 11. ALL MAINLINE PIPING SHALL BE BURIED TO A MINIMUM DEPTH OF 18" OF COVER. ALL LATERAL PIPING SHALL BE BURIED TO A MINIMUM DEPTH OF 12" OF COVER.
- 12. THROTTLE ALL VALVES ON SHRUB LINES AS REQUIRED TO PREVENT FOGGING.
- 13. ALL CONTROL WIRE SPLICES SHALL BE MADE IN VALVE BOXES USING SNAP-TITE CONNECTORS &
- 14. THE CONTRACTOR SHALL PREPARE AN AS-BUILT DRAWING SHOWING ALL IRRIGATION INSTALLATIONS.THE DRAWING SHALL LOCATE ALL VALVES & MAINLINES BY SHOWING EXACT MEASUREMENTS FROM HARD SURFACES OR STRUCTURES.
- 15. ANY PIPING SHOWN OUTSIDE THE PROPERTY LINE OR RUNNING OUTSIDE A IRRIGATION AREA IS SHOWN THERE FOR CLARITY ONLY. ALL LINES SHALL BE INSTALLED ON THE PROPERTY & INSIDE THE IRRIGATIOND AREAS.
- 16. ALL WORK SHALL BE GUARANTEED FOR ONE YEAR FROM THE DATE OF FINAL ACCEPTANCE AGAINST ALL DEFECTS IN EQUIPMENT & WORKMANSHIP.
- 17. ELECTRICAL SERVICE TO ALL EQUIPMENT SHALL BE PROVIDED TO A JUNCTION BOX AT THE EQUIPMENT LOCATION BY OTHERS.
- 18. ALL IRRIGATION SLEEVES ARE TO HAVE BEEN INSTALLED BY GENERAL CONTRACTOR AT TIME OF UTILITY CONSTRUCTION.





22-010

TOTAL IRRIGATED AREA = 8,287 SF REQUIRED IRRIGATION = 0.5"/WEEK TOTAL IRRIGATION DEMAND = 2,595 GAL/WEEK = 371 GPD IRRIGATION TO BE PROVIDED THRU 1" IRRIGATION METER

						0, 0,
08/14/2023	3	REVISED	PER	ORANGE COUNTY FIRE DEPT. DATED 08/07/2023	VP/MS	JAA
08/15/2023	4	REVISED	PER	SJRWMD COMMENTS DATED 07/24/2023	VP/MS	JAA
08/16/2023	5	REVISED	PER	OCU COMMENTS DATED 07/27/2023	VP/MS	JAA
08/17/2023	6	REVISED	PER	CITY OF BELLE ISLE COMMENTS DATED 08/04/2023	VP/MS	JAA
08/17/2023	7	REVISED	PER	FDOT COMMENTS DATED 07/11/2023	VP/MS	JAA
10/09/2023	8	REVISED	PER	CITY COMMENTS DATED 10/04/2023	VP/MS	JAA
DATE		•		REVISIONS	BY	CHECKED

