

# SPRINGS ACADEMY PARKING LOT FOR SPRINGS CHAPEL CORPORATION

1106 NORTH ORANGE AVENUE, GREEN COVE SPRINGS, FL 32043

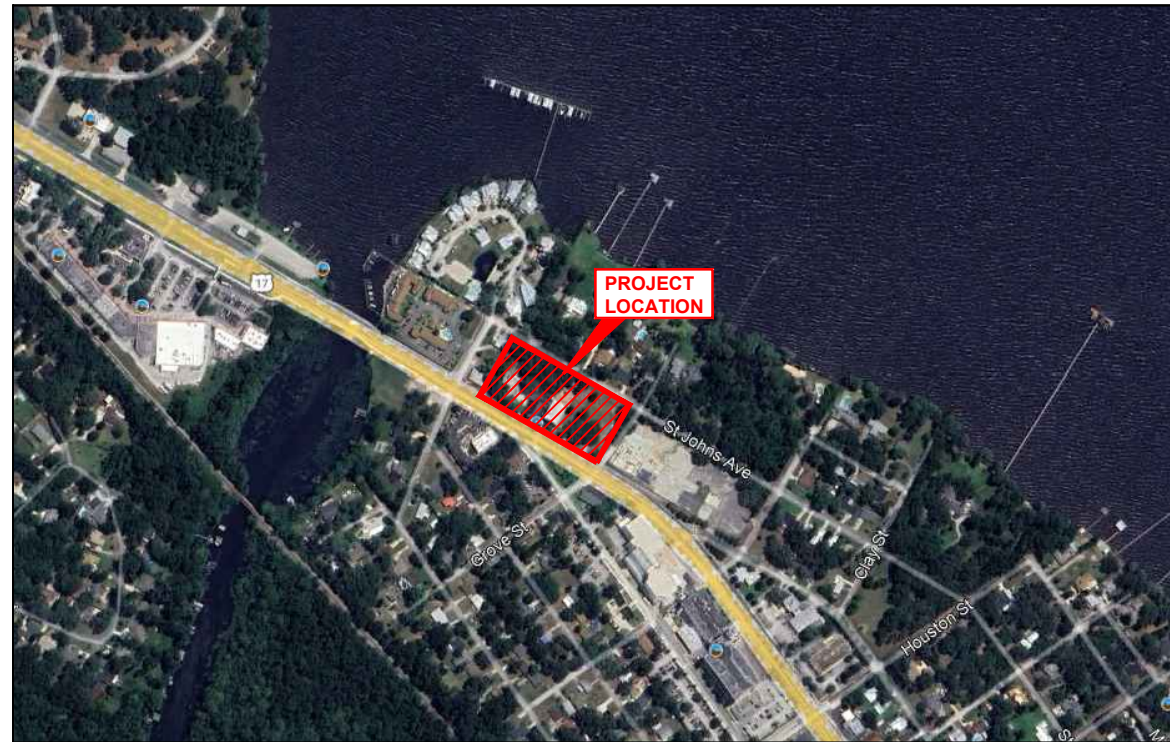
CLAY COUNTY

PROJECT OWNER AND CONSULTANTS

**OWNER:** Springs Chapel Corporation  
Dr. Christian Pope  
1106 N. Orange Avenue  
Green Cove Springs, FL 32043  
TEL: 904-531-9669

**SURVEYOR:** Compass Surveying  
6250 N. Military Trail, Suite 102  
West Palm Beach, FL 33407  
TEL: (561) 640-4800

**ENGINEER:** TocoI Engineering, LLC  
Charles Sohm, P.E.  
714 North Orange Avenue  
Green Cove Springs, FL 32043  
TEL: 904-215-1388



LOCATION MAP

N.T.S.



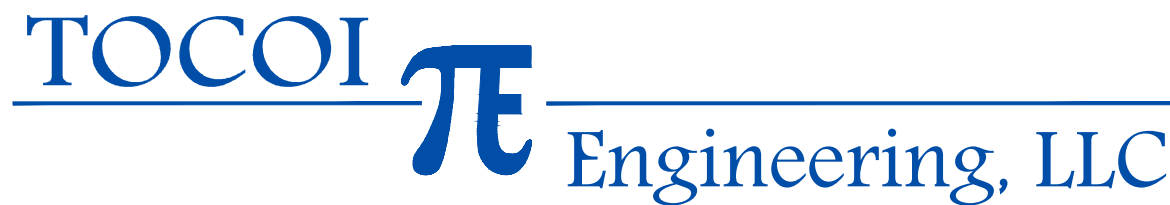
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TE JOB NO: 24-671



CALL BEFORE YOU DIG  
800-432-4770



714 NORTH ORANGE AVENUE, GREEN COVE SPRINGS, FL 32043  
PH: 904-215-1388 E.B. NUMBER: 26383  
"TURNING YOUR IDEAS INTO REALITY"  
www.tocoi.com

PRELIMINARY PLANS  
November 22, 2024

CHARLES SOHM, P.E.  
FLA. REGISTERED ENGINEER, #79289

Clay County General Notes (Commercial) – Revised 10/15/19

1. Clay County Engineering Division requires twenty-four hours (24-hr) notice on all meetings and or testing procedures.
2. Construction warning signs are to be post mounted and erected before construction can commence. These and all traffic control devices shall follow the standards set forth by the Manual of Uniform Traffic Control Devices (MUTCD) and the Florida Department of Transportation Standard Specifications and Details.
3. All construction projects 1 acre or more in size shall be required to abide by the provisions of the National Pollutant Discharge Elimination (NPDES) permit. The owner or contractor is responsible for preparing the Stormwater Pollution Prevention Plan (SWPPP) and submitting the NPDES "Notice of Intent" (NOI) and "Notice of Termination" (NOT) to the EPA or local state agency having jurisdiction over the NPDES program. The contractor shall keep onsite copies of the SWPPP, NOI, and water management district permits.
4. It is the responsibility of the contractor to recognize and abide by all OSHA safety standards.
5. All disturbed Clay County Rights-of-Way shall be sodded to the discretion and approval of the Clay County Engineering Division.
6. The contractor shall verify all utility locations prior to excavation and take all measures necessary to protect utilities during construction. Should any utility line or component become damaged or require relocation the contractor shall immediately notify the responsible utility company, the engineer, and the county.

CALL BEFORE YOU DIG  
 1-800-432-4770  
 &  
 904-269-6359

- Call 800-432-4770 two full business days before digging. Call 10 days before digging when digging under water.
  - Call 904-269-6359 (Clay County Signal & Maintenance Division) two full business days before digging
  - Wait the required time for buried utilities to be located and marked.
  - Protect the marks during your project. If marks are destroyed, call again.
  - Dig safely, using extreme caution when digging within 24 inches on either side of the marks to avoid hitting the buried utility lines.
7. Before working in existing county rights-of-way, the contractor shall be required to obtain a right-of-way permit. The permit can be obtained at the Clay County Engineering Division, 477 Houston Street, 3rd/ Floor, Green Cove Springs, Florida.
  8. All swale sections and ponds are to be sodded within 15 days of their final grading.
  9. Any offsite swales or ditches impacted by the development, the contractor shall re-grade and restore, to obtain positive drainage.
  10. A copy of the contractors' general license and the under ground utility license shall be provided at the time of the pre-construction conference.
  11. Any applicable Saint Johns River Water Management District (SJRWMD), FDEP (Generic Permit for Stormwater Discharge from Large and Small Construction Activities, Army Corp of Engineers, and a Florida Department of Transportation (FDOT) permits shall be provided to the county by the pre-construction conference. No work shall begin without all applicable permits on file.
  12. The contractor must obtain approval from the Saint Johns River Water Management District (SJRWMD) before the county will accept the project.
  13. All storm pipes shall be videoed prior to a final inspection and all data shall be recorded in High quality DVD format with sound or any equipment approved by the Engineering Division (Ref. FDOT SSRBC latest edition).
  14. There shall be a minimum five (5) days notice given for scheduling the final inspection.
  15. At the final inspection a letter of compliance will need to be filled out and signed by the State of Florida Registered Professional Engineer of record for the project. The letter shall state that the project has been built in accordance of the approved design plans and other agency permits.
  16. All soil and debris tracked out of the project shall be cleaned in accordance with the approved SWPPP or at the discretion of the Clay County Engineering Division.
  17. Prior to any inspection or testing, all pipe line, structures, roadway, etc. shall be cleaned.

Erosion Control

18. Pursuant to Comprehensive Plan Policy 9:1 of the conservation element, the use of one or more erosion control measures, as requested by the Clay County Engineering Division, shall be used during construction. These will be, but not limited to, items such as temporary grass cover, sediment basins or ponds, mulching, temporary fences, diversion channels, and hay bales.

19. Pursuant to Comprehensive Plan Policy 9:1 of the conservation element, scheduling of construction shall be given special consideration to minimize exposure of bare soil. The contractor will formulate a construction schedule to be given to the county representative.
20. The governing publications for erosion control are current FDOT Roadway and Traffic Design Standards and the NPDES Stormwater and Erosion Control Manual latest edition.
21. The contractor shall check each day to insure that all erosion control devices are in place and working properly.
22. All erosion control measures shall be in compliance with the rules, regulations and standards of the Saint Johns River Water Management District, The Florida Department of Environmental Protection, and The United States Army Corp of Engineers and Clay County Regulations and Ordinances.
23. The contractor shall take whatever means necessary to prevent the erosion of soil and deposition of sediment on adjacent and downstream properties.
24. All erosion control measures shall be installed prior to commencement of construction. Sediment control consists of silt fencing, hay bales, and floating turbidity barriers per FDOT Erosion and Sediment Control Manual. Erosion control consists of seeding and mulching, sodding, wetting surfaces, placement of coarse aggregate, temporary paving.
25. The contractor shall respond to erosion and sediment control maintenance with 24-hours of being informed by Clay County, unless the situation requires an immediate response. The contractor will then respond immediately after notification by the county. The contractor's erosion control inspector shall be a qualified stormwater management inspector by the Florida Department of Environmental Protection.
26. The contractor shall be required to incorporate permanent erosion control measures at the earliest practical time so as to minimize the need for temporary controls.
27. The erosion and sediment control measures shown on the plans are minimum requirements. The contractor shall be responsible for additional erosion control measures as determined by the county or the contractor to insure quality control.
28. All disturbed areas shall be grassed within 7 days of the initial disturbance. Types of grassing shall be as follows: Sodding is required for around all drainage structures, retention/detention areas, swales, ditches, and where 4:1 slopes are exceeded. Seed and mulch may be used at all other locations unless specifically called out for on these drawings. There shall be a standing row of grass at the time of final acceptance. If seed and mulch has been used and has not taken to, sod will be required for established grass.
29. The contractor shall inspect and report erosion and sediment control methods every week and after ½ inch of rain during construction. The contractor shall remove any sediment build up, repair or reinstall any control measures.
30. The county requires background testing of local waterways and additional periodic testing during construction for water quality and conformity with Clay County Standards.

Drainage Structures & Pipe Installation

31. The governing publications for pipe are the current FDOT Roadway and Traffic Design Standards and the current FDOT STD. Spec. for Roadway & Bridge Const.
32. The governing publications for Inlets, Junction Boxes and Manholes are the current FDOT Roadway and Traffic Design Standards, Index 425.
33. All joints of pipe regardless of material type shall be wrapped with fabric filter cloth per Florida Department of Transportation, type D-3, A.O.S. 70-100. The fabric shall be installed in accordance with FDOT. The contractor will provide a minimum 12" overlap in the fabric.
34. All storm sewer pipes are to be steel reinforced concrete pipe (SRCP) unless otherwise noted on these drawings. Round concrete pipe shall comply with ASTM C76. Elliptical pipe shall comply with ASTM C507. Pipe joints and O ring gaskets shall comply with ASTM C443.
35. All storm sewer pipes shall be subjected to leakage testing and shall be videoed/ TV prior to the final inspection.
36. All storm sewer pipes shall be cut flush with the interior wall of any type manhole or curb and ditch bottom inlets.
37. If the approved design requires the inlet or storm run be surcharged, all inlets shall be inspected before being exposed to the system.
38. Mitered End Sections shall meet the requirements under the current FDOT Roadway and Traffic Design Standards, Index 430.
39. No manhole shall be placed within 2.5' of the curb.
40. No brick adjustment shall be allowed for manholes underneath the pavement.
41. The maximum threshold for manhole adjustment underneath the roadway shall be between 0" to 4".

42. Final Pipe Inspection in the Right-of-Way or County's easement: After the final pavement operation, the contractor shall dewater and video the pipe/culvert; the County will only review the video Data post asphalt construction supplied by the contractor/developer, and the tests and DVD must meet the latest edition of the FDOT Standard Specifications for Road and Bridge Construction.

Signage & Pavement Markings

43. All signs and pavement markings shall be in accordance with the "Manual of Uniform Traffic Control Devices" and the latest implemented addition of the FDOT Roadway and Traffic Design Standards Index numbers 700 & 706 and the current FDOT STD. Spec. for Roadway & Bridge Const, Index 630.
44. All final pavement markings within the rights-of-way shall be thermoplastic.
45. All signs shall be on a ten-foot (10') pole a minimum seven feet (7') from the ground.
46. Street signs shall be mounted with tee caps.
47. Street signs shall be a six inches (6") wide with green backings and white letters and bordering.
48. Stop signs shall meet the minimum size requirements of the MUTCD.
49. Stop signs are to be placed four feet (4') from back of curb, four feet (4') behind cross walks and on the right hand side of the road.
50. All regulatory signs shall be black and white. All construction warning signs shall be orange and black. All warning signs shall be yellow and black. All no parking and stop signs shall be red and white.
51. Stop bars shall be twenty-four inches (24") wide and lane width. All stop bars shall be thermoplastic.
52. All signs must meet Florida Department of Transportation (FDOT) standards for engineering grade sign faces in reflectivity.
53. For county maintained roads, street signs shall be colored with a green background and white lettering. For private roads, the sign shall be a white background with green lettering.
54. All pavement markings require layout approval by Clay County.

Sidewalks

55. The governing publications for sidewalk are the current FDOT Roadway and Traffic Design Standards, Index 522.
56. Sidewalks are a minimum of 5' in width for a local road and 6' in width for a residential collector. All other roadway classifications shall refer to the details herein. In no case shall the sidewalk be less than 5' without written approval from the Engineering Division.
57. All sidewalks that are not in front of a build able lot, shall be installed prior to the final inspection
58. Pedestrian crossing/handicap ramps shall be installed wherever the sidewalk meets the curb. The ramps shall be in accordance with Florida Department of Transportation standard index number 522. All ADA ramps shall be installed prior to final acceptance unless otherwise approved by the Engineering Division.
59. Whether depicted on the plans or not, a sidewalk is to be installed at the subdivision entrance running parallel to the right of way for the extent of the property.
60. Sidewalks are to be placed, at a minimum, 3' from the property line or as otherwise approved by the Engineering Division.

Maintenance of Traffic

61. The governing publications for maintenance of traffic are the current FDOT Roadway and Traffic Design Standards, Index 102 and the current FDOT STD. Spec. for Roadway & Bridge Const., Section 102, and the latest edition of the MUTCD.
62. When FDOT Standard Indexes do not apply and hauling is necessary for the construction of the site, additional MOT maybe necessary. Installation of "Trucks Entering and Leaving Highway" signs shall be installed and maintained throughout the limits of the construction schedule.

REVISIONS	

All documents and materials supplementing the signed and sealed documents are resources provided for clarification purposes only and do not supersede the signed and sealed documents. Engineer is not responsible for any deviations from the signed and sealed documents.

AS-BUILT REQUIREMENTS  
PAVING AND DRAINAGE

General

1. Submit one signed and sealed paper copy (24"x36") of the as-builts overlaid on the approved plans. Submit a CAD file compatible with AutoCad 2017 and a pdf that exactly matches the paper copy.
2. All as-builts must use the NAVD 1988 vertical datum and the State Plane Coordinate NAD 83 horizontal datum.
3. As-built must contain at least the following:
  - a. Project name
  - b. Project/Development number
  - c. Street names
  - d. Physical address (commercial sites)
  - e. North arrow
  - f. Scale
  - g. 4 boundary corners
  - h. The word "as-built" must be in at least one inch high letters.
  - i. Reference all benchmarks by station and offset
  - j. Minimum of 2 benchmarks for every 1000' feet of road

Paving

4. As-builts should include elevation, station, and offset at the following every 100':
  - a. Centerline or profile grade line
  - b. Top of curb
  - c. Gutter or edge of pavement (specify width)
  - d. Back of sidewalks (minimum ever 100')
5. As-builts should include elevation, station, and offset at each:
  - a. PC, and PT
  - b. Low and high points
  - c. Centerline intersections
  - d. Beginning and end valley gutter
  - e. Begin and end super elevation transition
  - f. Gutter line (Cul-De-Sac every 25')

Drainage

6. Location of all drainage structures by station and offset, including
  - a. Structure throat top and/or grate elevation (specify which)
  - b. Weir and slot elevations and orifice sizes
  - c. Pipe invert elevation and flow direction. Including underdrain.
7. Size, lengths and types of drainage pipes to include underdrain.
8. Cross sections through all swale and ditches. Minimum of every 25'. Must include elevation and locations of centerline, toe of slope, and top of bank.
9. Pond details to include:
  - a. Elevations located top of bank a minimum of every 100'
  - b. Dated elevation of pond water level at time of the as-built
  - c. Elevations along bottom of the pond, two shots per acre minimum
10. Show all drainage easements to include water flow direction

Signage

11. Location of all street signs by station and offset

Lot Information

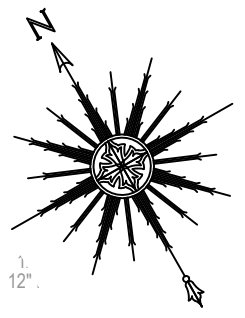
12. Lot elevations need to be included for each individual parcel. This must be at every elevation shown on the approved plans.

Letter of Certification

13. The as-built needs to be reviewed by the EOR and their approval must be included in the Engineers Certification letter and submitted with the close-out package.

REVISIONS

PLOT DATE:  
 DRAWN BY:  
 DESIGNED BY:  
 CHECKED BY:  
 SCALE:  
 JOB NO.:



ST. JOHNS AVENUE

APPARENT 60.0' RIGHT OF WAY

NORTH ORANGE AVENUE MAGNOLIA AVENUE(P) RIGHT OF WAY UNDETERMINED

GROVE STREET UNKNOWN RIGHT OF WAY

FOUND 4"x4" CONCRETE MONUMENT  
11.00'(P)  
10.64'(M)

FOUND 5/8" IROD PIPE (WITNESS CORNER)  
(12.8')

UNABLE TO FIND OR SET DUE TO OAK TREE & FENCE @ PROPERTY CORNER

FOUND 1/2" IROD PIPE (WITNESS CORNER)  
(11.7')

BROKEN CONCRETE

SEWAGE MANHOLE  
RIM EL.=17.84'  
BOTTOM EL.=8.60'  
12" R.C.P. (W) INV.=9.54'  
12" R.C.P. (E) INV.=9.54'

METAL BUILDING ON CONCRETE  
40.6'

FOUND 1/2" IROD PIPE ILLEGIBLE  
N:10037.813  
E:5461.293

FOUND 1/2" IROD PIPE ILLEGIBLE  
N:921.753  
E:354.793

CURB INLET DRAIN STORM MANHOLE  
RIM EL.=17.19'  
15" R.C.P. (SW) INV.=13.24'  
6" R.C.P. (E) INV.=13.85'  
6" R.C.P. (W) INV.=15.85'  
4" C.P.P. (NW) INV.=14.04'

SITE BOUNDARY  
N60°18'23"W 498.70'(C) 1.6'N

S29°49'54"W 244.03'(C)

S29°49'54"W 244.00'(C)

N60°18'28"W 498.70'(M)

0 20 40  
SCALE: 1" = 20'  
SCALE: 1" = 40'  
FOR: 22"x34" SHEET  
FOR: 11"x17" SHEET

Table with columns for REVISIONS, PLOT DATE, DRAWN BY, DESIGNED BY, CHECKED BY, SCALE, and JOB NO.