CORNERSTONE CHARTER ACADEMY CONSTRUCTION PLANS CITY OF BELLE ISLE, FLORIDA



5127 S. Orange Avenue, Suite 200 Orlando, FL 32809	
Phone: 407-895-0324	
Fax: 407-895-0325	

www.feg-inc.us

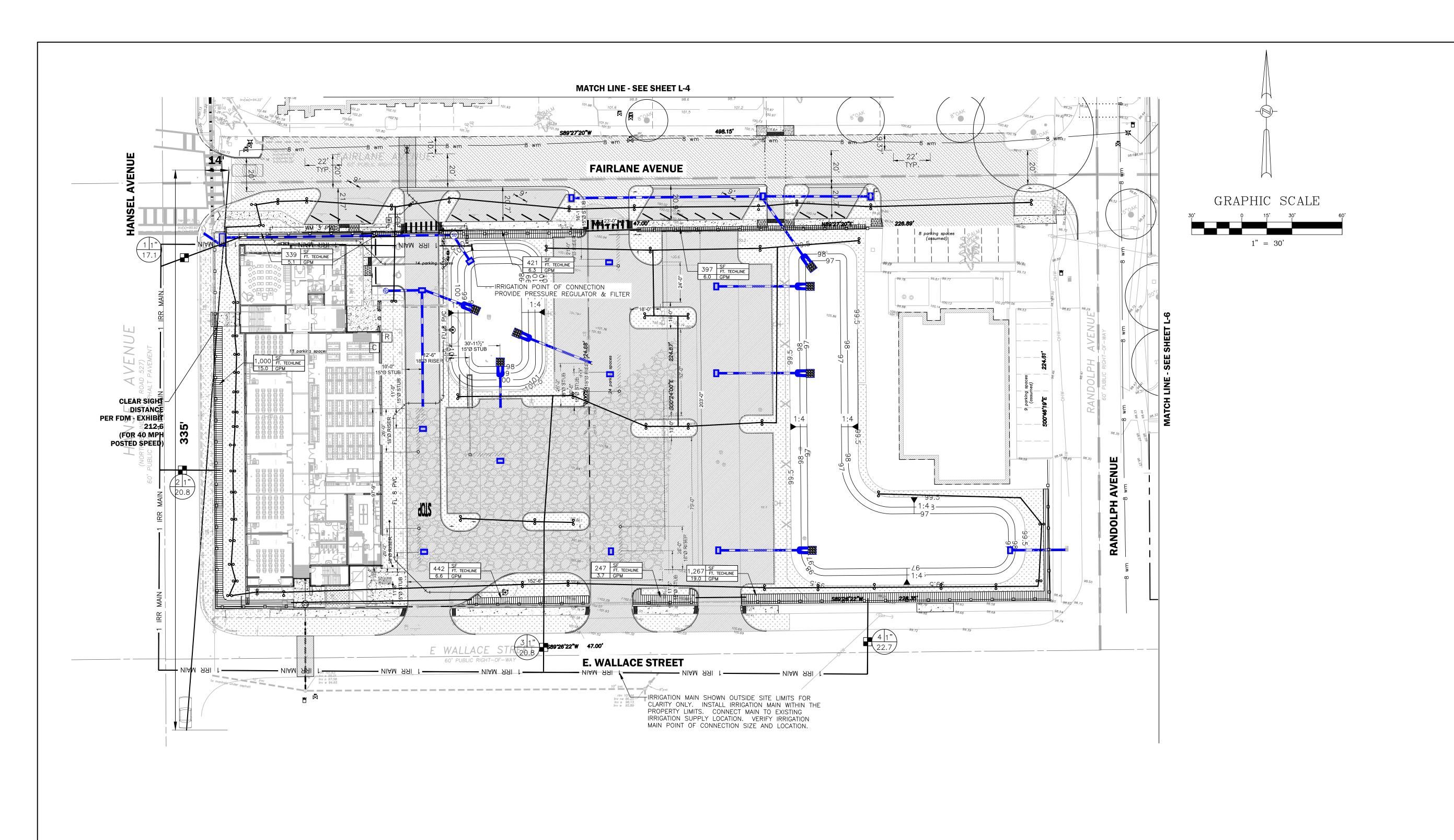
SITE IRRIGATION PLAN (4 OF 6)	

SITE IF	1" = 30'			
		•	,	JUNE 23, 2023
				SHEET NO.
DESIGNED BY RTA	DRAWN BY SMH	CHECKED BY RTA	APPROVED BY  JAA	L-4   SHEET 46 OF 50

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THIS ITEM HAS BEEN ELECTRONICALLY SIGNED AND SEALED BY (ENGINEER), P.E. ON (DATE) USING A SHA-1 AUTHENTICATION CODE.

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			JAA
08/14/2023	REVISED PER ORANGE COUNTY FIRE DEPT. DATED 08/07/2023	VP/MS	JAA
08/15/2023	REVISED PER SJRWMD COMMENTS DATED 07/24/2023	VP/MS	JAA
08/16/2023	REVISED PER OCU COMMENTS DATED 07/27/2023	VP/MS	JAA
08/17/2023	REVISED PER CITY OF BELLE ISLE COMMENTS DATED 08/04/2023	VP/MS	JAA
08/17/2023	REVISED PER FDOT COMMENTS DATED 07/11/2023	VP/MS	JAA
10/09/2023	8 REVISED PER CITY COMMENTS DATED 10/04/2023	VP/MS	JAA
DATE	REVISIONS	BY	CHECKED

CORNERSTONE CHARTER ACADEMY
CONSTRUCTION PLANS
CITY OF BELLE ISLE, FLORIDA



5127 S. Orange Avenue, Suite 200 Orlando, FL 32809 Phone: 407-895-0324 Fax: 407-895-0325

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SITE IRRIGATION PLAN (5 OF 6)	

CHECKED BY

RTA

APPROVED BY

JAA

DRAWN BY

SMH

DESIGNED BY

RTA

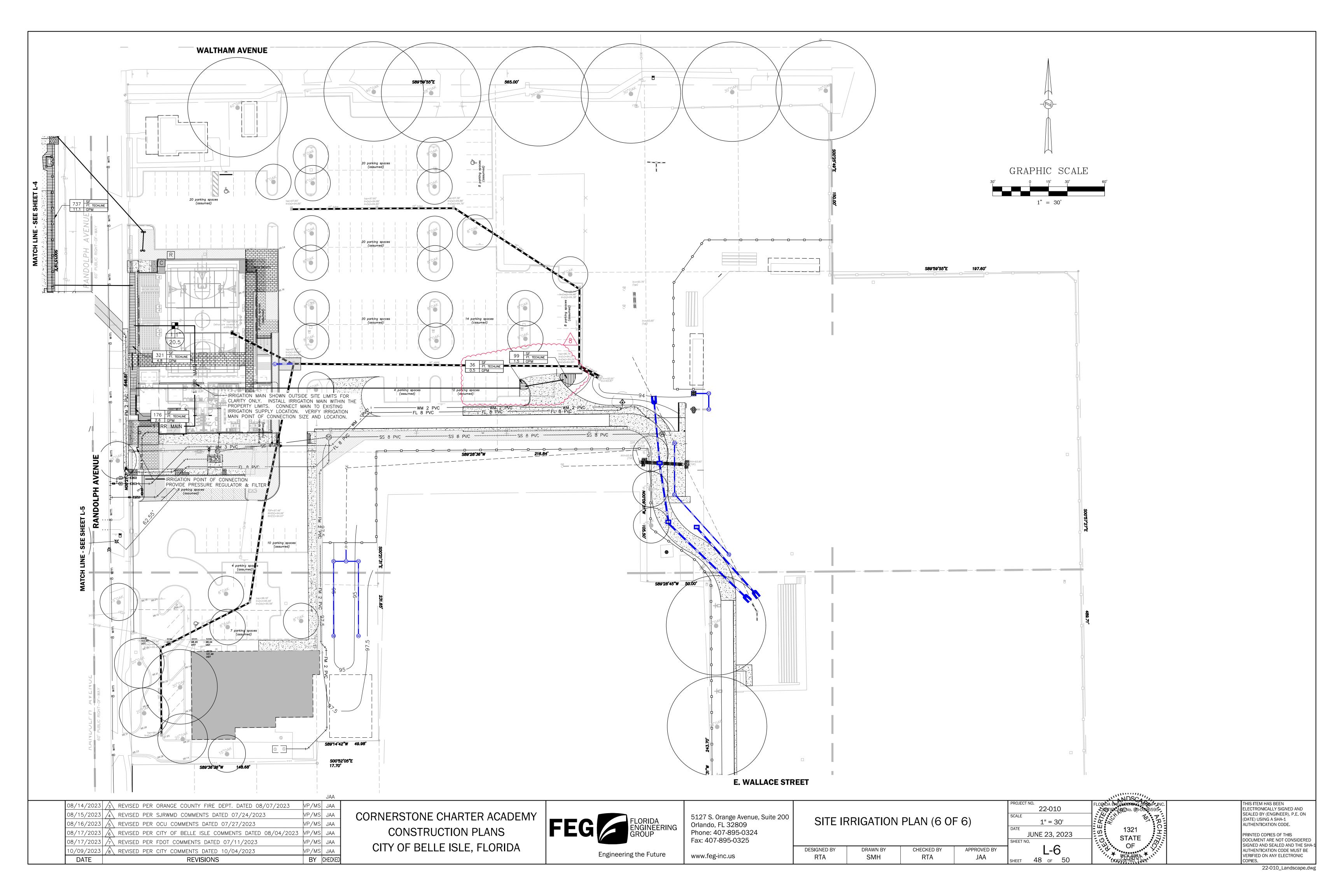
	NDSCA
22-010	FLORIDA ENGINEETING GRAUP, IN CERTIFICATEDNO. FB-0006595
1" = 30'	A PR
INE 23, 2023	1321 E
<b>L-5</b> 47 of 50	OF PICK ART NATURE LIGHT NEW TON THE PROPERTY OF TRANSPORT OF TRANSPOR

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22-010\_Landscape.dwg



.UMINAIF	JMINAIRE SCHEDULE										
SYMBOL	QTY	LABEL	ARRANGEMENT	MANUFACTURER	CATALOG NUMBER	MOUNTING	EMERGENCY	LLF	LUMINAIRE LUMENS	LUMINAIRE WATTS	ARRANGEMENT WATTS
4	10	SA	Single	Lithonia Lighting	DSX0 LED P7 40K 70CRI T4M HS	POLE MOUNTED: 20' A.F.G.	N/A	0.900	17739	170.81	170.81
4	1	SB	Single	Lithonia Lighting	DSX0 LED P7 40K 70CRI BLC3	POLE MOUNTED: 20' A.F.G.	N/A	0.900	14777	170.81	170.81
	3	sc	Back-Back	Lithonia Lighting	DSX0 LED P7 40K 70CRI T5M	POLE MOUNTED: 20' A.F.G.	N/A	0.900	21214	170.81	341.62
4	1	SD	Single	Lithonia Lighting	DSX0 LED P7 40K 70CRI RCCO	POLE MOUNTED: 20' A.F.G.	N/A	0.900	14914	170.81	170.81
<b>4</b>	10	SF1	Single	Lithonia Lighting	DSX0 LED P4 40K 70CRI BLC3	POLE MOUNTED: 20' A.F.G.	N/A	0.900	8094	93.04	93.04
<b>4</b>	2	SF2	Single	Lithonia Lighting	DSX0 LED P4 40K 70CRI RCCO	POLE MOUNTED: 20' A.F.G.	N/A	0.900	8170	93.04	93.04

CALCULATION SUMMARY										
LABEL	CALC TYPE	UNITS	SPACING L-R (FT)	SPACING T-B (FT)	HEIGHT (FT)	AVG	мах	MIN	AVG/MIN	MAX/MIN
QUEUING LANE	Illuminance	Fc	5	5	0	2.42	5.3	1.1	2.20	4.82
SITE - NW	Illuminance	Fc	8	8	0	4.39	6.6	1.1	3.99	6.00
SITE - SW	Illuminance	Fc	8	8	o	4.18	8.6	1.1	3.80	7.82
SPILL	Illuminance	Fc	8	N.A.	N.A.	0.03	0.5	0.0	N.A.	N.A.