Date: 11/22/24 Time: 9:00 AM DWG Name: \\TE-GCS\01-Projects\24-671 Springs Academy Parking Lot GCS Pope\03-CADD\24-671 MASTER PLAN 111224.dwg Layout: 3-ENST

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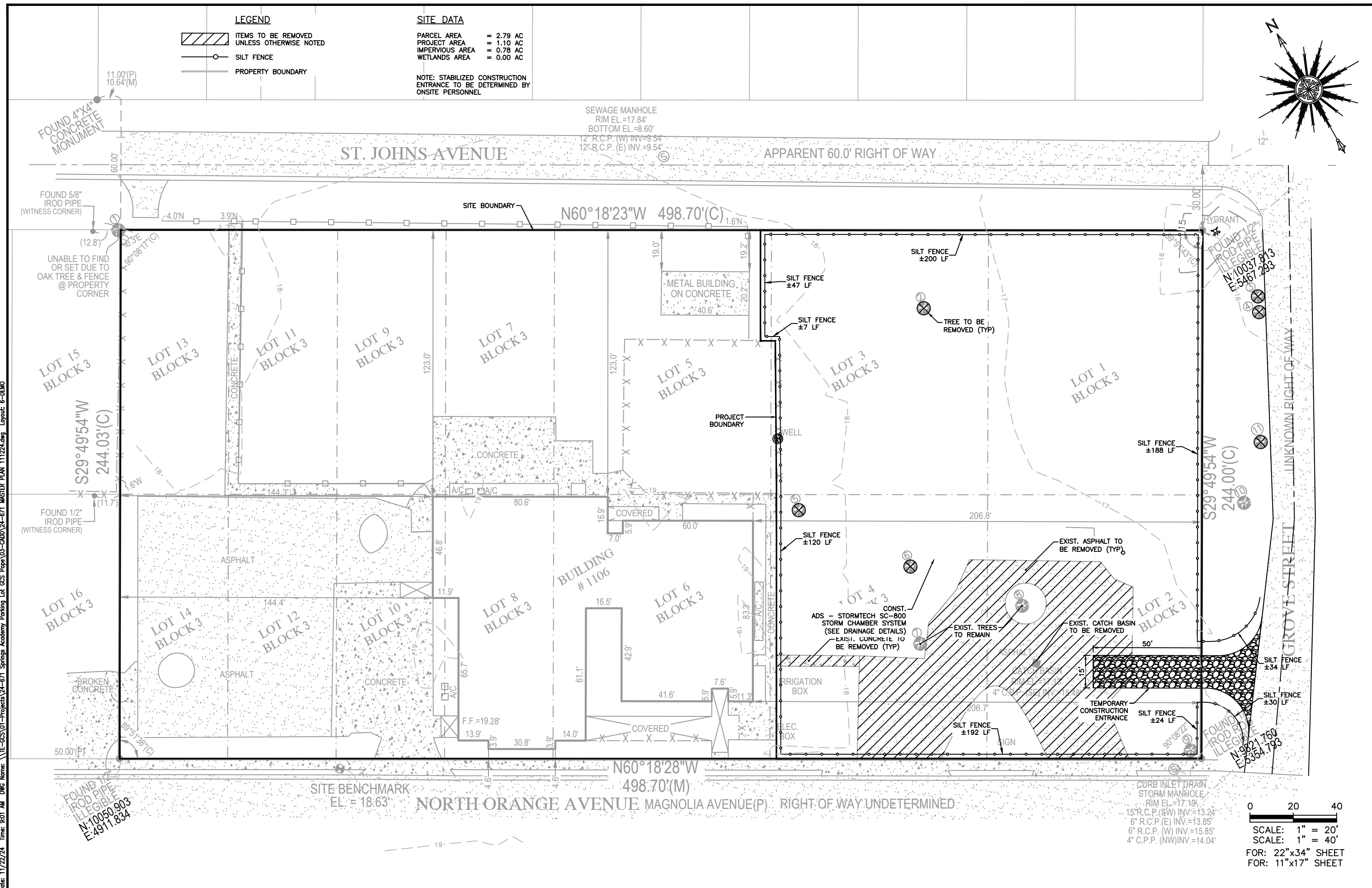
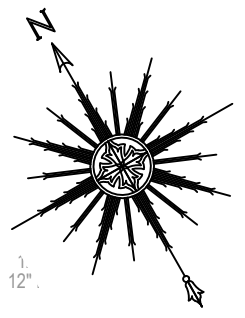
**LEGEND**

	ITEMS TO BE REMOVED UNLESS OTHERWISE NOTED
	SILT FENCE
	PROPERTY BOUNDARY

**SITE DATA**

PARCEL AREA	= 2.79 AC
PROJECT AREA	= 1.10 AC
IMPERVIOUS AREA	= 0.78 AC
WETLANDS AREA	= 0.00 AC

NOTE: STABILIZED CONSTRUCTION ENTRANCE TO BE DETERMINED BY ONSITE PERSONNEL



Date: 11/22/24 Time: 9:01 AM DWG Name: \\TE-GCS\01-Projects\24-671 Springs Academy Parking Lot GCS Pope\03-CADD\24-671 MASTER PLAN 111224.dwg Layout: 6-DEMO

**TOCOI** Engineering, LLC  
 714 NORTH ORANGE AVENUE, GREEN COVE SPRINGS, FL 32043  
 PH: 904-215-1388 E.B. NUMBER: 26383

ENGINEER OF RECORD  
 CHARLES SOHM  
 FLORIDA  
 REGISTRATION NUMBER:  
 79289

SPRINGS ACADEMY PARKING LOT  
 FOR  
 SPRINGS CHAPEL CORP.  
 DEMOLITION PLAN

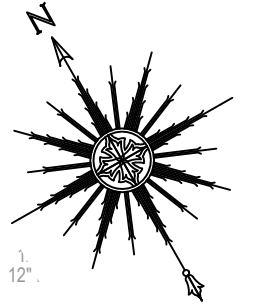
**REVISIONS**


PLOT DATE:  
 DRAWN BY:  
 DESIGNED BY:  
 CHECKED BY:  
 SCALE:  
 JOB NO.:

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 SCALE: 1" = 20'  
 SCALE: 1" = 40'  
 FOR: 22"x34" SHEET  
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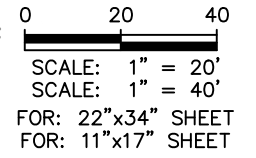
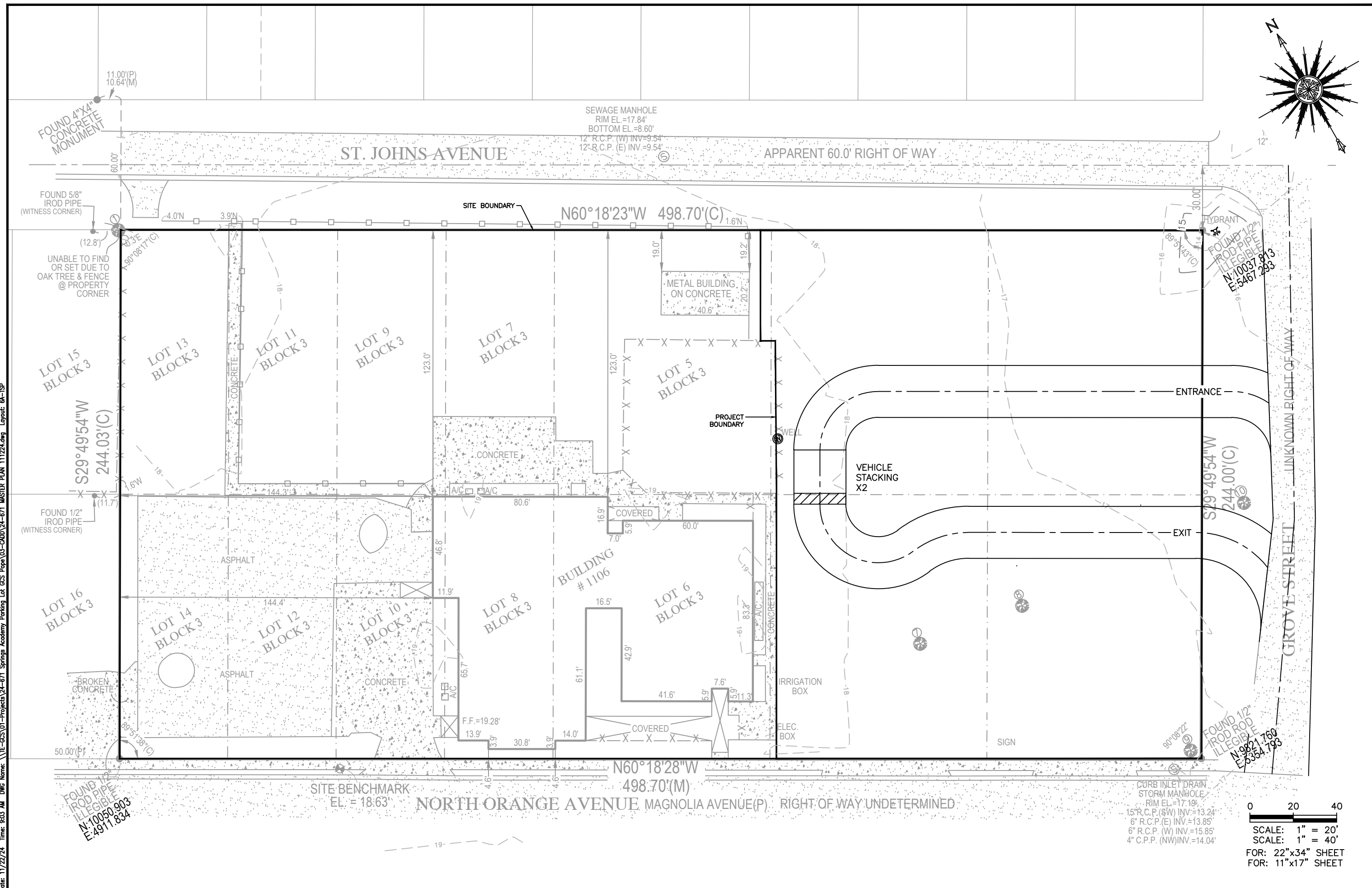
SHEET NO.  
**6**

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REVISIONS

NO.	DATE	DESCRIPTION



Date: 11/22/24 Time: 9:03 AM DWG Name: \\TE-GCS\01-Projects\24-671 Springs Academy Parking Lot GCS Pope\03-CADD\24-671 MASTER PLAN 111224.dwg Layout: 6A-TSP

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**LEGEND**

- AREAS WHERE NEW CONCRETE CONSTRUCTION IS TO OCCUR
- AREAS WHERE NEW ASPHALT CONSTRUCTION IS TO OCCUR
- PROPERTY BOUNDARY
- SOLID ARROWS ARE FOR DIRECTIONAL PURPOSES ONLY NOT FOR PAVEMENT MARKINGS
- NUMBER OF STANDARD PARKING SPACES

NOTE: FOR ADA PARKING AND SIDEWALK DETAILS SEE MISC. DETAILS

**SITE DATA**

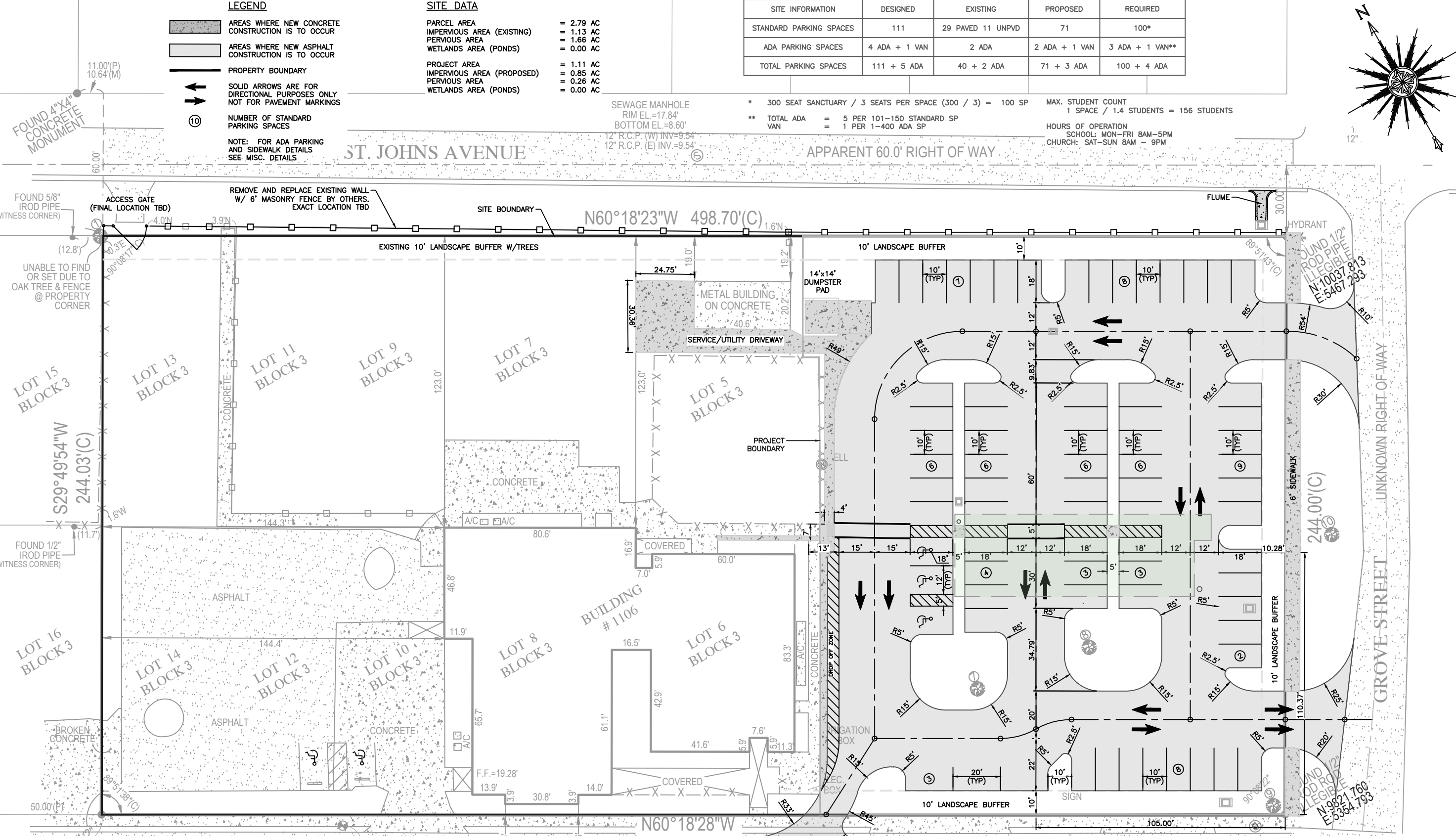
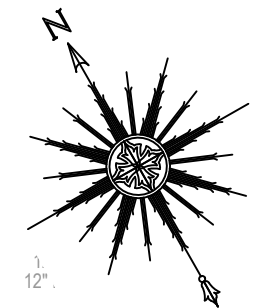
- PARCEL AREA = 2.79 AC
- IMPERVIOUS AREA (EXISTING) = 1.13 AC
- PERVIOUS AREA = 1.66 AC
- WETLANDS AREA (PONDS) = 0.00 AC
- PROJECT AREA = 1.11 AC
- IMPERVIOUS AREA (PROPOSED) = 0.85 AC
- PERVIOUS AREA = 0.26 AC
- WETLANDS AREA (PONDS) = 0.00 AC

SITE INFORMATION	DESIGNED	EXISTING	PROPOSED	REQUIRED
STANDARD PARKING SPACES	111	29 PAVED 11 UNPVD	71	100*
ADA PARKING SPACES	4 ADA + 1 VAN	2 ADA	2 ADA + 1 VAN	3 ADA + 1 VAN**
TOTAL PARKING SPACES	111 + 5 ADA	40 + 2 ADA	71 + 3 ADA	100 + 4 ADA

- \* 300 SEAT SANCTUARY / 3 SEATS PER SPACE (300 / 3) = 100 SP
- \*\* TOTAL ADA = 5 PER 101-150 STANDARD SP  
VAN = 1 PER 1-400 ADA SP

MAX. STUDENT COUNT  
1 SPACE / 1.4 STUDENTS = 156 STUDENTS

HOURS OF OPERATION  
SCHOOL: MON-FRI 8AM-5PM  
CHURCH: SAT-SUN 8AM - 9PM



LAND USE	PROPOSED	ALLOWED
MIXED USE AREA IMPERVIOUS	57%	70%
NEIGHBORHOOD USE AREA IMPERVIOUS	40%	40%

**NOTES:**

ALL IMPROVEMENTS SHALL BE MAINTAINED BY THE PROPERTY OWNER IN PERPETUITY.

ALL IMPROVEMENTS SHALL COMPLY WITH ALL THE CONDITIONS SET FORTH IN THE APPROVED SPECIAL EXCEPTION PROJECT #SE-24-002.