8323 NW 12th St. Suite 106 Doral, FL 33126

tel: 305.593.9959 AA #26001093 www.civicagroup.com PROJECT:

CORNERSTONE CHARTER ACADEMY



6300 HANSEL AVE. BELLE ISLE, FL 32809

#### PARCEL ID: 24-23-29-8820-00-050 24-23-29-3400-00-073

24-23-29-3400-00-092 24-23-29-3400-00-093 24-23-29-3400-00-094 24-23-29-3400-00-095 24-23-29-3400-00-114

APPLICANT: CORNERSTONE CHARTER ACADEMY 906 WALTHAM AVE. BELLE ISLE, FL 32809

ISSUED FOR: **SUBMITTAL SET** 

CIVICA PROJECT No 220208

CONSULTANTS:

ISSUED FOR BY

DRAWN BY APPROVED BY TM JG/RL DATE SCALE: AS SHOWN

1st FL FFE: (SEE PLANS) NAVD (1988) SEAL/SIGNATURE



ROLANDO LLANES

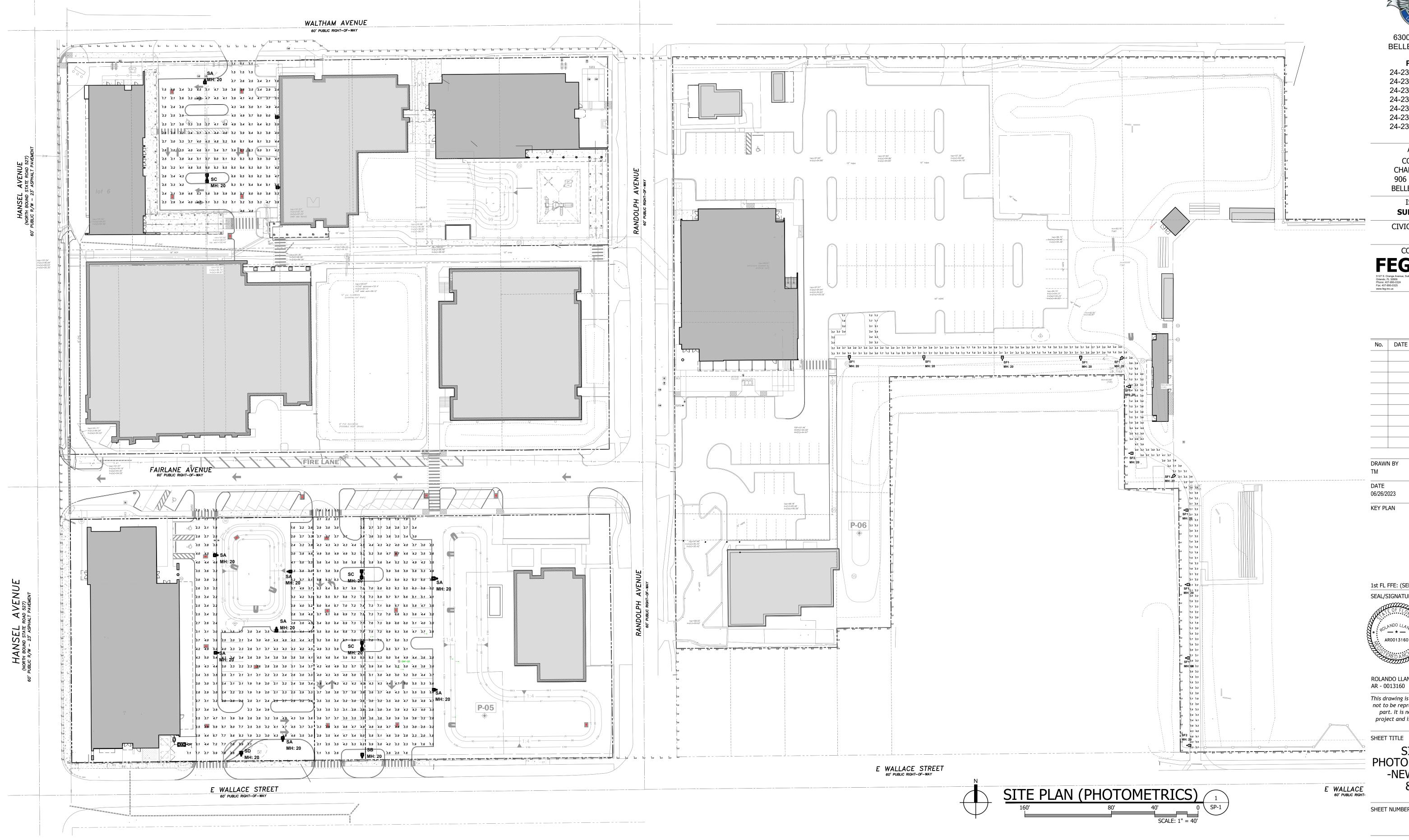
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SITE PLAN
PHOTOMETRIC CALCS
-NEW PARKING-& AREAS

SHEET NUMBER

SP-1



Lumen Output

COMMERCIAL OUTDOOR

One Lithonia Way • Conyers, Georgia 30012 • Phone: 1-800-705-SERV (7378) • www.lithonia.com

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CIVICA 8323 NW 12th St. Suite 106

Doral, FL 33126 tel: 305.593.9959 AA #26001093 www.civicagroup.com PROJECT:

#### CORNERSTONE **CHARTER ACADEMY**



6300 HANSEL AVE. BELLE ISLE, FL 32809

#### PARCEL ID:

24-23-29-8820-00-050 24-23-29-3400-00-073 24-23-29-3400-00-092 24-23-29-3400-00-093 24-23-29-3400-00-094 24-23-29-3400-00-095 24-23-29-3400-00-114

APPLICANT: CORNERSTONE CHARTER ACADEMY 906 WALTHAM AVE.

ISSUED FOR:

BELLE ISLE, FL 32809

**SUBMITTAL SET** CIVICA PROJECT No:

220208





nLIGHT AIR CONTROLS	DRAWN BY	APPROVED BY	
The DSX0 LED area luminaire is also available with nLight® AIR for the ultimate in wireless control. This powerful controls platform provides out-of-the-box basic motion sensing and photocontrol functionality and is suitable for mounting	TM	JG/ RL	
heights up to 40 feet. Once commissioned using a smartphone and the easy-to- use CLAIRITY app, nLight AIR equipped luminaries can be grouped, resulting	DATE	SCALE:	
in motion sensor and photocell group response without the need for additional equipment. Scheduled dimming with motion sensor over-ride can be achieved when used with the nLight Eclypse. Additional information about nLight Air can be found here.	06/26/2023	AS SHOWN	
INSTALLATION Integral mounting arm allows for fast mounting using Lithonia standard #8 drilling and accommodates pole drilling's from 2.41 to 3.12" on center. The standard "SPA" option for square poles and the "RPA" option for round poles use the #8 drilling. For #5 pole drillings, use SPA5 or RPA5. Additional mountings are available including a wall bracket (WBA) and mast arm (MA) option that allows luminaire attachment to a 2 3/8" beginning the standment to a 2 3/8" beginning the standment to a 2 3/8".	KEY PLAN		

International Dark-Sky Association (IDA) Fixture Seal of Approval (FSA) is available 5-year limited warranty. This is the only warranty provided and no other statements in this specification sheet create any warranty of any kind. All other express and implied warranties are disclaimed. Complete warranty terms located 1st FL FFE: (SEE PLANS) NAVD (1988)