0 20 40

SCALE: 1" = 20'

SCALE: 1" = 40'

FOR: 22"x34" SHEET

FOR: 11"x17" SHEET

**TOCOI Engineering, LLC**  
714 NORTH ORANGE AVENUE, GREEN COVE SPRINGS, FL 32043  
PH: 904-215-1398 E.B. NUMBER: 26383

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ENGINEER OF RECORD: CHARLES SOHM  
FLORIDA REGISTRATION NUMBER: 79289

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SPRINGS ACADEMY PARKING LOT FOR SPRINGS CHAPEL CORP.  
GEOMETRY PLAN

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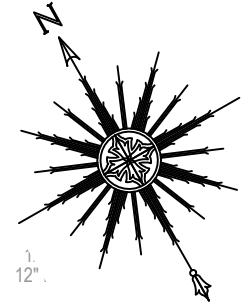
REVISIONS

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PLOT DATE:      DRAWN BY:      CHECKED BY:      SCALE:      JOB NO.:      SHEET NO. **7**

Date: 11/25/24 Time: 1:48 PM DWG Name: \\TE-GCS\01-Projects\24-671 Springs Academy Parking Lot GCS Pope\03-CADD\24-671 MASTER PLAN 111224.dwg Layout: 7-GEOM

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FOUND 4"X4" CONCRETE MONUMENT  
11.00'(P)  
10.64'(M)

FOUND 5/8" IROD PIPE (WITNESS CORNER)  
(12.8')  
UNABLE TO FIND OR SET DUE TO OAK TREE & FENCE @ PROPERTY CORNER

FOUND 1/2" IROD PIPE (WITNESS CORNER)  
(11.7')

BROKEN CONCRETE

FOUND 1/2" IROD PIPE ILLEGIBLE  
N:10050.903  
E:4971.834

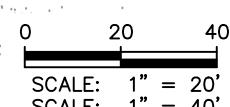
ST. JOHNS AVENUE  
APPARENT 60.0' RIGHT OF WAY  
SEWAGE MANHOLE  
RIM EL.=17.84'  
BOTTOM EL.=8.60'  
12" R.C.P. (W) INV.=9.54'  
12" R.C.P. (E) INV.=9.54'

FOUND 1 1/2" IROD PIPE ILLEGIBLE  
N:10037.813  
E:5461.293

FOUND 1/2" IROD PIPE ILLEGIBLE  
N:9821.760  
E:5364.793

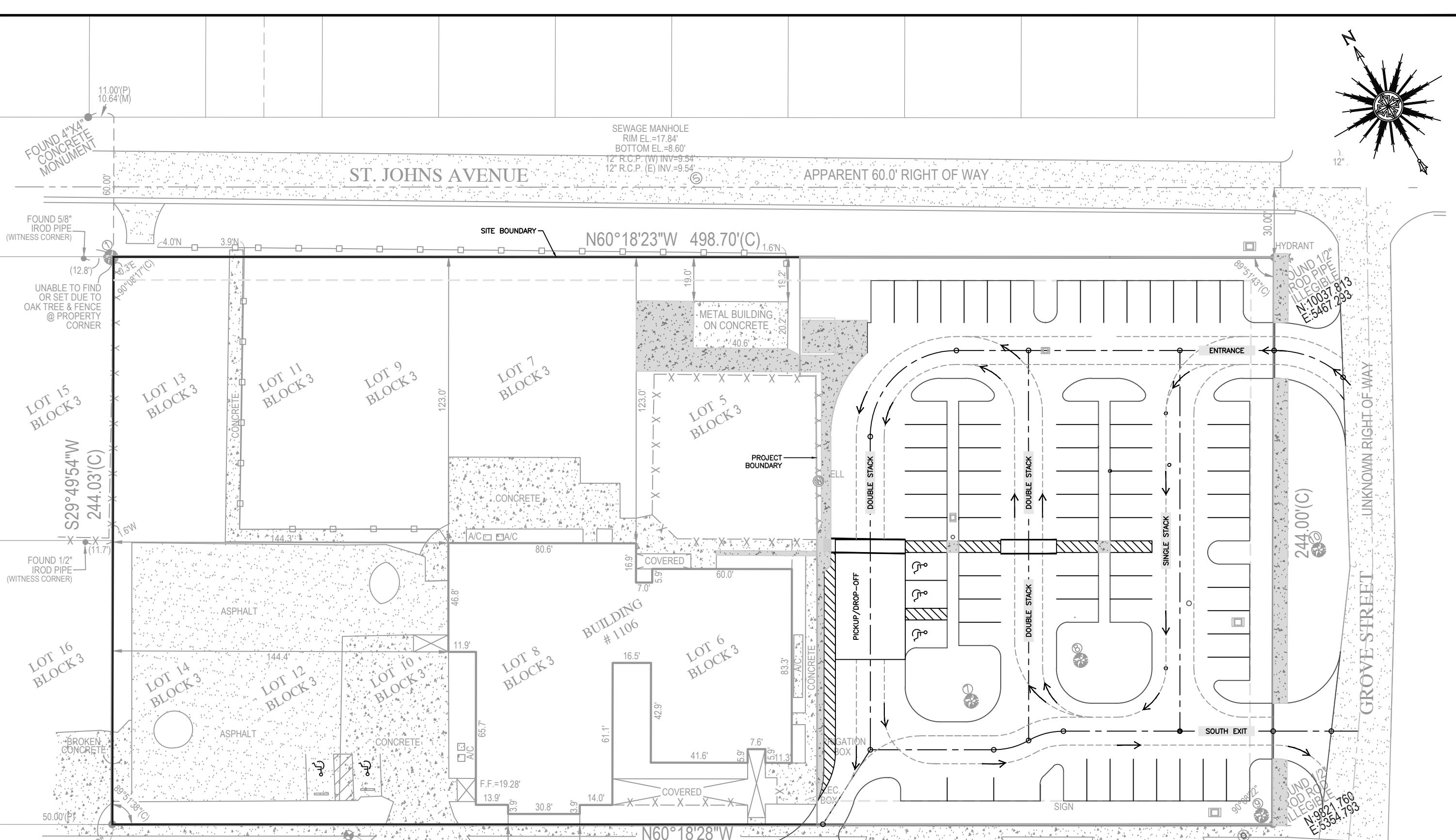
NORTH ORANGE AVENUE MAGNOLIA AVENUE(P)  
RIGHT OF WAY UNDETERMINED  
SITE BENCHMARK  
EL. = 18.63'

CURB INLET DRAIN  
STORM MANHOLE  
RIM EL.=17.19'  
15" R.C.P. (SW) INV.=13.24'  
6" R.C.P. (E) INV.=13.85'  
6" R.C.P. (W) INV.=15.85'  
4" C.P.P. (NW) INV.=14.04'



SCALE: 1" = 20'  
SCALE: 1" = 40'  
FOR: 22"x34" SHEET  
FOR: 11"x17" SHEET

Date: 11/25/24 Time: 2:36 PM DWG Name: \\TE-GCS\01-Projects\24-671 Springs Academy Parking Lot 6CS Pope\03-CADD\24-671 MASTER PLAN 111224.dwg Layout: 7A-SHAC



**TOCOI** Engineering, LLC  
714 NORTH ORANGE AVENUE, GREEN COVE SPRINGS, FL 32043  
PH: 904-215-1398 E.B. NUMBER: 26383

ENGINEER OF RECORD  
CHARLES SOHM  
FLORIDA  
REGISTRATION NUMBER:  
79289

SPRINGS ACADEMY PARKING LOT  
FOR  
SPRINGS CHAPEL CORP.  
STACKING PLAN

REVISIONS	

PLOT DATE:  
DRAWN BY:  
DESIGNED BY:  
CHECKED BY:  
SCALE:  
JOB NO.:

SHEET NO.  
**7A**

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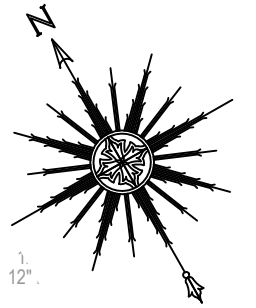


LEGEND

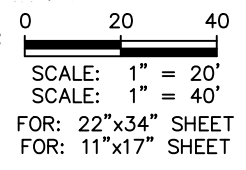
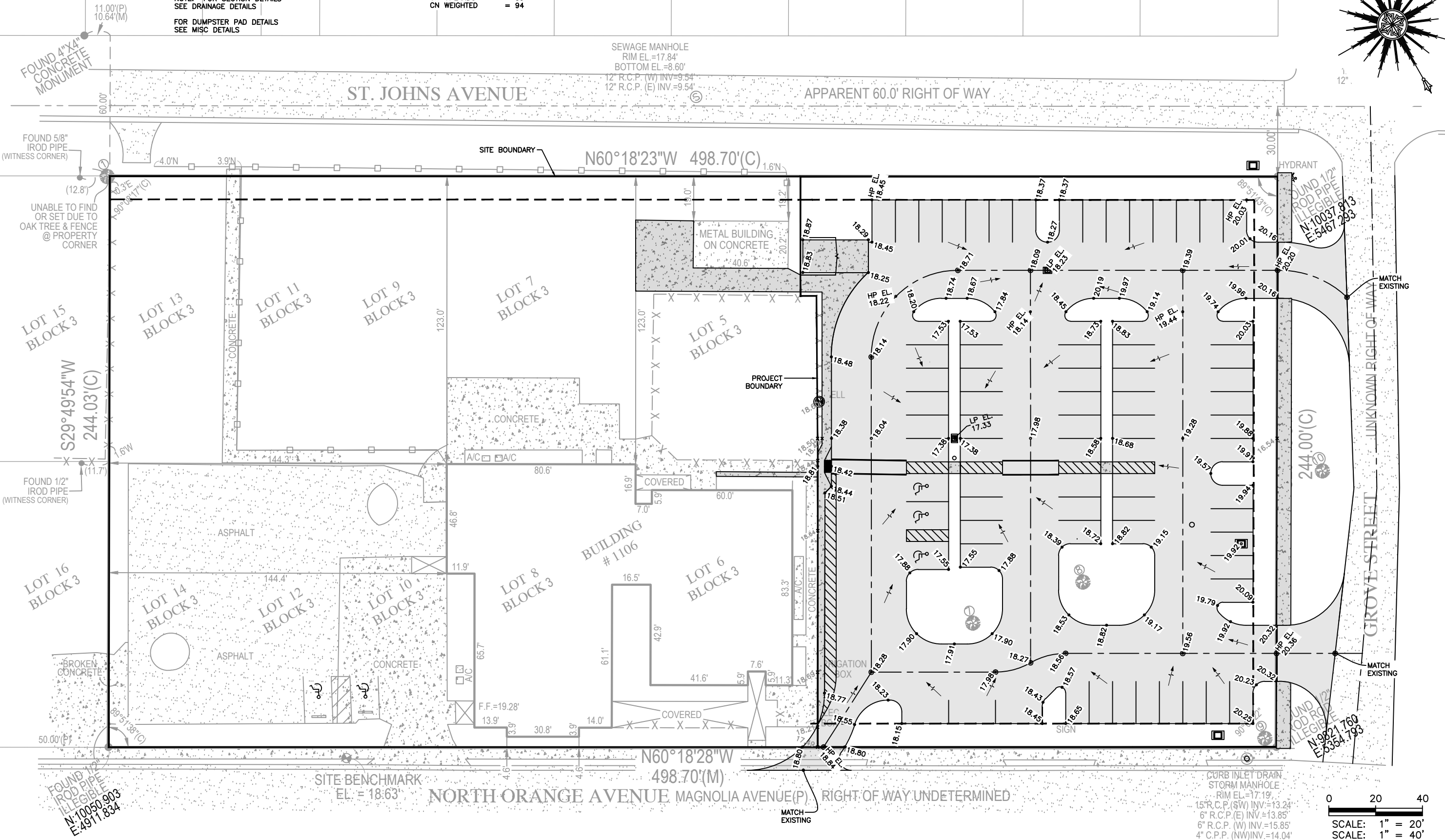
- PROPERTY BOUNDARY
  - - - DRAINAGE DIVIDE
- NOTE: FOR SECTION DETAILS  
SEE DRAINAGE DETAILS
- FOR DUMPSTER PAD DETAILS  
SEE MISC DETAILS

SITE DATA

- PROJECT AREA = 1.11 AC
- IMPERVIOUS AREA = 0.78 AC
- WETLANDS AREA = 0.08 AC
- CN UPLANDS = 39
- CN WEIGHTED = 94



Date: 11/25/24 Time: 1:48 PM DWG Name: \\TE-GCS\01-Projects\24-671 Springs Academy Parking Lot 6CS Pope\03-CADD\24-671 MASTER PLAN 111224.dwg Layout: 8A-600



**TOCOI** Engineering, LLC

714 NORTH ORANGE AVENUE, GREEN COVE SPRINGS, FL 32043  
PH: 904-215-1388 E.B. NUMBER: 26383

ENGINEER OF RECORD  
CHARLES SOHM

FLORIDA  
REGISTRATION NUMBER:  
79289

SPRINGS ACADEMY PARKING LOT  
FOR  
SPRINGS CHAPEL CORP.

GRADING PLAN

REVISIONS

PLOT DATE:  
DRAWN BY:  
DESIGNED BY:  
CHECKED BY:  
SCALE:  
JOB NO.:

SHEET NO.  
**8A**

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**LEGEND**

- PROPERTY BOUNDARY
- DRAINAGE DIVIDE

NOTE: FOR SECTION DETAILS  
SEE DRAINAGE DETAILS  
FOR DUMPSTER PAD DETAILS  
SEE MISC DETAILS

**SITE DATA**

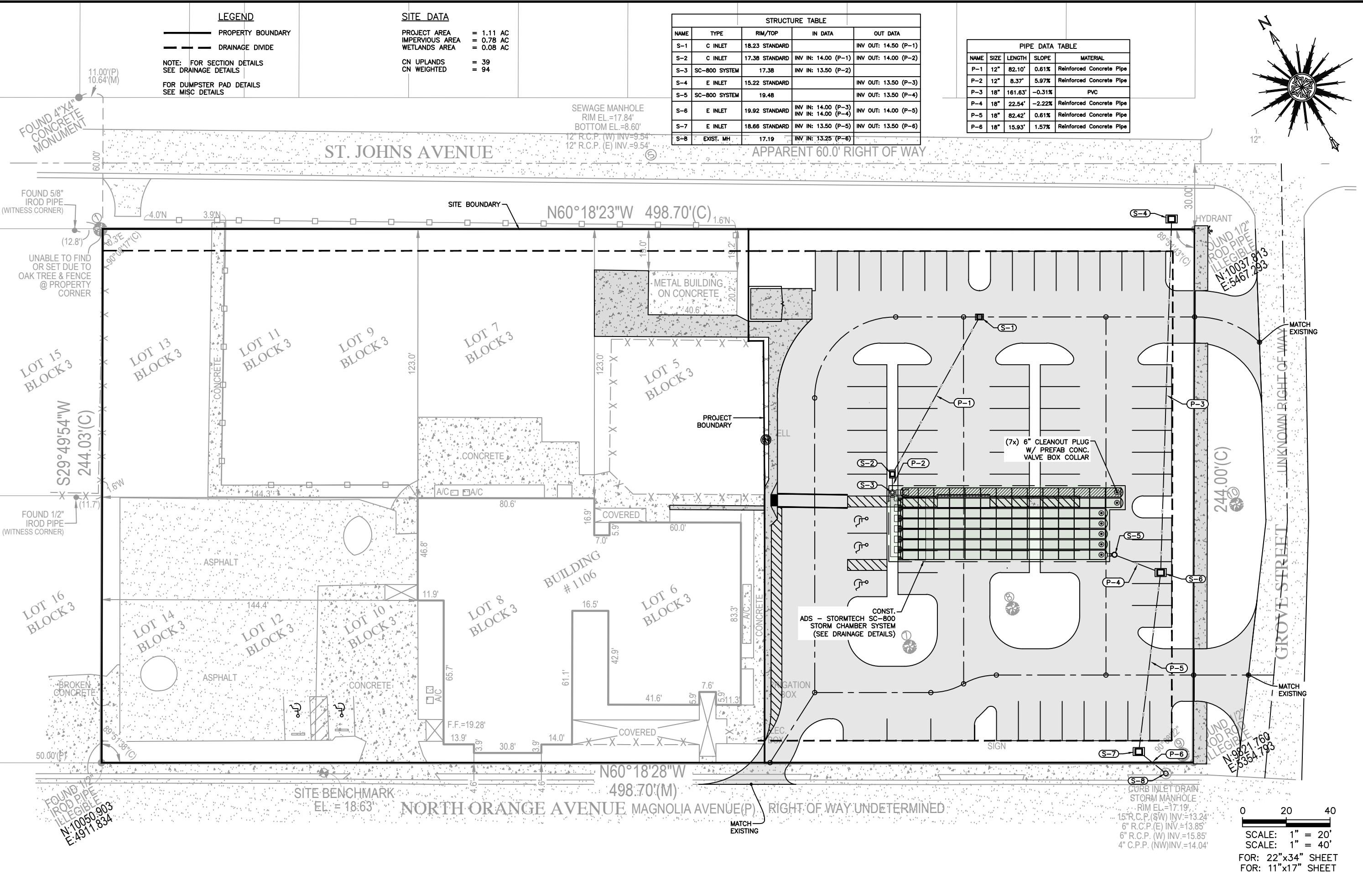
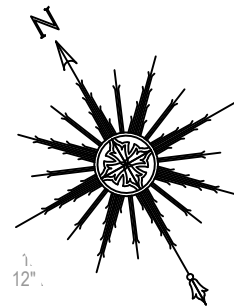
- PROJECT AREA = 1.11 AC
- IMPERVIOUS AREA = 0.78 AC
- WETLANDS AREA = 0.08 AC
- CN UPLANDS = 39
- CN WEIGHTED = 94

**STRUCTURE TABLE**

NAME	TYPE	RIM/TOP	IN DATA	OUT DATA
S-1	C INLET	18.23 STANDARD		INV OUT: 14.50 (P-1)
S-2	C INLET	17.38 STANDARD	INV IN: 14.00 (P-1)	INV OUT: 14.00 (P-2)
S-3	SC-800 SYSTEM	17.38	INV IN: 13.50 (P-2)	
S-4	E INLET	15.22 STANDARD		INV OUT: 13.50 (P-3)
S-5	SC-800 SYSTEM	19.48		INV OUT: 13.50 (P-4)
S-6	E INLET	19.92 STANDARD	INV IN: 14.00 (P-3) INV IN: 14.00 (P-4)	INV OUT: 14.00 (P-5)
S-7	E INLET	18.66 STANDARD	INV IN: 13.50 (P-5)	INV OUT: 13.50 (P-6)
S-8	EXIST. MH	17.19	INV IN: 13.25 (P-6)	

**PIPE DATA TABLE**

NAME	SIZE	LENGTH	SLOPE	MATERIAL
P-1	12"	82.10'	0.61%	Reinforced Concrete Pipe
P-2	12"	8.37'	5.97%	Reinforced Concrete Pipe
P-3	18"	161.63'	-0.31%	PVC
P-4	18"	22.54'	-2.22%	Reinforced Concrete Pipe
P-5	18"	82.42'	0.61%	Reinforced Concrete Pipe
P-6	18"	15.93'	1.57%	Reinforced Concrete Pipe



**TOCOI Engineering, LLC**  
714 NORTH ORANGE AVENUE, GREEN COVE SPRINGS, FL 32043  
PH: 904-215-1398 E.B. NUMBER: 26383

ENGINEER OF RECORD  
CHARLES SOHM  
FLORIDA REGISTRATION NUMBER:  
79289

SPRINGS ACADEMY PARKING LOT  
FOR  
SPRINGS CHAPEL CORP.  
DRAINAGE PLAN

REVISIONS

PLOT DATE:  
DRAWN BY:  
DESIGNED BY:  
CHECKED BY:  
SCALE:  
JOB NO.:

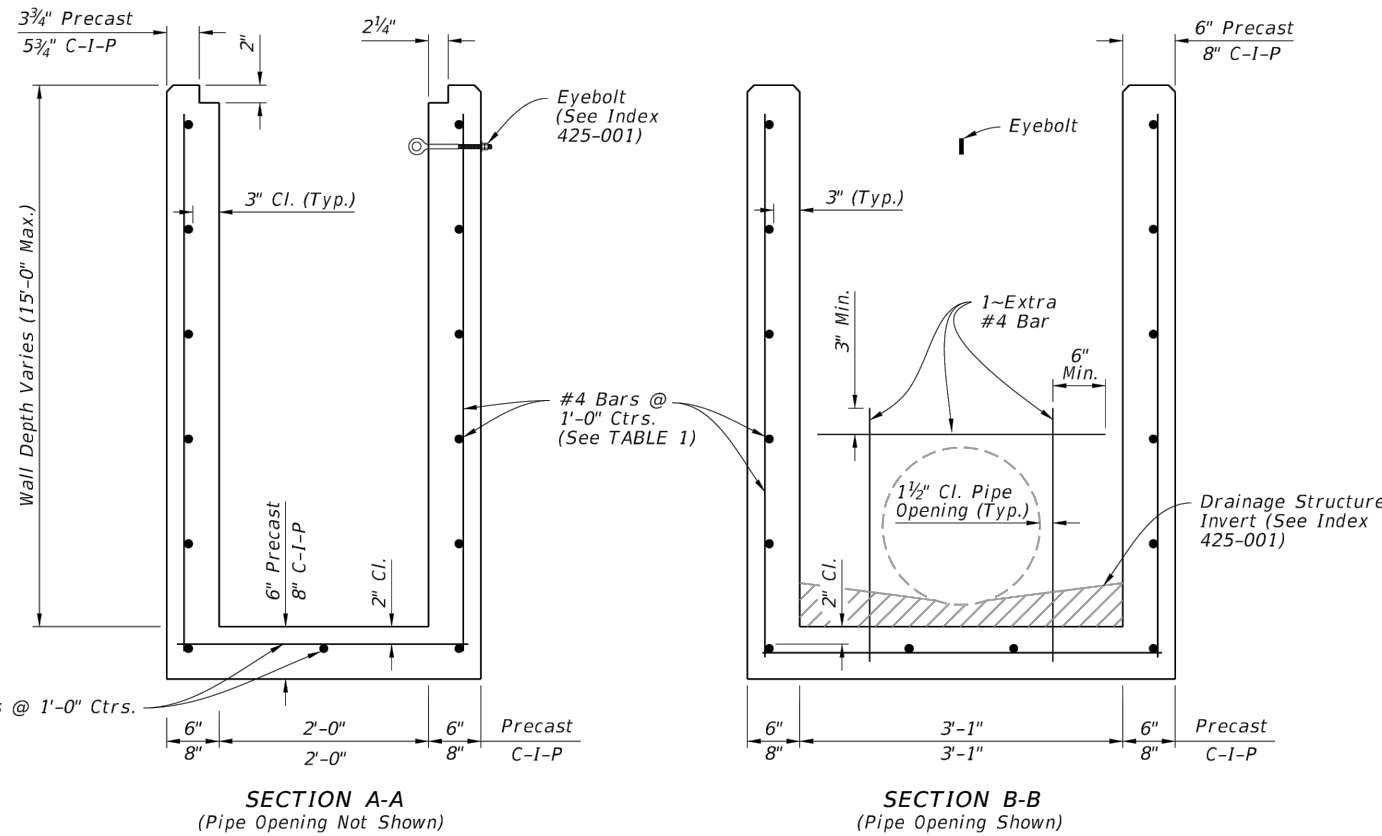
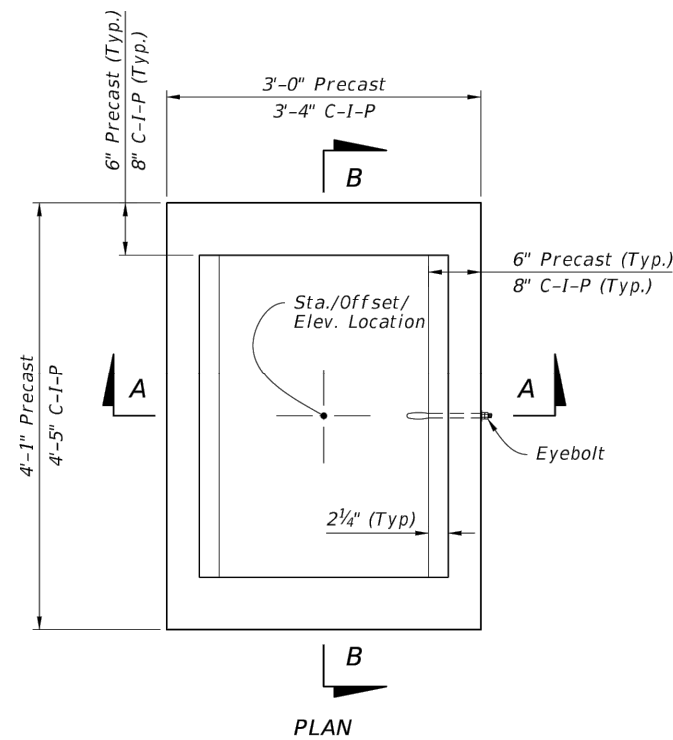
SHEET NO.  
**8B**