SEAL/SIGNATURE

SHEET TITLE

LIGHT FIXTURE **CUT SHEETS** & AREAS

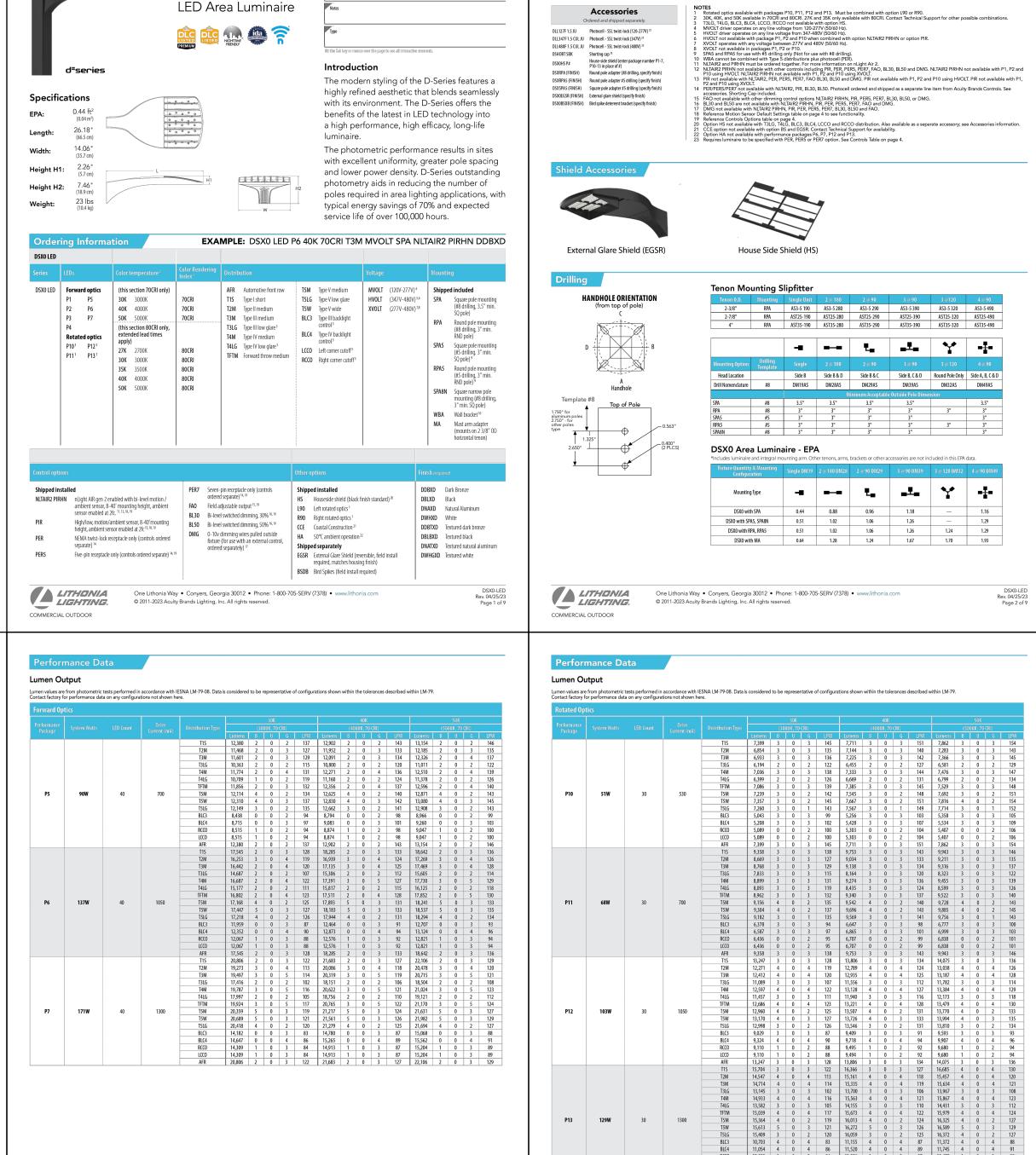
SHEET NUMBER





E-MAIL: JOHNL@P-LS.COM





**D-Series Size 0** 

LED Area Luminaire

DIC DIC INSTED NONTIME PRENDEY

LITHONIA LIGHTING.

COMMERCIAL OUTDOOR

One Lithonia Way • Conyers, Georgia 30012 • Phone: 1-800-705-SERV (7378) • www.lithonia.com

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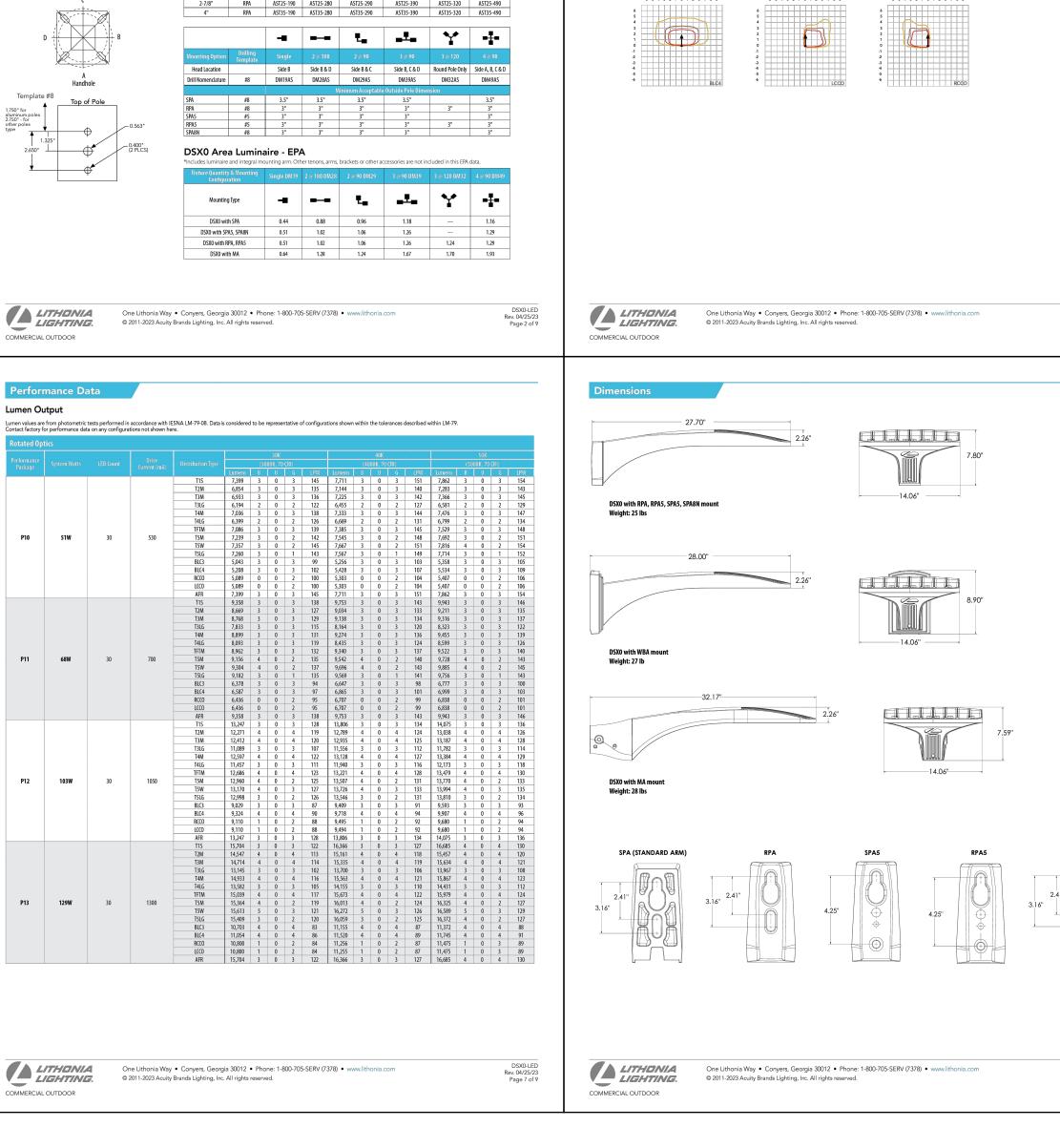
Ordering Information

Accessories

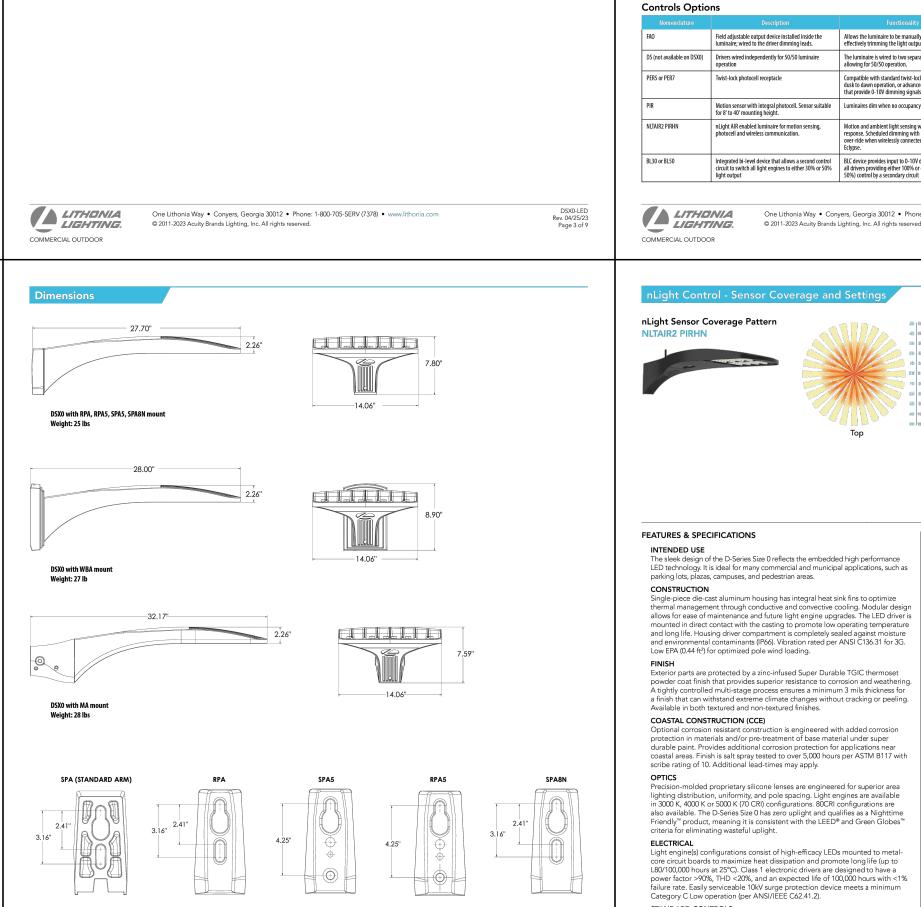
Ordered and shipped separately.

DLL127F 1.5 JU Photocell - SSL twist-lock (120-277V) <sup>23</sup>

DLL347F1.5 CULJU Photocell - SSL twist-lock (347V)



SITE LIGHTING FIXTURES - CUT SHEETS

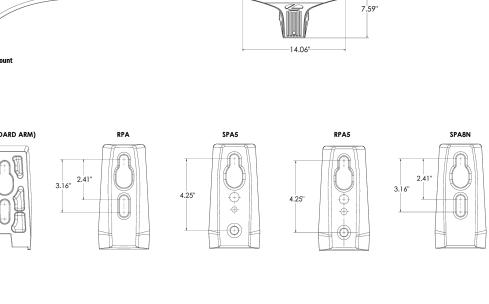


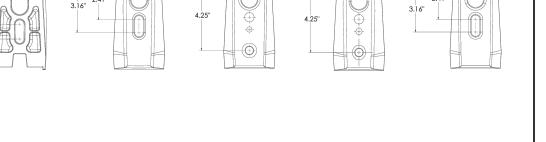
Photometric Diagrams

To see complete photometric reports or download .ies files for this product, visit Lithonia Lighting's homepage

Isofootcandle plots for the DSX0 LED P7 40K 70CRI, Distances a

0.5 fc





		L80/100,000 hours at 25°C). Class 1 electronic drivers are desip power factor >90%, THD <20%, and an expected life of 100,0 failure rate. Easily serviceable 10kV surge protection device m Category C Low operation (per ANSI/IEEE C62.41.2).
		STANDARD CONTROLS  The DSX0 LED area luminaire has a number of control options standard with 0-10V dimming driver. Dusk to dawn controls ce optional NEMA twist-lock photocell receptacles. PIR integrate with on-board photocell feature field-adjustable programing mounting heights up to 40 feet. Control option BL features a allows a second control circuit to switch all light engines to eit light output.