Date: 11/25/24 Time: 1:50 PM DWG Name: \\TE-GCS\01-Projects\24-671 Springs Academy Parking Lot 6CS Pope\03-CADD\24-671 MASTER PLAN 111224.dwg Layout: 8B-DRNG

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Date: 11/15/24 Time: 10:18 AM DWG Name: \\TE-GCS-01-Projects\24-671 Springs Academy Parking Lot GCS Pope\03-CADD\09\_24-671 DRAINAGE DETAILS 2.dwg Layout: 9A

10/20/2022 8:14:24 AM

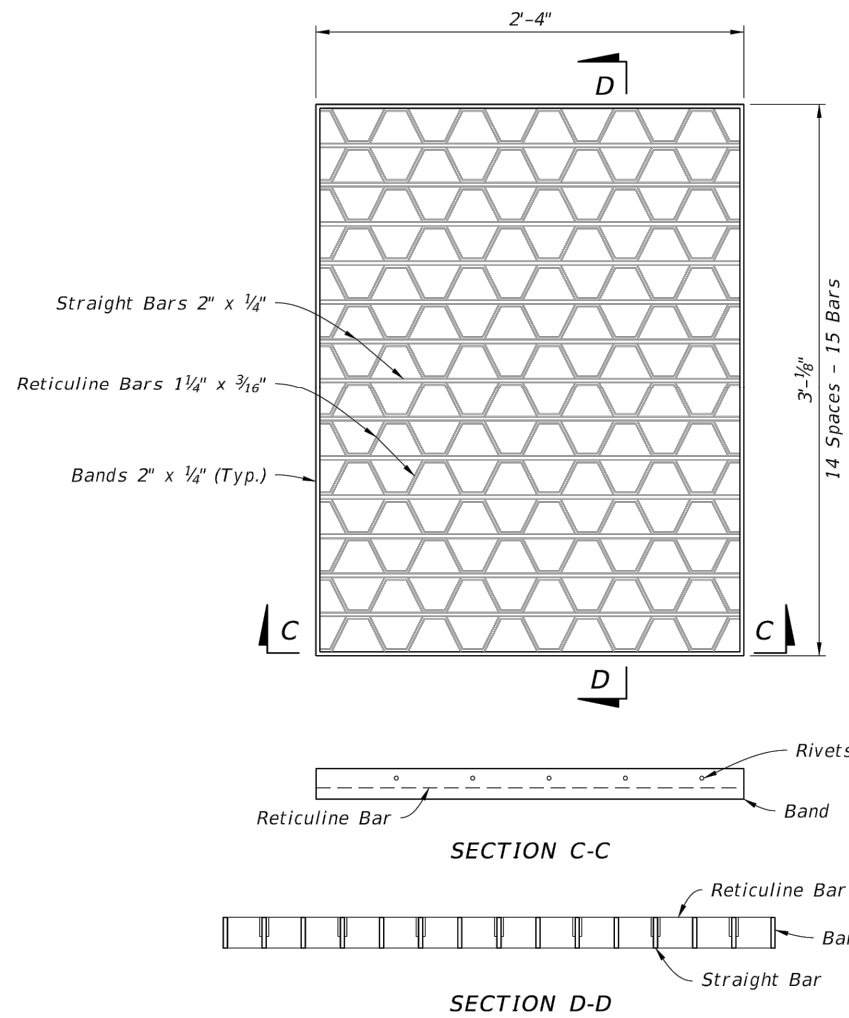


DIMENSIONAL AND REINFORCING DETAILS

WALL DEPTH	SCHEDULE	AREA (in. <sup>2</sup> /ft.)	MAX. SPACING	
			BARS	WWF
0' - 15'	A12	0.20	12"	8"

**NOTES:**

1. Grate, Concrete Apron, and Sod not shown on structure detail.
2. See Sheet 8, 9, and 10 for Concrete Apron and Sodded Area details.



**STEEL GRATE DETAIL**  
(Approx. 104 Lbs. - See Sheet 7 For Cast Iron Grates)

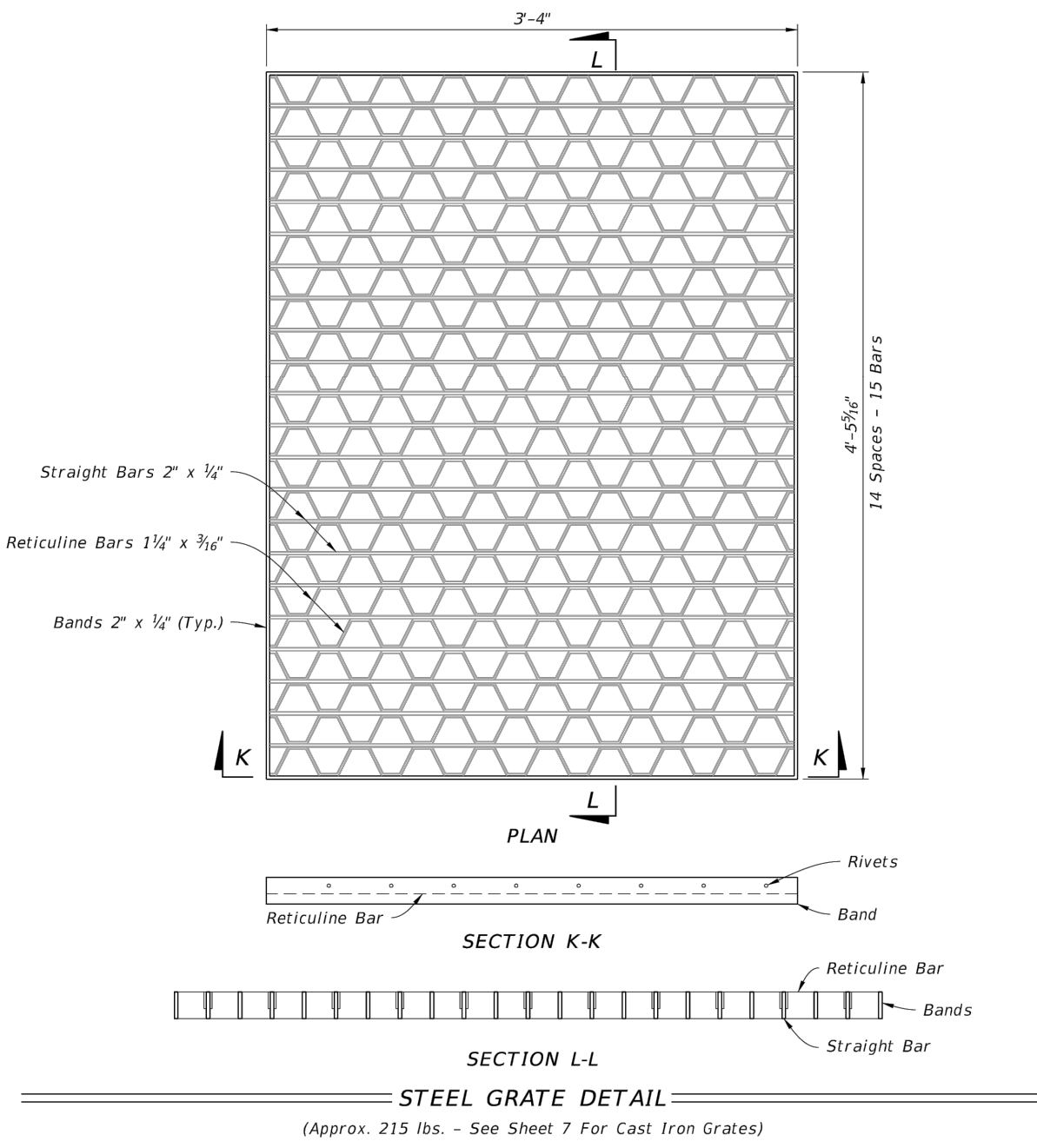
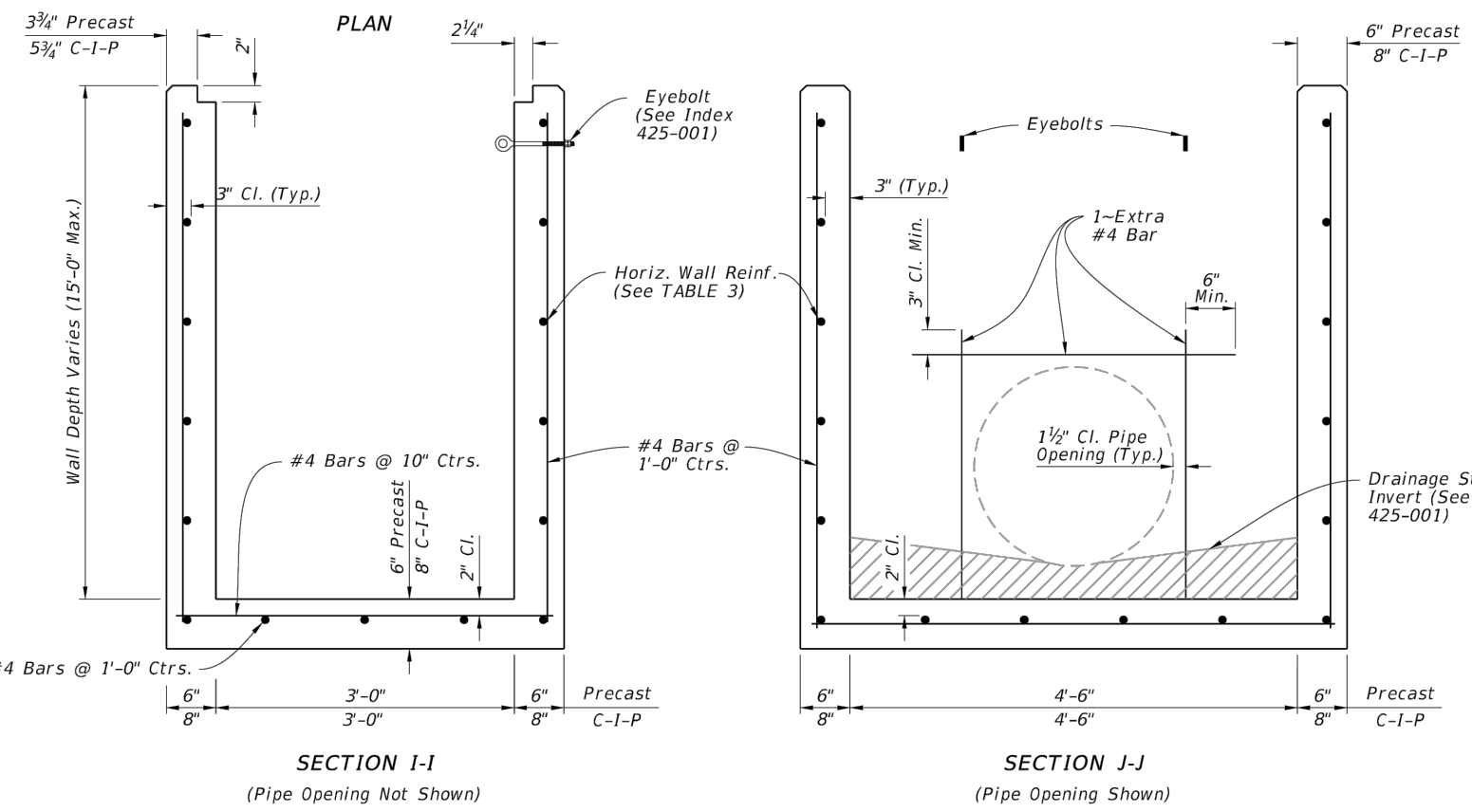
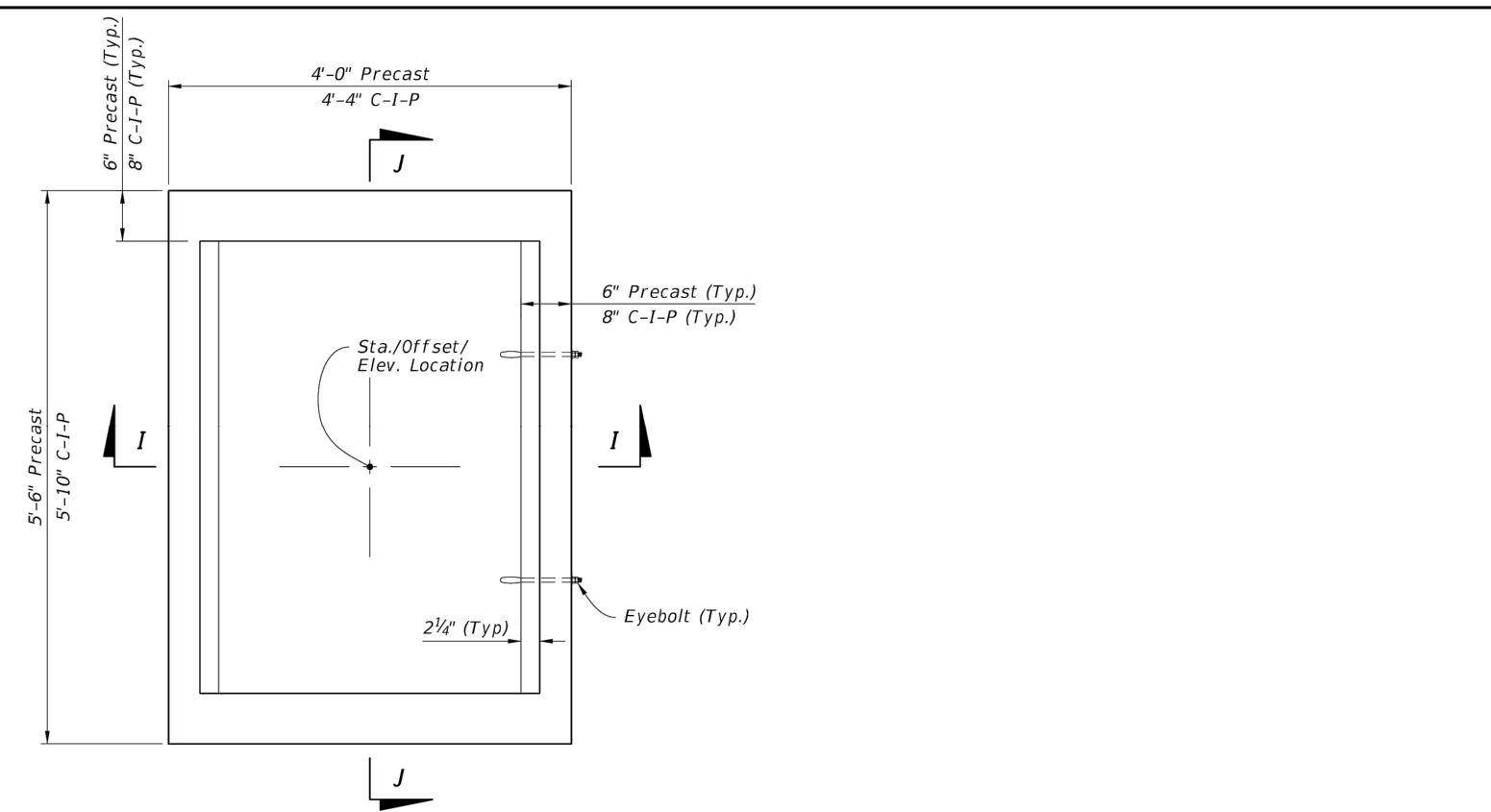
TYPE C - DIMENSIONAL, REINFORCING, AND STEEL GRATE DETAILS

LAST REVISION 10/01/20		DESCRIPTION:		FY 2023-24 STANDARD PLANS	DITCH BOTTOM INLET TYPES C, D, E, AND H	INDEX 425-052	SHEET 2 of 14

REVISIONS	

PLOT DATE:	11/15/24
DRAWN BY:	
DESIGNED BY:	
CHECKED BY:	
SCALE:	
JOB NO.:	
SHEET NO.	9A

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**TABLE 3**  
**HORIZONTAL WALL REINFORCING SCHEDULE**

WALL DEPTH	SCHEDULE	AREA (in. <sup>2</sup> /ft.)	MAX. SPACING	
			BARS	WWR
0' - 5'	A12	0.20	12"	8"
0' - 7.5'	A6	0.20	6"	5"
7.5' - 10'	B5.5	0.24	5 1/2"	5"
10' - 15'	C6.5	0.37	6 1/2"	6"

- NOTES:**
1. Grate, Concrete Apron, and Sod not shown on structure detail.
  2. See Sheet 8, 9, and 10 for Concrete Apron and Sodded Area details.

**DIMENSIONAL AND REINFORCING DETAILS**

**TYPE E - DIMENSIONAL, REINFORCING, AND STEEL GRATE DETAILS**

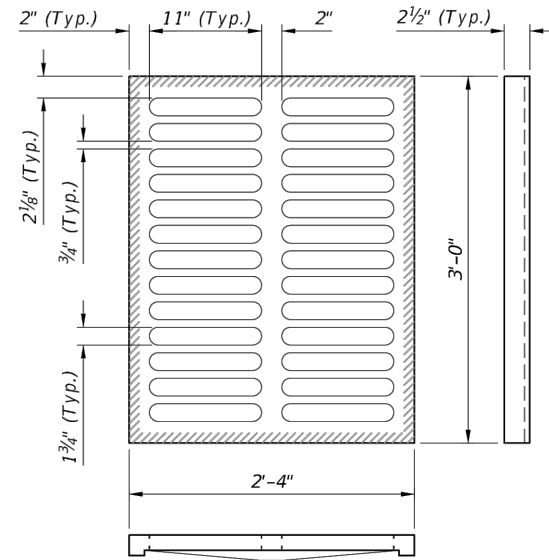
LAST REVISION 10/01/20	DESCRIPTION:	FY 2023-24 STANDARD PLANS	DITCH BOTTOM INLET TYPES C, D, E, AND H	INDEX	SHEET
				425-052	4 of 14

Date: 11/15/24 Time: 10:18 AM DWG Name: \\TE-GCS-01-Projects\24-671 Springs Academy Parking Lot\_GCS\_Pope\03-CADD\09\_24-671 DRAINAGE DETAILS 2.dwg Layout: 9B  
 10/20/2022 8:14:26 AM

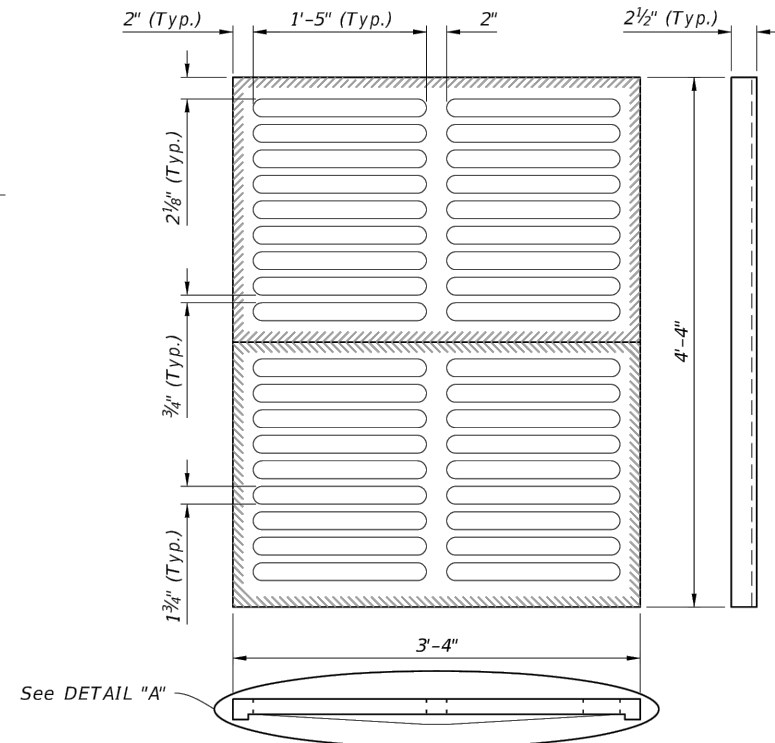
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**NOTES:**

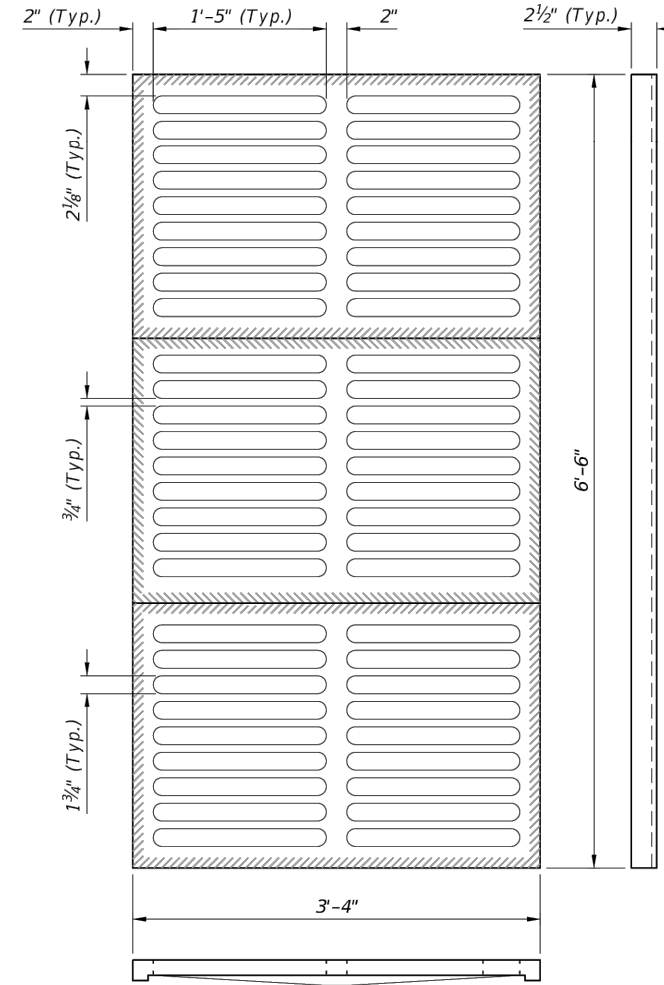
1. Steel Grates are required on inlets with traversable slots and on Inlets where bicycle traffic is anticipated.
2. Cast Iron Grates are not permitted on Inlet Type D.



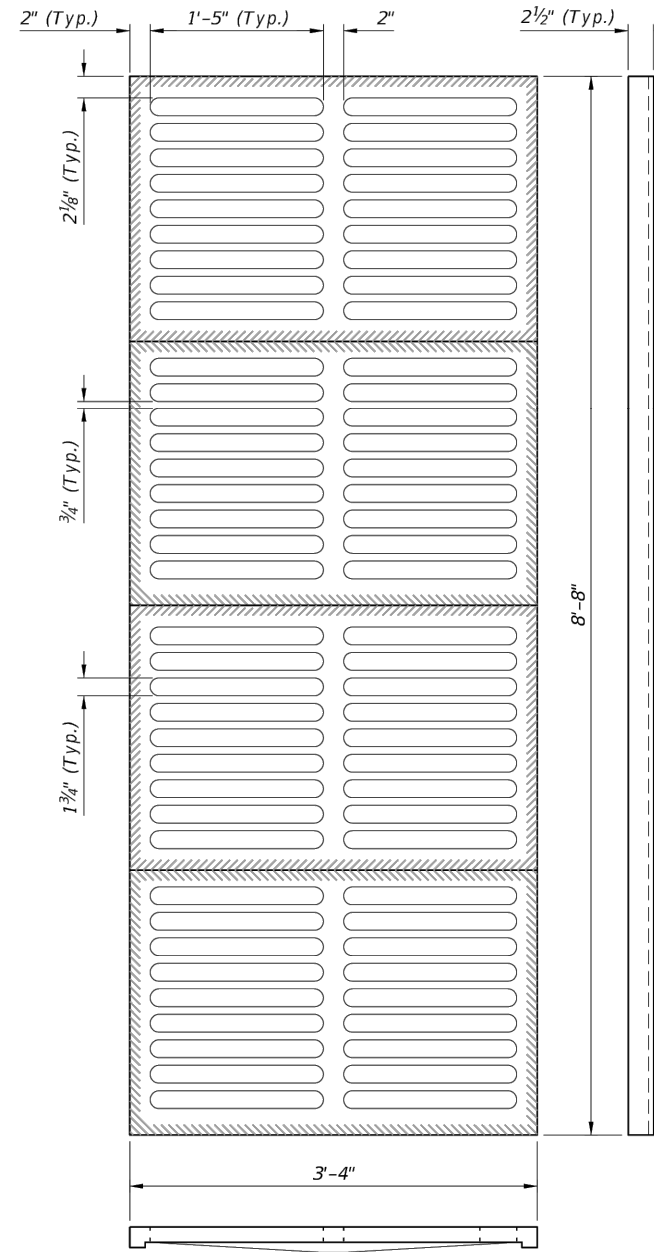
**TYPE C**  
Approx. 235 lbs.



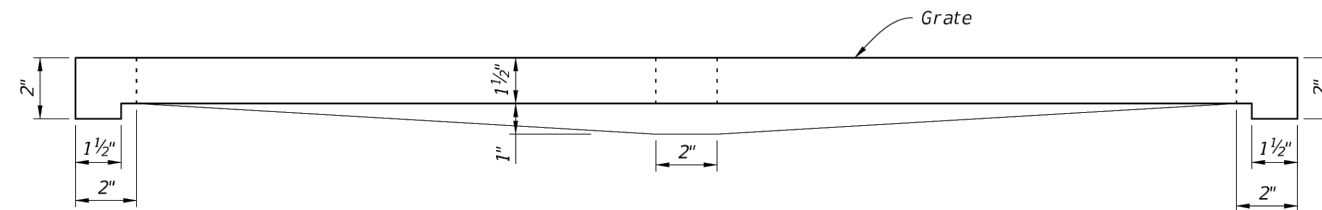
**TYPE E**  
Approx. 465 lbs.



**TYPE H**  
(3-Grate Inlet)  
Approx. 725 lbs.



**TYPE H**  
(4-Grate Inlet)  
Approx. 967 lbs.



**DETAIL "A"**  
(Typical Section)

**CAST IRON GRATE DETAILS**

LAST REVISION	DESCRIPTION:
10/01/20	

**FDOT** FY 2023-24  
STANDARD PLANS

**DITCH BOTTOM INLET TYPES C, D, E, AND H**

INDEX	SHEET
425-052	7 of 14

REVISIONS

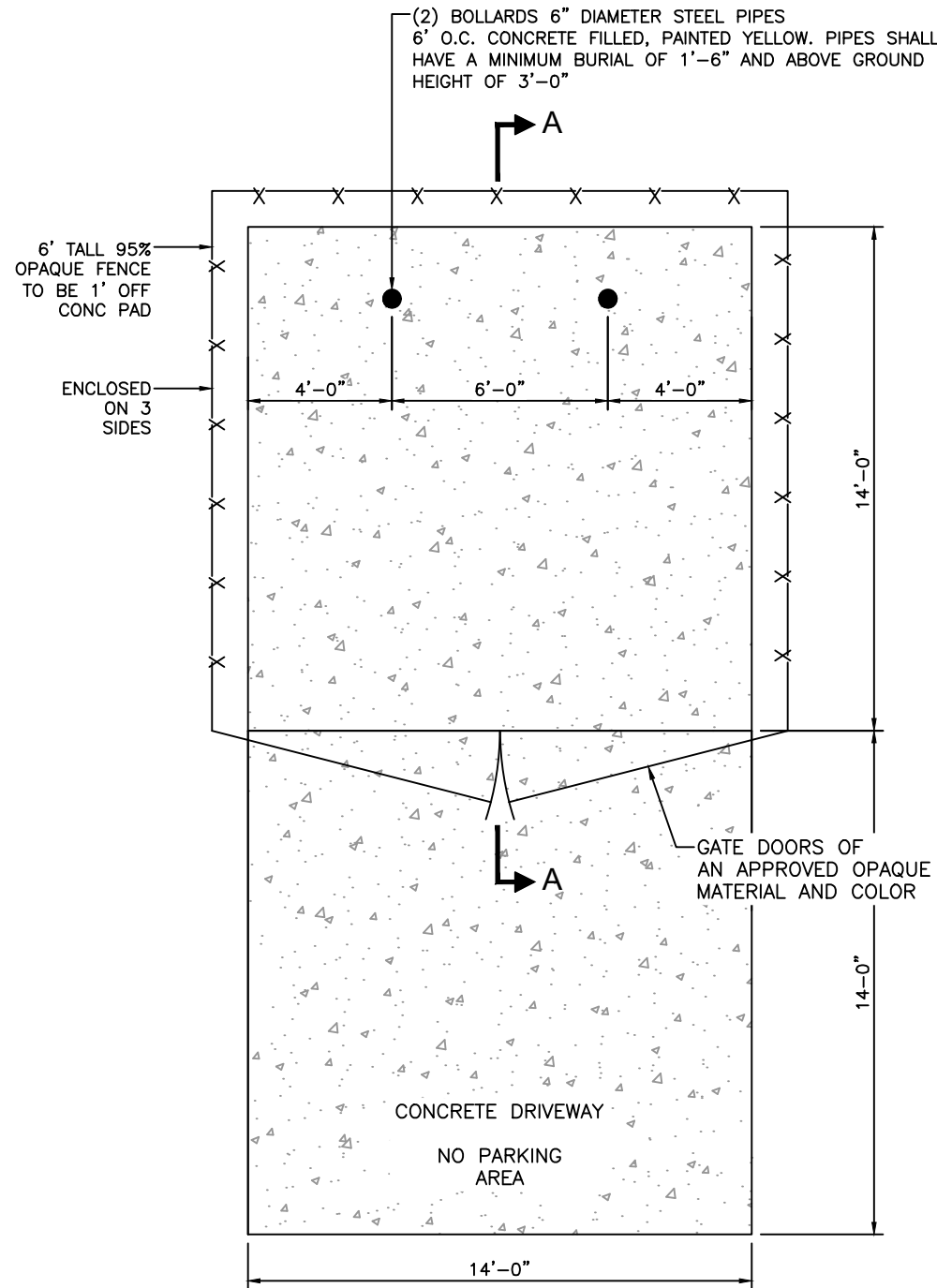
PLOT DATE:	11/15/24
DRAWN BY:	
DESIGNED BY:	
CHECKED BY:	
SCALE:	
JOB NO.:	
SHEET NO.	9C

Date: 11/15/24 Time: 10:19 AM DWG Name: \\TE-GCS\01-Projects\24-671 Springs Academy Parking Lot GCS Pope\03-CADD\09\_24-671 DRAINAGE DETAILS 2.dwg Layout: 9C

10/20/2022 8:14:28 AM

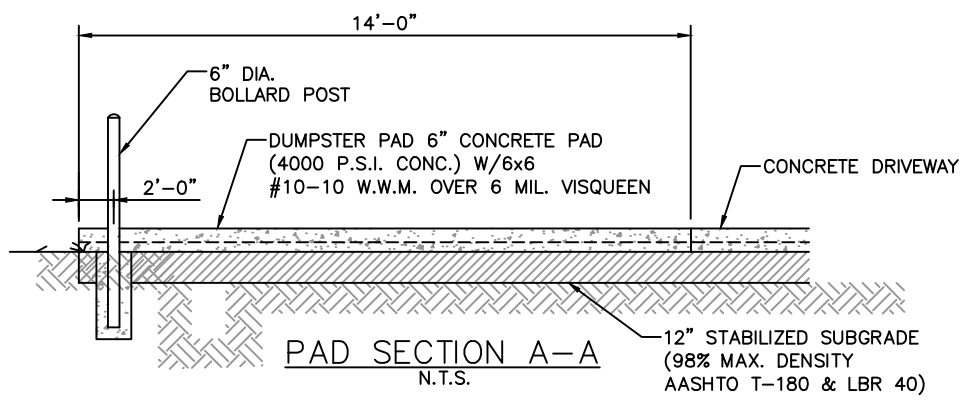
All documents and materials supplementing the signed and sealed documents are resources provided for clarification purposes only and do not supersede the signed and sealed documents. Engineer is not responsible for any deviations from the signed and sealed documents.

Date: 11/15/24 Time: 10:24 AM DWG Name: \\TE-GCS\01-Projects\24-671 Springs Academy Parking Lot GCS Pope\03-CADD\09\_24-671 DRAINAGE DETAILS 11.12.24.dwg Layout: 9D



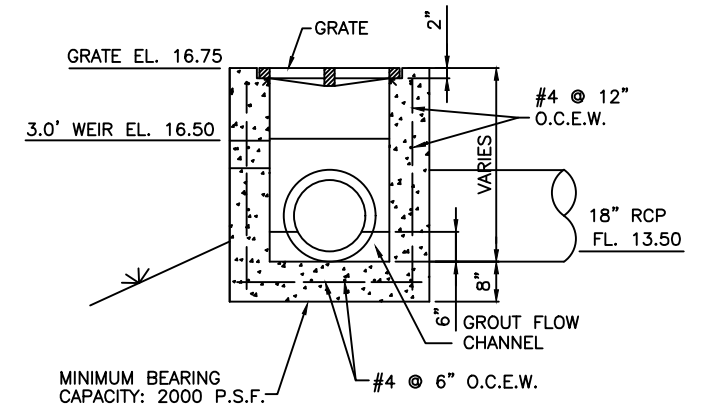
DUMPSTER PAD AND SWALE DETAIL  
N.T.S.

(2) BOLLARDS 6" DIAMETER STEEL PIPES  
6' O.C. CONCRETE FILLED, PAINTED YELLOW. PIPES SHALL  
HAVE A MINIMUM BURIAL OF 1'-6" AND ABOVE GROUND  
HEIGHT OF 3'-0"



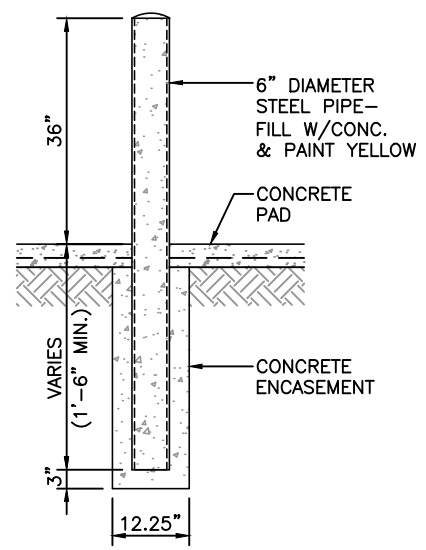
PAD SECTION A-A  
N.T.S.

- NOTES:**
- 1. MAXIMUM ANGLE OF CONTAINER PAD TO DIRECTION OF AISLE TO BE 30°.
  - 2. AREA TO BE FREE OF OVERHEAD LINES AND WIRES.
  - 3. DUMPSTER PAD TO BE A MINIMUM OF 12' WIDE FOR DUMPSTER RECYCLING.
  - 4. APPLICANT TO PROVIDE A SIDE ELEVATION TO DEMONSTRATE COLOR, MATERIAL AND DESIGN CONSISTENCY WITH THE PRINCIPAL BUILDING.
  - 5. DRAINAGE PATTERNS AROUND PADS SHALL BE SUBJECT TO CITY REVIEW AND APPROVAL.
  - 6. INGRESS AND EGRESS ROUTES TO/FROM DUMPSTER PADS SHALL BE IN ACCORDANCE WITH WASTE HANDLING CONTRACTORS REQUIREMENTS.

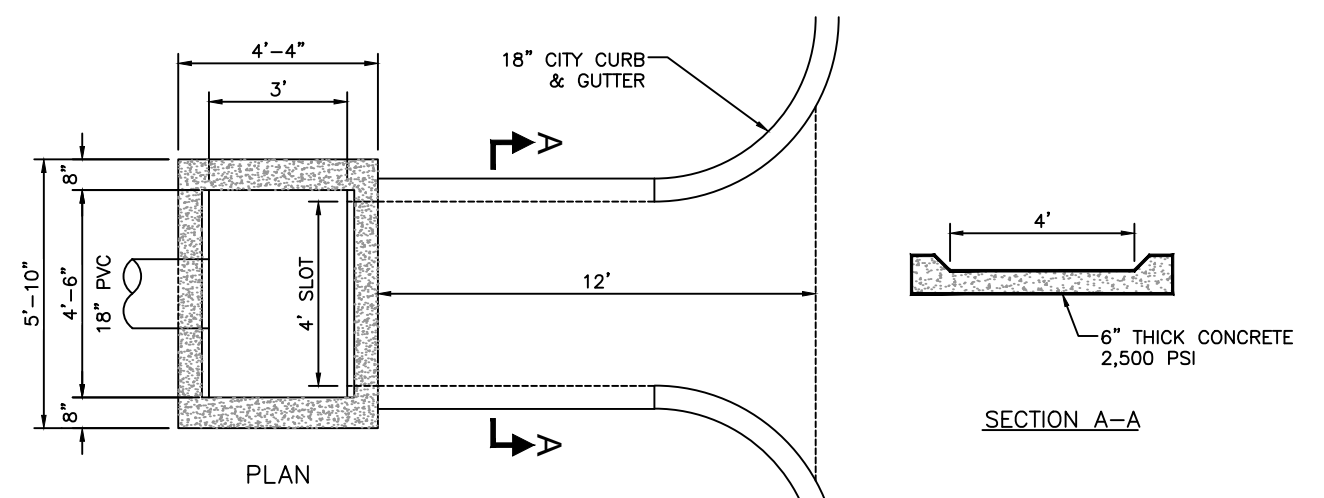


MODIFIED TYPE "E" INLET (S-7)  
N.T.S.