DSX0-LED Rev. 04/25/23 Page 8 of 9

core circuit boards to maximize neat dissipation and promote iong life (up to L80/100,000 hours at 25°C). Class 1 electronic drivers are designed to have a power factor >90%, THD <20%, and an expected life of 100,000 hours with <1% failure rate. Easily serviceable 10kV surge protection device meets a minimum Category C Low operation (per ANSI/IEEE C62.41.2).
STANDARD CONTROLS  The DSX0LED areal luminaire has a number of control options. DSX Size 0, comes standard with 0-10V dimming driver. Dusk to dawn controls can be utilized via optional NEMA twist-lock photocell receptacles. PIR integrated motion sensor with on-board photocell feature field-adjustable programing and are suitable for mounting heights up to 40 feet. Control option BL features a bi-level device that allows a second control circuit to switch all light engines to either 30% or 50%

Lumen Ambient Temperature (LAT) Multipliers

Projected LED Lumen Maintenance

FAO Dimming Settings

Motion Sensor Default Settings

**Electrical Load** 

Allows the luminaire to be manually dimmed, effectively trimming the light output.

One Lithonia Way • Conyers, Georgia 30012 • Phone: 1-800-705-SERV (7378) • www.lithonia.com

Motion sensor with integral photocell. Sensor suitable for 8' to 40' mounting height.

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The luminaire is wired to two separate circuits, allowing for 50/50 operation.

| Drive | Current (m.)) | Wattage | 120V | 208V | 240V | 277V | 347V | 480V

 P1
 20
 530
 34
 0.28
 0.16
 0.14
 0.12
 0.10
 0.07

 P2
 20
 700
 45
 0.38
 0.22
 0.19
 0.16
 0.13
 0.09

P3 20 1050 69 0.57 0.33 0.29 0.25 0.20 0.14

P4 20 1400 94 0.78 0.45 0.39 0.34 0.27 0.19

P5 40 700 89 0.75 0.43 0.38 0.33 0.26 0.19

P13 30 1300 129 1.07 0.62 0.54 0.46 0.37 0.27

Lumen Multiplier Availability Lumen Multiplier Availability Lumen Multiplier Availability

 5000K
 102%
 Standard
 92%
 Extended lead-time
 71%
 (see note)

 4000K
 100%
 Standard
 92%
 Extended lead-time
 67%
 (see note)

 3500K
 100%
 (see note)
 90%
 Extended lead-time
 63%
 (see note)

 3000K
 96%
 Standard
 87%
 Extended lead-time
 61%
 (see note)

 2700K
 94%
 (see note)
 85%
 Extended lead-time
 57%
 (see note)

Cannot be used with other controls options that need the 0-10V leads

Requires two separately switched circuits. Consider nLight AIR as a more cost effective alternative.

Cannot be used with other controls options that need the 0-10V leads.

nLight AIR sensors can be programmed and commissioned from the ground using the CIAIRity Pro app. Cannot be use with other controls options that need the 0–10V leads.

UL listed to meet U.S. and Canadian standards. UL Listed for wet locations. Light engines are IP66 rated; luminaire is IP66 rated. Rated for -40°C minimum ambient.

DesignLights Consortium® (DLC) Premium qualified product and DLC qualified

product. Not all versions of this product may be DLC Premium qualified or DLC qualified. Please check the DLC Qualified Products List at www.designlights.org QPL to confirm which versions are qualified.

Note: Actual performance may differ as a result of end-user environment and applicati All values are design or typical values, measured under laboratory conditions at  $25\,^\circ\text{C}$  . Specifications subject to change without notice.

for all products on this page utilizing 3000K color temperature only.

luminaire attachment to a 2 3/8" horizontal mast arm.

LISTINGS

WARRANTY

DSX0-LED Rev. 04/25/23 Page 4 of 9

Pins 4 & 5 to dimming leads on driver, Pins 6 & 7 are capped inside luminaire. Cannot be used with other controls options that need the 0-10V leads.

Note: Some LED types are available as per special request. Contact Technical Support for more information.

**LED Color Temperature / Color Rendering Multipliers** 

power factor >90%, THD <20%, and an expected life of 100,000 hours with <1% failure rate. Easily serviceable 10kV surge protection device meets a minimum Category C Low operation (per ANSI/IEEE C62.41.2).	
STANDARD CONTROLS  The DSX0 LED area luminaire has a number of control options. DSX Size 0, comes standard with 0-10V dimming driver. Dusk to dawn controls can be utilized via optional NEMA twist-lock photocell receptacles. PIR integrated motion sensor with on-board photocell feature field-adjustable programing and are suitable for mounting heights up to 40 feet. Control option BL features a bi-level device that allows a second control circuit to switch all light engines to either 30% or 50% light output.	

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LIGHTING.	© 2011-2023 Acuity Brands Lighting, Inc. All rigi		

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ROLANDO LLANES AR - 0013160

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SP-2