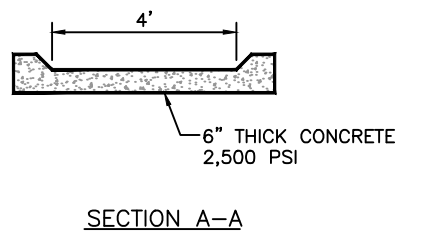
**NOTE**  
INLETS WITH SLOTS GREATER THAN 6" SHALL BE CONSTRUCTED WITH HORIZONTAL BARS AT THE MAXIMUM VERTICAL SPACING OF 6-INCHES. 1" DIA. GALVANIZED PIPE IMBEDDED 2" IN PRECAST STRUCTURE OR OTHER APPROVED METHOD.



TYPICAL BOLLARD DETAIL  
N.T.S.



POND OUTFALL-CONTROL STRUCTURE (S-4)  
N.T.S.



SECTION A-A

**TOCOI** Engineering, LLC  
714 NORTH ORANGE AVENUE, GREEN COVE SPRINGS, FL 32043  
PH: 904-215-1388 E.B. NUMBER: 26383

ENGINEER OF RECORD  
CHARLES SOHM  
FLORIDA  
REGISTRATION NUMBER:  
79289

SPRINGS ACADEMY PARKING LOT  
FOR  
SPRINGS CHAPEL CORP.  
DRAINAGE DETAILS

REVISIONS

SHEET NO.  
9D



# SPRINGS CHAPEL

## GREEN COVE SPRINGS, FL, USA

PROJECT INFORMATION	
ENGINEERED PRODUCT MANAGER	
ADS SALES REP	
PROJECT NO.	

### SC-800 STORMTECH CHAMBER SPECIFICATIONS

1. CHAMBERS SHALL BE STORMTECH SC-800.
2. CHAMBERS SHALL BE ARCH-SHAPED AND SHALL BE MANUFACTURED FROM VIRGIN, IMPACT-MODIFIED POLYPROPYLENE COPOLYMERS.
3. CHAMBERS SHALL MEET THE REQUIREMENTS OF ASTM F2418, "STANDARD SPECIFICATION FOR POLYPROPYLENE (PP) CORRUGATED WALL STORMWATER COLLECTION CHAMBERS".
4. CHAMBER ROWS SHALL PROVIDE CONTINUOUS, UNOBSTRUCTED INTERNAL SPACE WITH NO INTERNAL SUPPORTS THAT WOULD IMPEDE FLOW OR LIMIT ACCESS FOR INSPECTION.
5. THE STRUCTURAL DESIGN OF THE CHAMBERS, THE STRUCTURAL BACKFILL, AND THE INSTALLATION REQUIREMENTS SHALL ENSURE THAT THE LOAD FACTORS SPECIFIED IN THE AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, SECTION 12.12, ARE MET FOR: 1) LONG-DURATION DEAD LOADS AND 2) SHORT-DURATION LIVE LOADS, BASED ON THE AASHTO DESIGN TRUCK WITH CONSIDERATION FOR IMPACT AND MULTIPLE VEHICLE PRESENCES.
6. CHAMBERS SHALL BE DESIGNED AND ALLOWABLE LOAD CONFIGURATIONS DETERMINED IN ACCORDANCE WITH ASTM F2787, "STANDARD PRACTICE FOR STRUCTURAL DESIGN OF THERMOPLASTIC CORRUGATED WALL STORMWATER COLLECTION CHAMBERS". LOAD CONFIGURATIONS SHALL INCLUDE: 1) INSTANTANEOUS (<1 MIN) AASHTO DESIGN TRUCK LIVE LOAD ON MINIMUM COVER 2) MAXIMUM PERMANENT (75-YR) COVER LOAD AND 3) ALLOWABLE COVER WITH PARKED (1-WEEK) AASHTO DESIGN TRUCK.
7. REQUIREMENTS FOR HANDLING AND INSTALLATION:
  - TO MAINTAIN THE WIDTH OF CHAMBERS DURING SHIPPING AND HANDLING, CHAMBERS SHALL HAVE INTEGRAL, INTERLOCKING STACKING LUGS.
  - TO ENSURE A SECURE JOINT DURING INSTALLATION AND BACKFILL, THE HEIGHT OF THE CHAMBER JOINT SHALL NOT BE LESS THAN 2".
  - TO ENSURE THE INTEGRITY OF THE ARCH SHAPE DURING INSTALLATION, a) THE ARCH STIFFNESS CONSTANT SHALL BE GREATER THAN OR EQUAL TO 550 LBS/FT%. THE ASC IS DEFINED IN SECTION 6.2.8 OF ASTM F2418. AND b) TO RESIST CHAMBER DEFORMATION DURING INSTALLATION AT ELEVATED TEMPERATURES (ABOVE 73° F / 23° C), CHAMBERS SHALL BE PRODUCED FROM REFLECTIVE GOLD OR YELLOW COLORS.
8. ONLY CHAMBERS THAT ARE APPROVED BY THE SITE DESIGN ENGINEER WILL BE ALLOWED. UPON REQUEST BY THE SITE DESIGN ENGINEER OR OWNER, THE CHAMBER MANUFACTURER SHALL SUBMIT A STRUCTURAL EVALUATION FOR APPROVAL BEFORE DELIVERING CHAMBERS TO THE PROJECT SITE AS FOLLOWS:
  - THE STRUCTURAL EVALUATION SHALL BE SEALED BY A REGISTERED PROFESSIONAL ENGINEER.
  - THE STRUCTURAL EVALUATION SHALL DEMONSTRATE THAT THE SAFETY FACTORS ARE GREATER THAN OR EQUAL TO 1.95 FOR DEAD LOAD AND 1.75 FOR LIVE LOAD, THE MINIMUM REQUIRED BY ASTM F2787 AND BY SECTIONS 3 AND 12.12 OF THE AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS FOR THERMOPLASTIC PIPE.
  - THE TEST DERIVED CREEP MODULUS AS SPECIFIED IN ASTM F2418 SHALL BE USED FOR PERMANENT DEAD LOAD DESIGN EXCEPT THAT IT SHALL BE THE 75-YEAR MODULUS USED FOR DESIGN.
9. CHAMBERS AND END CAPS SHALL BE PRODUCED AT AN ISO 9001 CERTIFIED MANUFACTURING FACILITY.
10. MANIFOLD SIZE TO BE DETERMINED BY SITE DESIGN ENGINEER. SEE TECH NOTE #6.32 FOR MANIFOLD SIZING GUIDANCE. DUE TO THE ADAPTATION OF THIS CHAMBER SYSTEM TO SPECIFIC SITE AND DESIGN CONSTRAINTS, IT MAY BE NECESSARY TO CUT AND COUPLE ADDITIONAL PIPE TO STANDARD MANIFOLD COMPONENTS IN THE FIELD.
11. ADS DOES NOT DESIGN OR PROVIDE MEMBRANE LINER SYSTEMS. TO MINIMIZE THE LEAKAGE POTENTIAL OF LINER SYSTEMS, THE MEMBRANE LINER SYSTEM SHOULD BE DESIGNED BY A KNOWLEDGEABLE GEOTEXTILE PROFESSIONAL AND INSTALLED BY A QUALIFIED CONTRACTOR.

### IMPORTANT - NOTES FOR THE BIDDING AND INSTALLATION OF THE SC-800 SYSTEM

1. STORMTECH SC-800 CHAMBERS SHALL NOT BE INSTALLED UNTIL THE MANUFACTURER'S REPRESENTATIVE HAS COMPLETED A PRE-CONSTRUCTION MEETING WITH THE INSTALLERS.
2. STORMTECH SC-800 CHAMBERS SHALL BE INSTALLED IN ACCORDANCE WITH THE "STORMTECH SC-310/SC-740/SC-800/DC-780 CONSTRUCTION GUIDE".
3. CHAMBERS ARE NOT TO BE BACKFILLED WITH A DOZER OR AN EXCAVATOR SITUATED OVER THE CHAMBERS. STORMTECH RECOMMENDS 3 BACKFILL METHODS:
  - STONESHOOTER LOCATED OFF THE CHAMBER BED.
  - BACKFILL AS ROWS ARE BUILT USING AN EXCAVATOR ON THE FOUNDATION STONE OR SUBGRADE.
  - BACKFILL FROM OUTSIDE THE EXCAVATION USING A LONG BOOM HOE OR EXCAVATOR.
4. THE FOUNDATION STONE SHALL BE LEVELED AND COMPACTED PRIOR TO PLACING CHAMBERS.
5. JOINTS BETWEEN CHAMBERS SHALL BE PROPERLY SEATED PRIOR TO PLACING STONE.
6. MAINTAIN MINIMUM - 6" (150 mm) SPACING BETWEEN THE CHAMBER ROWS.
7. EMBEDMENT STONE SURROUNDING CHAMBERS MUST BE A CLEAN, CRUSHED, ANGULAR STONE OR RECYCLED CONCRETE; AASHTO M43 #3, 357, 4, 467, 5, 56, OR 57.
8. THE CONTRACTOR MUST REPORT ANY DISCREPANCIES WITH CHAMBER FOUNDATION MATERIALS BEARING CAPACITIES TO THE SITE DESIGN ENGINEER.
9. ADS RECOMMENDS THE USE OF "FLEXSTORM CATCH IT" INSERTS DURING CONSTRUCTION FOR ALL INLETS TO PROTECT THE SUBSURFACE STORMWATER MANAGEMENT SYSTEM FROM CONSTRUCTION SITE RUNOFF.

### NOTES FOR CONSTRUCTION EQUIPMENT

1. STORMTECH SC-800 CHAMBERS SHALL BE INSTALLED IN ACCORDANCE WITH THE "STORMTECH SC-310/SC-740/SC-800/DC-780 CONSTRUCTION GUIDE".
2. THE USE OF CONSTRUCTION EQUIPMENT OVER SC-800 CHAMBERS IS LIMITED:
  - NO EQUIPMENT IS ALLOWED ON BARE CHAMBERS.
  - NO RUBBER TIRE LOADERS, DUMP TRUCKS, OR EXCAVATORS ARE ALLOWED UNTIL PROPER FILL DEPTHS ARE REACHED IN ACCORDANCE WITH THE "STORMTECH SC-310/SC-740/SC-800/DC-780 CONSTRUCTION GUIDE".
  - WEIGHT LIMITS FOR CONSTRUCTION EQUIPMENT CAN BE FOUND IN THE "STORMTECH SC-310/SC-740/SC-800/DC-780 CONSTRUCTION GUIDE".
3. FULL 36" (900 mm) OF STABILIZED COVER MATERIALS OVER THE CHAMBERS IS REQUIRED FOR DUMP TRUCK TRAVEL OR DUMPING.

**USE OF A DOZER TO PUSH EMBEDMENT STONE BETWEEN THE ROWS OF CHAMBERS MAY CAUSE DAMAGE TO THE CHAMBERS AND IS NOT AN ACCEPTABLE BACKFILL METHOD. ANY CHAMBERS DAMAGED BY THE "DUMP AND PUSH" METHOD ARE NOT COVERED UNDER THE STORMTECH STANDARD WARRANTY.**

CONTACT STORMTECH AT 1-800-821-6710 WITH ANY QUESTIONS ON INSTALLATION REQUIREMENTS OR WEIGHT LIMITS FOR CONSTRUCTION EQUIPMENT.

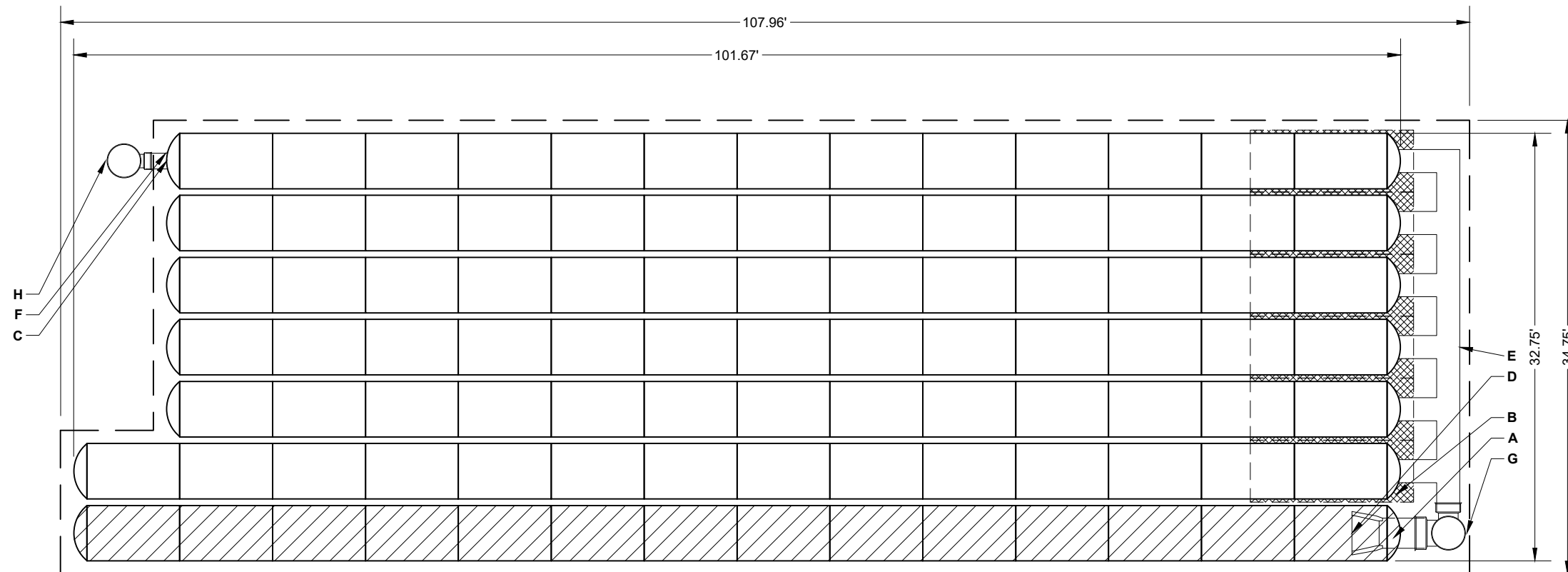
REVISIONS


PLOT DATE:	11/15/24
DRAWN BY:	-
DESIGNED BY:	-
CHECKED BY:	-
SCALE:	-
JOB NO.:	-


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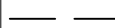
Date: 11/15/24 Time: 10:19 AM DWG Name: \\TE-GCS-01-Projects\24-671 Springs Academy Parking Lot GCS Pope\03-CADD\09\_24-671 DRAINAGE DETAILS 2.dwg Layout: 9E

PROPOSED LAYOUT		PROPOSED ELEVATIONS:		*INVERT ABOVE BASE OF CHAMBER				
				PART TYPE	ITEM ON LAYOUT	DESCRIPTION	INVERT*	MAX FLOW
93	STORMTECH SC-800 CHAMBERS	MAXIMUM ALLOWABLE GRADE (TOP OF PAVEMENT/UNPAVED):	23.25					
12	STORMTECH SC-800 END CAPS	MINIMUM ALLOWABLE GRADE (UNPAVED WITH TRAFFIC):	17.00					
6	STONE ABOVE (in)	MINIMUM ALLOWABLE GRADE (UNPAVED NO TRAFFIC):	16.50	PREFABRICATED END CAP	A	24" BOTTOM CORED END CAP, PART#: SC800EPE24BPC / TYP OF ALL 24" BOTTOM CONNECTIONS AND ISOLATOR PLUS ROWS	2.30"	
6	STONE BELOW (in)	MINIMUM ALLOWABLE GRADE (TOP OF RIGID CONCRETE PAVEMENT):	16.50	PREFABRICATED END CAP	B	18" TOP CORED END CAP, PART#: SC800EPE18TPC / TYP OF ALL 18" TOP CONNECTIONS	8.00"	
40	STONE VOID	MINIMUM ALLOWABLE GRADE (BASE OF FLEXIBLE PAVEMENT):	16.50	PREFABRICATED END CAP	C	12" BOTTOM CORED END CAP, PART#: SC800EPE12BPC / TYP OF ALL 12" BOTTOM CONNECTIONS	1.60"	
8196	INSTALLED SYSTEM VOLUME (CF) (PERIMETER STONE INCLUDED) (COVER STONE INCLUDED) (BASE STONE INCLUDED)	TOP OF STONE:	15.75	FLAMP	D	INSTALL FLAMP ON 24" ACCESS PIPE / PART#: SC74024RAMP		
		TOP OF SC-800 CHAMBER:	15.25	MANIFOLD	E	18" x 18" TOP MANIFOLD, ADS N-12	8.00"	
		18" x 18" TOP MANIFOLD INVERT:	13.17	PIPE CONNECTION	F	12" BOTTOM CONNECTION	1.60"	
		24" ISOLATOR ROW PLUS INVERT:	12.69	NYLOPLAST (INLET W/ ISO PLUS ROW)	G	30" DIAMETER (24.00" SUMP MIN)		14.0 CFS IN
3564	SYSTEM AREA (SF)	12" BOTTOM CONNECTION INVERT:	12.63	NYLOPLAST (OUTLET)	H	30" DIAMETER (DESIGN BY ENGINEER)		2.0 CFS OUT
304.4	SYSTEM PERIMETER (ft)	BOTTOM OF SC-800 CHAMBER:	12.50					
		BOTTOM OF STONE:	12.00					



 ISOLATOR ROW PLUS (SEE DETAIL)

 PLACE MINIMUM 12.50' OF ADSPLUS625 WOVEN GEOTEXTILE OVER BEDDING STONE AND UNDERNEATH CHAMBER FEET FOR SCOUR PROTECTION AT ALL CHAMBER INLET ROWS

 BED LIMITS

**NOTES**

- THE SITE DESIGN ENGINEER MUST REVIEW ELEVATIONS AND IF NECESSARY ADJUST GRADING TO ENSURE THE CHAMBER COVER REQUIREMENTS ARE MET.
- **NOT FOR CONSTRUCTION:** THIS LAYOUT IS FOR DIMENSIONAL PURPOSES ONLY TO PROVE CONCEPT & THE REQUIRED STORAGE VOLUME CAN BE ACHIEVED ON SITE.

GARDEN STREET SUBDIVISION  
FOR  
COASTLAND GROUP, LLC.

DRAINAGE DETAILS - STORMTECH SC-800

**TOCO**  **Engineering, LLC**  
714 NORTH ORANGE AVENUE, GREEN COVE SPRINGS, FL 32043  
PH: 904-215-1388 E.B. NUMBER: 26383

REVISIONS

NO.	DATE	DESCRIPTION

PLOT DATE: 11/15/24

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DESIGNED BY: --

CHECKED BY: --

SCALE: --

JOB NO.: --

SHEET NO.

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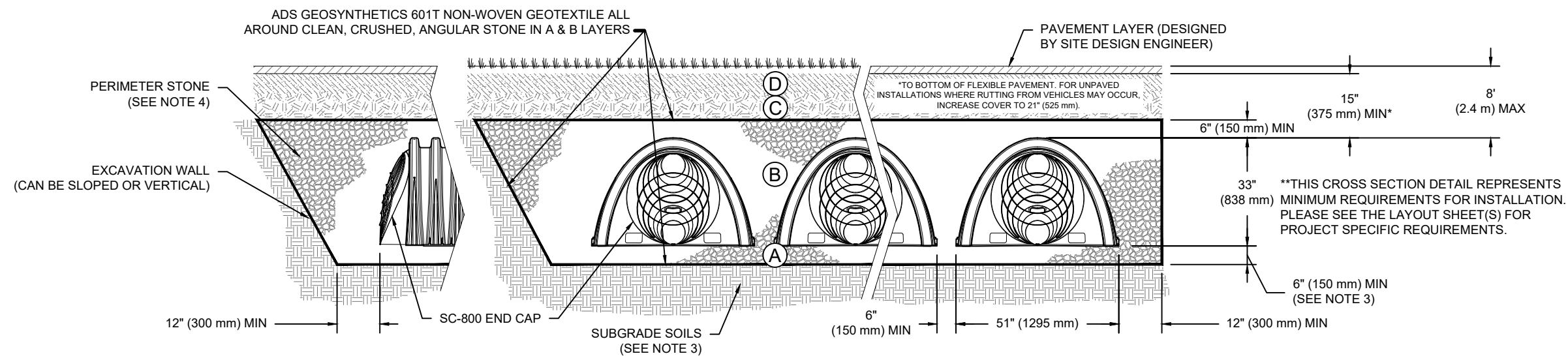


## ACCEPTABLE FILL MATERIALS: STORMTECH SC-800 CHAMBER SYSTEMS

MATERIAL LOCATION		DESCRIPTION	AASHTO MATERIAL CLASSIFICATIONS	COMPACTION / DENSITY REQUIREMENT
D	<b>FINAL FILL:</b> FILL MATERIAL FOR LAYER 'D' STARTS FROM THE TOP OF THE 'C' LAYER TO THE BOTTOM OF FLEXIBLE PAVEMENT OR UNPAVED FINISHED GRADE ABOVE. NOTE THAT PAVEMENT SUBBASE MAY BE PART OF THE 'D' LAYER.	ANY SOIL/ROCK MATERIALS, NATIVE SOILS, OR PER ENGINEER'S PLANS. CHECK PLANS FOR PAVEMENT SUBGRADE REQUIREMENTS.	N/A	PREPARE PER SITE DESIGN ENGINEER'S PLANS. PAVED INSTALLATIONS MAY HAVE STRINGENT MATERIAL AND PREPARATION REQUIREMENTS.
C	<b>INITIAL FILL:</b> FILL MATERIAL FOR LAYER 'C' STARTS FROM THE TOP OF THE EMBEDMENT STONE ('B' LAYER) TO 15" (375 mm) ABOVE THE TOP OF THE CHAMBER. NOTE THAT PAVEMENT SUBBASE MAY BE A PART OF THE 'C' LAYER.	GRANULAR WELL-GRADED SOIL/AGGREGATE MIXTURES, <35% FINES OR PROCESSED AGGREGATE.  MOST PAVEMENT SUBBASE MATERIALS CAN BE USED IN LIEU OF THIS LAYER.	AASHTO M145 <sup>1</sup> A-1, A-2-4, A-3  OR AASHTO M43 <sup>1</sup> 3, 357, 4, 467, 5, 56, 57, 6, 67, 68, 7, 78, 8, 89, 9, 10	BEGIN COMPACTIONS AFTER 12" (300 mm) OF MATERIAL OVER THE CHAMBERS IS REACHED. COMPACT ADDITIONAL LAYERS IN 6" (150 mm) MAX LIFTS TO A MIN. 95% PROCTOR DENSITY FOR WELL GRADED MATERIAL AND 95% RELATIVE DENSITY FOR PROCESSED AGGREGATE MATERIALS. ROLLER GROSS VEHICLE WEIGHT NOT TO EXCEED 12,000 lbs (53 kN). DYNAMIC FORCE NOT TO EXCEED 20,000 lbs (89 kN).
B	<b>EMBEDMENT STONE:</b> FILL SURROUNDING THE CHAMBERS FROM THE FOUNDATION STONE ('A' LAYER) TO THE 'C' LAYER ABOVE.	CLEAN, CRUSHED, ANGULAR STONE OR RECYCLED CONCRETE <sup>5</sup>	AASHTO M43 <sup>1</sup> 3, 357, 4, 467, 5, 56, 57	NO COMPACTION REQUIRED.
A	<b>FOUNDATION STONE:</b> FILL BELOW CHAMBERS FROM THE SUBGRADE UP TO THE FOOT (BOTTOM) OF THE CHAMBER.	CLEAN, CRUSHED, ANGULAR STONE OR RECYCLED CONCRETE <sup>5</sup>	AASHTO M43 <sup>1</sup> 3, 357, 4, 467, 5, 56, 57	PLATE COMPACT OR ROLL TO ACHIEVE A FLAT SURFACE. <sup>2,3</sup>

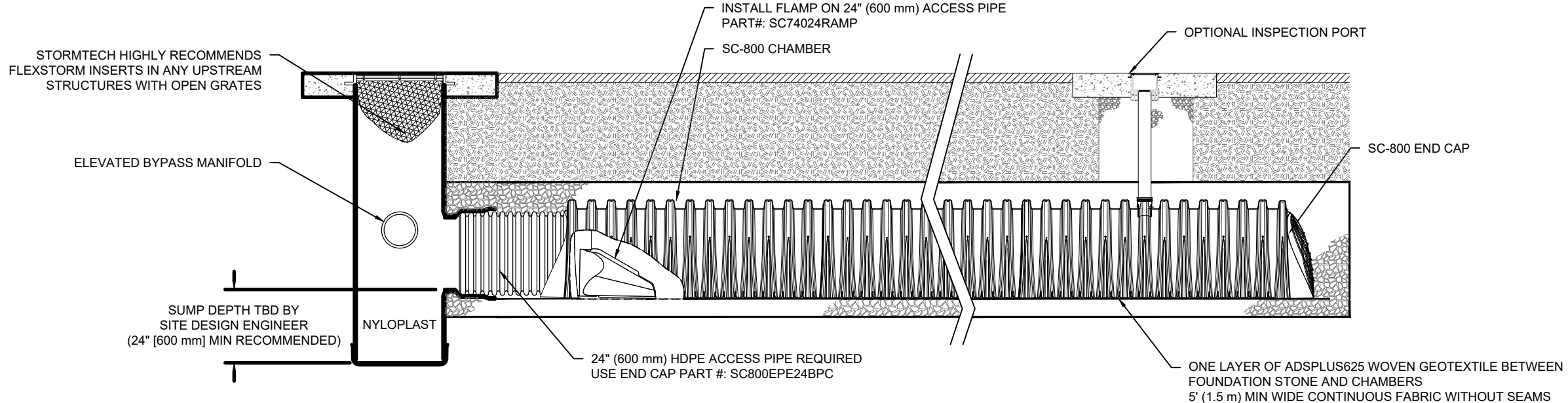
### PLEASE NOTE:

- THE LISTED AASHTO DESIGNATIONS ARE FOR GRADATIONS ONLY. THE STONE MUST ALSO BE CLEAN, CRUSHED, ANGULAR. FOR EXAMPLE, A SPECIFICATION FOR #4 STONE WOULD STATE: "CLEAN, CRUSHED, ANGULAR NO. 4 (AASHTO M43) STONE".
- STORMTECH COMPACTION REQUIREMENTS ARE MET FOR 'A' LOCATION MATERIALS WHEN PLACED AND COMPACTED IN 6" (150 mm) (MAX) LIFTS USING TWO FULL COVERAGES WITH A VIBRATORY COMPACTOR.
- WHERE INFILTRATION SURFACES MAY BE COMPROMISED BY COMPACTION, FOR STANDARD DESIGN LOAD CONDITIONS, A FLAT SURFACE MAY BE ACHIEVED BY RAKING OR DRAGGING WITHOUT COMPACTION EQUIPMENT. FOR SPECIAL LOAD DESIGNS, CONTACT STORMTECH FOR COMPACTION REQUIREMENTS.
- ONCE LAYER 'C' IS PLACED, ANY SOIL/MATERIAL CAN BE PLACED IN LAYER 'D' UP TO THE FINISHED GRADE. MOST PAVEMENT SUBBASE SOILS CAN BE USED TO REPLACE THE MATERIAL REQUIREMENTS OF LAYER 'C' OR 'D' AT THE SITE DESIGN ENGINEER'S DISCRETION.
- WHERE RECYCLED CONCRETE AGGREGATE IS USED IN LAYERS 'A' OR 'B' THE MATERIAL SHOULD ALSO MEET THE ACCEPTABILITY CRITERIA OUTLINED IN TECHNICAL NOTE 6.20 "RECYCLED CONCRETE STRUCTURAL BACKFILL".



### NOTES:

- CHAMBERS SHALL MEET THE REQUIREMENTS OF ASTM F2418, "STANDARD SPECIFICATION FOR POLYPROPYLENE (PP) CORRUGATED WALL STORMWATER COLLECTION CHAMBERS".
- SC-800 CHAMBERS SHALL BE DESIGNED IN ACCORDANCE WITH ASTM F2787 "STANDARD PRACTICE FOR STRUCTURAL DESIGN OF THERMOPLASTIC CORRUGATED WALL STORMWATER COLLECTION CHAMBERS".
- THE SITE DESIGN ENGINEER IS RESPONSIBLE FOR ASSESSING THE BEARING RESISTANCE (ALLOWABLE BEARING CAPACITY) OF THE SUBGRADE SOILS AND THE DEPTH OF FOUNDATION STONE WITH CONSIDERATION FOR THE RANGE OF EXPECTED SOIL MOISTURE CONDITIONS. REFERENCE STORMTECH DESIGN MANUAL FOR BEARING CAPACITY GUIDANCE.
- PERIMETER STONE MUST BE EXTENDED HORIZONTALLY TO THE EXCAVATION WALL FOR BOTH VERTICAL AND SLOPED EXCAVATION WALLS.
- REQUIREMENTS FOR HANDLING AND INSTALLATION:
  - TO MAINTAIN THE WIDTH OF CHAMBERS DURING SHIPPING AND HANDLING, CHAMBERS SHALL HAVE INTEGRAL, INTERLOCKING STACKING LUGS.
  - TO ENSURE A SECURE JOINT DURING INSTALLATION AND BACKFILL, THE HEIGHT OF THE CHAMBER JOINT SHALL NOT BE LESS THAN 2".
  - TO ENSURE THE INTEGRITY OF THE ARCH SHAPE DURING INSTALLATION, a) THE ARCH STIFFNESS CONSTANT AS DEFINED IN SECTION 6.2.8 OF ASTM F2418 SHALL BE GREATER THAN OR EQUAL TO 550 LBS/FT%. AND b) TO RESIST CHAMBER DEFORMATION DURING INSTALLATION AT ELEVATED TEMPERATURES (ABOVE 73° F / 23° C), CHAMBERS SHALL BE PRODUCED FROM REFLECTIVE GOLD OR YELLOW COLORS.



**SC-800 ISOLATOR ROW PLUS DETAIL**

NTS

**INSPECTION & MAINTENANCE**

- STEP 1) INSPECT ISOLATOR ROW PLUS FOR SEDIMENT
  - A. INSPECTION PORTS (IF PRESENT)
    - A.1. REMOVE/OPEN LID ON NYLOPLAST INLINE DRAIN
    - A.2. REMOVE AND CLEAN FLEXSTORM FILTER IF INSTALLED
    - A.3. USING A FLASHLIGHT AND STADIA ROD, MEASURE DEPTH OF SEDIMENT AND RECORD ON MAINTENANCE LOG
    - A.4. LOWER A CAMERA INTO ISOLATOR ROW PLUS FOR VISUAL INSPECTION OF SEDIMENT LEVELS (OPTIONAL)
    - A.5. IF SEDIMENT IS AT, OR ABOVE, 3" (80 mm) PROCEED TO STEP 2. IF NOT, PROCEED TO STEP 3.
  - B. ALL ISOLATOR PLUS ROWS
    - B.1. REMOVE COVER FROM STRUCTURE AT UPSTREAM END OF ISOLATOR ROW PLUS
    - B.2. USING A FLASHLIGHT, INSPECT DOWN THE ISOLATOR ROW PLUS THROUGH OUTLET PIPE
      - i) MIRRORS ON POLES OR CAMERAS MAY BE USED TO AVOID A CONFINED SPACE ENTRY
      - ii) FOLLOW OSHA REGULATIONS FOR CONFINED SPACE ENTRY IF ENTERING MANHOLE
    - B.3. IF SEDIMENT IS AT, OR ABOVE, 3" (80 mm) PROCEED TO STEP 2. IF NOT, PROCEED TO STEP 3.
- STEP 2) CLEAN OUT ISOLATOR ROW PLUS USING THE JETVAC PROCESS
  - A. A FIXED CULVERT CLEANING NOZZLE WITH REAR FACING SPREAD OF 45" (1.1 m) OR MORE IS PREFERRED
  - B. APPLY MULTIPLE PASSES OF JETVAC UNTIL BACKFLUSH WATER IS CLEAN
  - C. VACUUM STRUCTURE SUMP AS REQUIRED
- STEP 3) REPLACE ALL COVERS, GRATES, FILTERS, AND LIDS; RECORD OBSERVATIONS AND ACTIONS.
- STEP 4) INSPECT AND CLEAN BASINS AND MANHOLES UPSTREAM OF THE STORMTECH SYSTEM.

**NOTES**

- 1. INSPECT EVERY 6 MONTHS DURING THE FIRST YEAR OF OPERATION. ADJUST THE INSPECTION INTERVAL BASED ON PREVIOUS OBSERVATIONS OF SEDIMENT ACCUMULATION AND HIGH WATER ELEVATIONS.
- 2. CONDUCT JETTING AND VACTORING ANNUALLY OR WHEN INSPECTION SHOWS THAT MAINTENANCE IS NECESSARY.

REVISIONS


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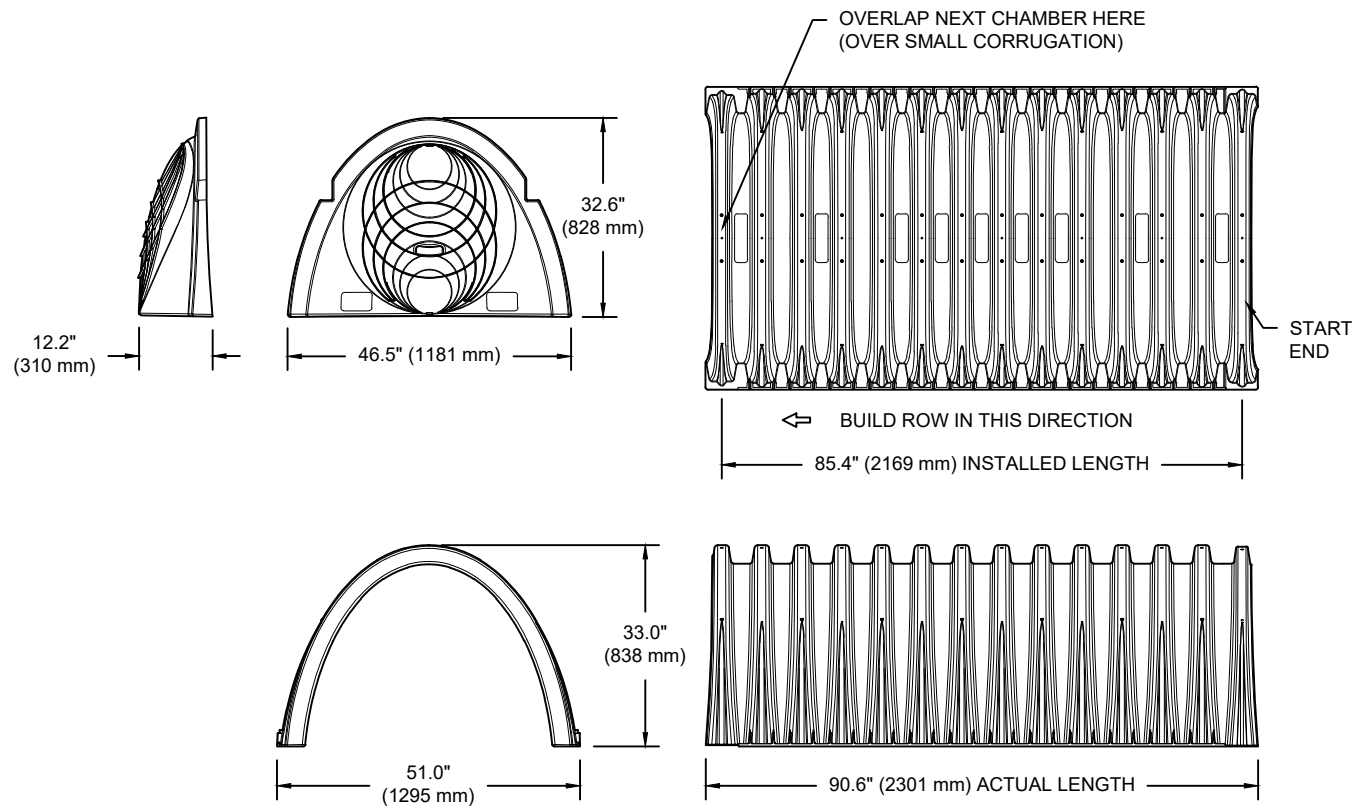
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Date: 11/15/24 Time: 10:21 AM DWG Name: \\TE-GCS\01-Projects\24-671 Springs Academy Parking Lot GCS Pope\03-CADD\09\_24-671 DRAINAGE DETAILS 2.dwg Layout: 9H

All documents and materials supplementing the signed and sealed documents are resources provided for clarification purposes only and do not supersede the signed and sealed documents. Engineer is not responsible for any deviations from the signed and sealed documents.

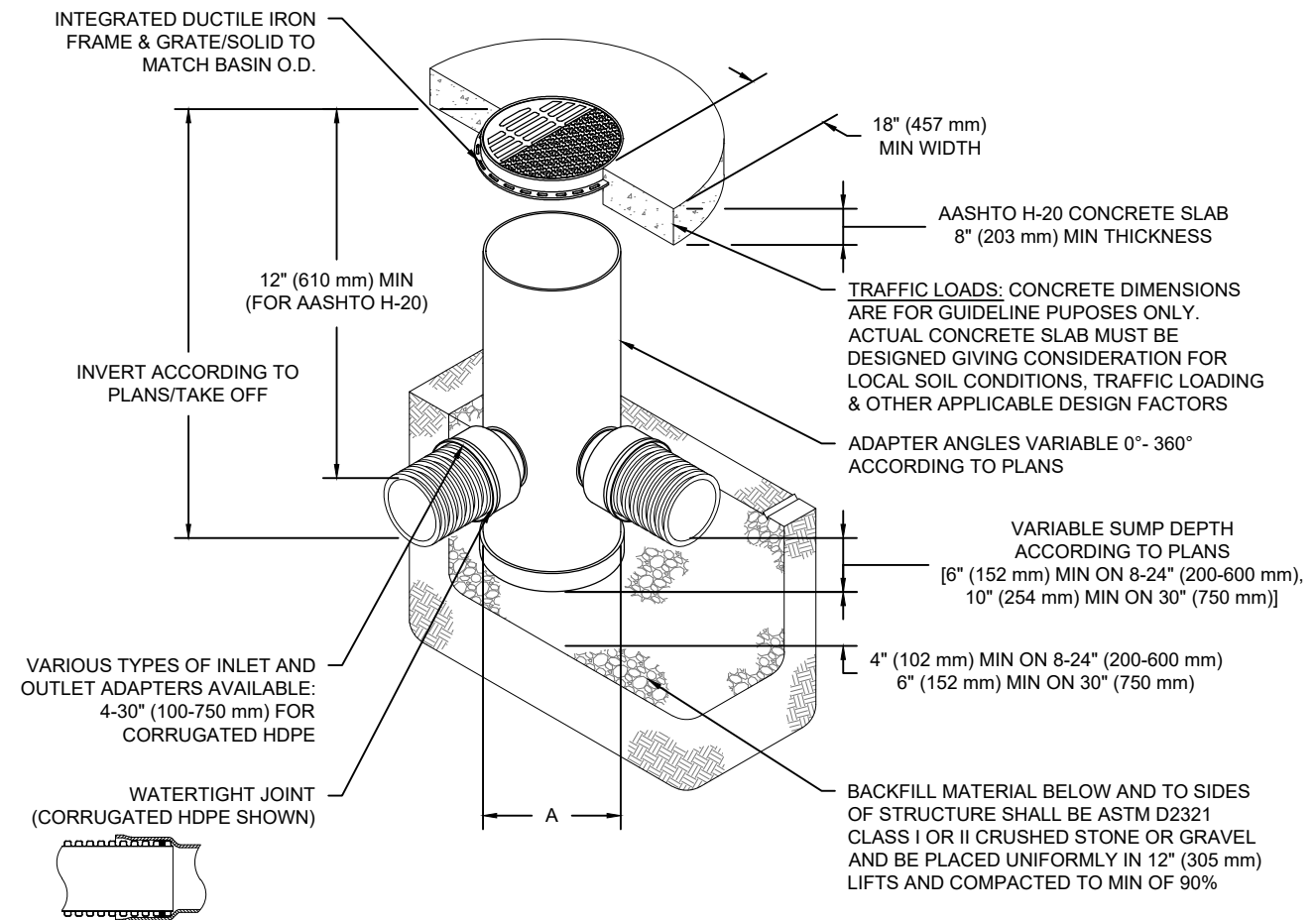
**SC-800 TECHNICAL SPECIFICATION**

NTS



**NYLOPLAST DRAIN BASIN**

NTS



**NOMINAL CHAMBER SPECIFICATIONS**

SIZE (W X H X INSTALLED LENGTH)	51.0" X 33.0" X 85.4"	(1295 mm X 838 mm X 2169 mm)
CHAMBER STORAGE	50.6 CUBIC FEET	(1.43 m³)
MINIMUM INSTALLED STORAGE*	81.0 CUBIC FEET	(2.29 m³)
WEIGHT	81.8 lbs.	(37.1 kg)

**NOMINAL END CAP SPECIFICATIONS**

SIZE (W X H X INSTALLED LENGTH)	46.5" X 32.6" X 10.5"	(1181 mm X 828 mm X 267 mm)
END CAP STORAGE	3.4 CUBIC FEET	(0.09 m³)
MINIMUM INSTALLED STORAGE**	15.4 CUBIC FEET	(0.43 m³)
WEIGHT	15.7 lbs.	(7.1 kg)

\* ASSUMES 6" (152 mm) STONE ABOVE, BELOW, AND BETWEEN CHAMBERS

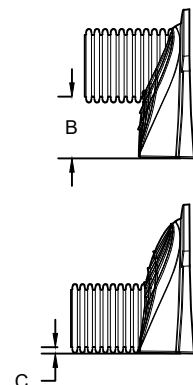
\*\*ASSUMES 6" (152 mm) STONE ABOVE AND BELOW END CAPS, 6" (152 mm) BETWEEN ROWS, 12" (305 mm) BEYOND END CAPS

PRE-CORED HOLES AT BOTTOM OF END CAP FOR PART NUMBERS ENDING WITH "BPC"

PRE-CORED HOLES AT TOP OF END CAP FOR PART NUMBERS ENDING WITH "TPC"

PART #	STUB	B	C
SC800EPE06TPC	6" (150 mm)	21.4" (544 mm)	---
SC800EPE06BPC		---	0.9" (23 mm)
SC800EPE08TPC	8" (200 mm)	19.2" (488 mm)	---
SC800EPE08BPC		---	1.0" (25 mm)
SC800EPE10TPC	10" (250 mm)	17.0" (432 mm)	---
SC800EPE10BPC		---	1.2" (30 mm)
SC800EPE12TPC	12" (300 mm)	14.4" (366 mm)	---
SC800EPE12BPC		---	1.6" (41 mm)
SC800EPE15TPC	15" (375 mm)	11.3" (287 mm)	---
SC800EPE15BPC		---	1.7" (43 mm)
SC800EPE18TPC	18" (450 mm)	8.0" (203 mm)	---
SC800EPE18BPC		---	2.0" (51 mm)
SC800EPE24BPC	24" (600 mm)	---	2.3" (58 mm)
SC800EPE	NONE	SOLID END CAP	

NOTE: ALL DIMENSIONS ARE NOMINAL



**NOTES**

- 8-30" (200-750 mm) GRATES/SOLID COVERS SHALL BE DUCTILE IRON PER ASTM A536 GRADE 70-50-05
- 12-30" (300-750 mm) FRAMES SHALL BE DUCTILE IRON PER ASTM A536 GRADE 70-50-05
- DRAIN BASIN TO BE CUSTOM MANUFACTURED ACCORDING TO PLAN DETAILS
- DRAINAGE CONNECTION STUB JOINT TIGHTNESS SHALL CONFORM TO ASTM D3212 FOR CORRUGATED HDPE (ADS & HANCOR DUAL WALL) & SDR 35 PVC
- FOR COMPLETE DESIGN AND PRODUCT INFORMATION: [WWW.NYLOPLAST-US.COM](http://WWW.NYLOPLAST-US.COM)
- TO ORDER CALL: 800-821-6710

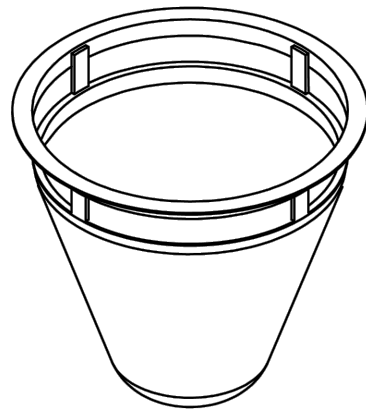
A	PART #	GRATE/SOLID COVER OPTIONS		
8" (200 mm)	2808AG	PEDESTRIAN LIGHT DUTY	STANDARD LIGHT DUTY	SOLID LIGHT DUTY
10" (250 mm)	2810AG	PEDESTRIAN LIGHT DUTY	STANDARD LIGHT DUTY	SOLID LIGHT DUTY
12" (300 mm)	2812AG	PEDESTRIAN AASHTO H-10	STANDARD AASHTO H-20	SOLID AASHTO H-20
15" (375 mm)	2815AG	PEDESTRIAN AASHTO H-10	STANDARD AASHTO H-20	SOLID AASHTO H-20
18" (450 mm)	2818AG	PEDESTRIAN AASHTO H-10	STANDARD AASHTO H-20	SOLID AASHTO H-20
24" (600 mm)	2824AG	PEDESTRIAN AASHTO H-10	STANDARD AASHTO H-20	SOLID AASHTO H-20
30" (750 mm)	2830AG	PEDESTRIAN AASHTO H-20	STANDARD AASHTO H-20	SOLID AASHTO H-20

**REVISIONS**

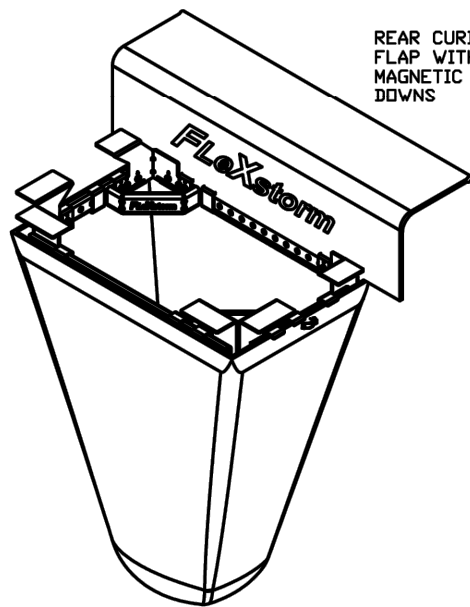
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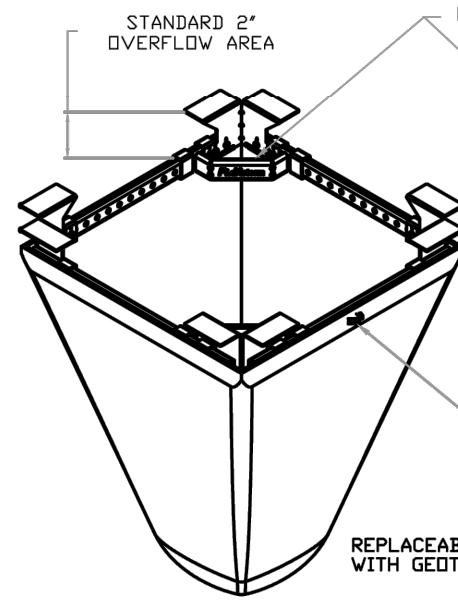
# FLEXSTORM INLET FILTERS PRODUCT SELECTION AND SPECIFICATION DRAWING



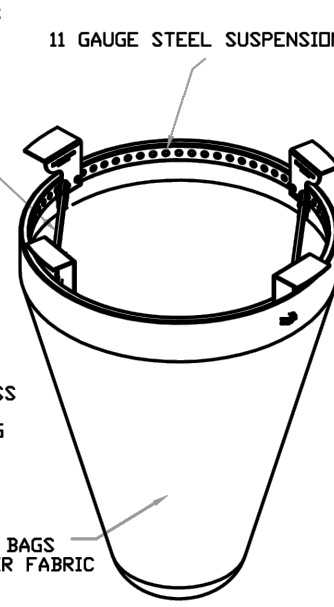
STAINLESS STEEL ROUND INLET FILTERS for NYLOPLAST CASTINGS  
CATCH-ITS SPECIFIED W/ FX or FX-S BAGS



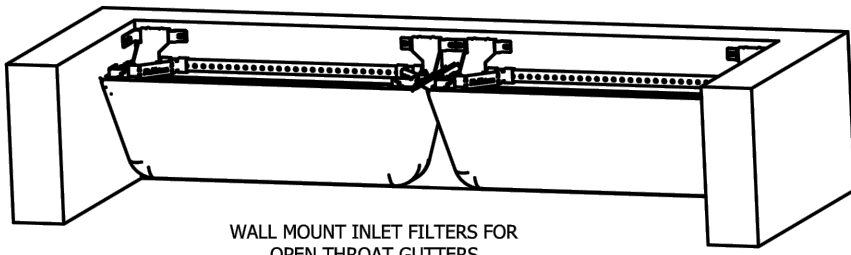
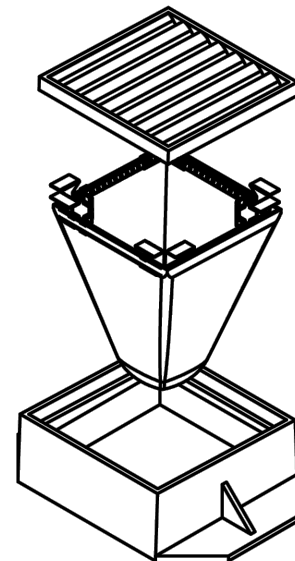
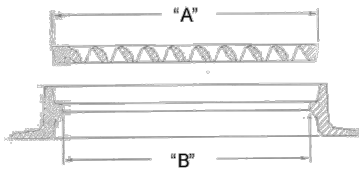
COMBINATION INLET FILTER FOR CURB HOODS



TYPICAL RECTANGULAR INLET FILTER



TYPICAL ROUND INLET FILTER



WALL MOUNT INLET FILTERS FOR OPEN THROAT GUTTERS

1. IDENTIFY YOUR FRAME STYLE, SIZE, AND MATERIAL

STYLE	FRAME STYLE AND SIZE	Frame P/N:
ROUND	Small Round (up to 20.0" dia grates (A) dim)	62SRD
	Med Round (20.1" - 26.0" dia grates (A) up to 25" dia openings (B))	62MRD
	Large Round (26.1" - 32.0" dia grates (A) up to 30" openings (B))	62LRD
	XL Round (32.1" dia - 39" dia grates (A) up to 37" dia openings (B))	62XLRD
RECT/ SQUARE	Small Rect / Square (up to 16" (B) x 16" (D) openings or 64" perimeter)	62SSQ
	Med Rect / Square (up to 24" (B) x 24" (D) openings or 96" perimeter)	62MSQ
	Large Rect / Square (up to 36" (B) x 24" (D) openings or 120" perimeter)	62LSQ
	XL Rect / Square (side by side 2 pc set to fit up to 48" (B) x 36" (D) openings)	62XLSQ
COMBO INLETS	Small Rect / Square (ref Rect sizing; shipped with Magnetic Curb Flaps)	62SCB
	Med Rect / Square (ref Rect sizing; shipped with Magnetic Curb Flaps)	62MCB
	Large Rect / Square (ref Rect sizing; shipped with Magnetic Curb Flaps)	62LCB
	XL Rect / Square (ref Rect sizing; shipped with Magnetic Curb Flaps)	62XLCB
NYLOPLAST	12" diameter Nyloplast castings (Stainless Steel Framing standard)	6212NY
	15" diameter Nyloplast castings (Stainless Steel Framing standard)	6215NY
	18" diameter Nyloplast castings (Stainless Steel Framing standard)	6218NY
	24" diameter Nyloplast castings (Stainless Steel Framing standard)	6224NY
	30" diameter Nyloplast castings (Stainless Steel Framing standard)	6230NY
WALL MOUNT	Open Throat Gutters - Curb Opening Size	
	Up to 4' (1 Filter and Mounting Hardware)	62WM1
	Between 4' and 8' (2 Filters and Mounting Hardware)	62WM2
	Between 8' and 12' (3 Filters and Mounting Hardware)	62WM3
	Between 12' and 16' (4 Filters and Mounting Hardware)	62WM4
UPGRADED FRAMING MATERIAL OPTIONS (STANDARD IS ZINC PLATED)		SUFFIX
CHROME PLATED FRAMING FOR HIGH SALT EXPOSURE		- CHR
STAINLESS STEEL FRAMING FOR HIGH SALT AND/OR CHEMICAL EXPOSURE		- SS

2. SELECT YOUR FILTER BAG PART NUMBER

FLEXSTORM FILTER BAGS	(22" depth)	(12" depth)	Clean Water Flow Rate (GPM/SqFt)	Min A.O.S. (US Sieve)
	STD Bag P/N	Short Bag P/N		
FX: Standard Woven Bag	FX	FX-S	200	40
FX+: Woven w/ MyCelx	FXP	FXP-S	200	40
FXO: Woven w/ Oil Boom	FXO	FXO-S	200	40
PC: Post Construction Bag	PC	PC-S	137	140
PC+: PC Bag w/ MyCelx	PCP	PCP-S	137	140
LL: Litter and Leaf Bag	LL	LL-S	High	3.5
IL: IDOT Non-Woven Bag	IL	IL-S	145	70

- INSTALLATION:**
- REMOVE GRATE
  - DROP FLEXSTORM INLET FILTER ONTO LOAD BEARING LIP OF CASTING OR CONCRETE STRUCTURE
  - REPLACE GRATE

3. CREATE YOUR FLEXSTORM INLET FILTER PART NUMBER

Frame P/N from Step 1.	Filter Bag P/N from Step 2.	-	Framing Material
------------------------	-----------------------------	---	------------------

SPECIFICATIONS FOR STANDARD BAGS BY NOMINAL SIZE

Nominal Bag Size	Solids Storage (CuFt)	Filtered Flow Rate at 50% Max			* PC Oil Retent (Oz)	**PCP Oil Retent (Oz)
		FX (Woven)	PC (Post Constr)	IL (Non Woven)		
Small	1.6	1.2	0.8	0.9	66	155
Medium	2.1	1.8	1.2	1.3	96	185
Large	3.8	2.2	1.5	1.6	120	209
XL	4.2	3.6	2.4	2.6	192	370

\* PC filter bag at 50% max adsorption capacity  
\*\* PC filter bag at 50% capacity and MyCelx skimmer at 100% capacity

ALL PRODUCTS MANUFACTURED BY INLET & PIPE PROTECTION, INC  
DISTRIBUTED BY ADS  
WWW.INLETFILTERS.COM  
(866) 287-8655 PH  
(630) 355-3477 FX  
INFO@INLETFILTERS.COM

SIZE	DWG NO	REV
C	FLEXSTORM_SPECS	
SCALE	SHEET 1 OF 1	

**TOCOI** **Engineering, LLC**

714 NORTH ORANGE AVENUE, GREEN COVE SPRINGS, FL 32043  
PH: 904-215-1388 E.B. NUMBER: 26383

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GARDEN STREET SUBDIVISION  
FOR  
COASTLAND GROUP, LLC.

DRAINAGE DETAILS - STORMTECH SC-800

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REVISIONS

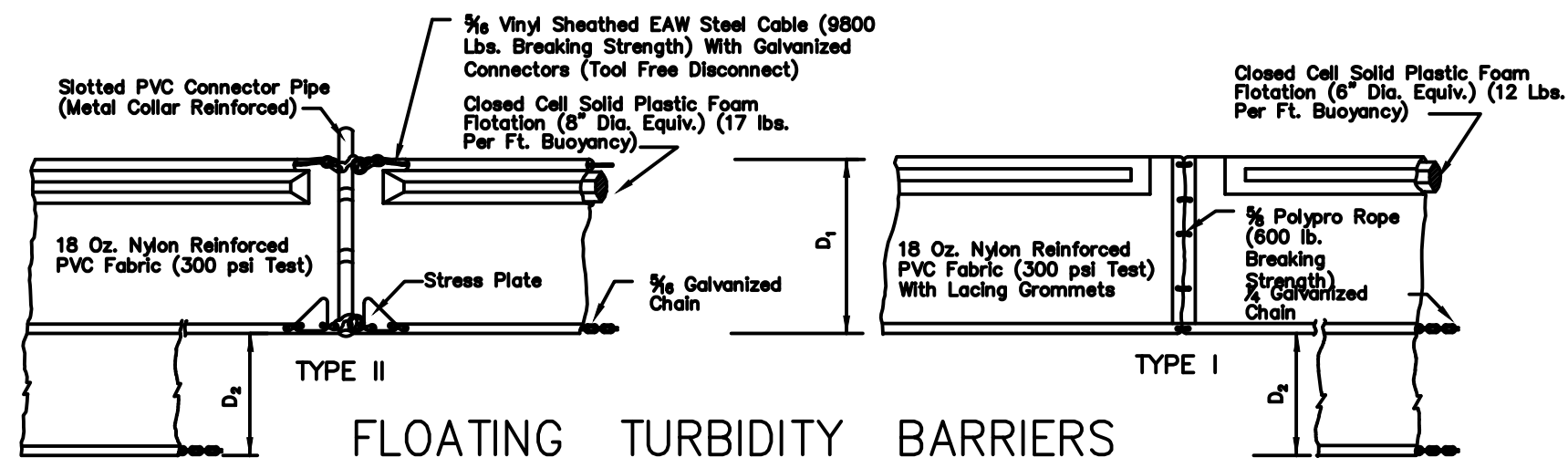
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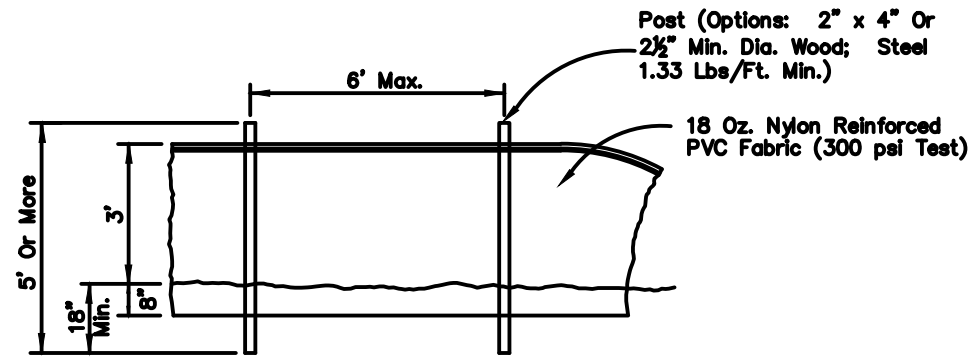
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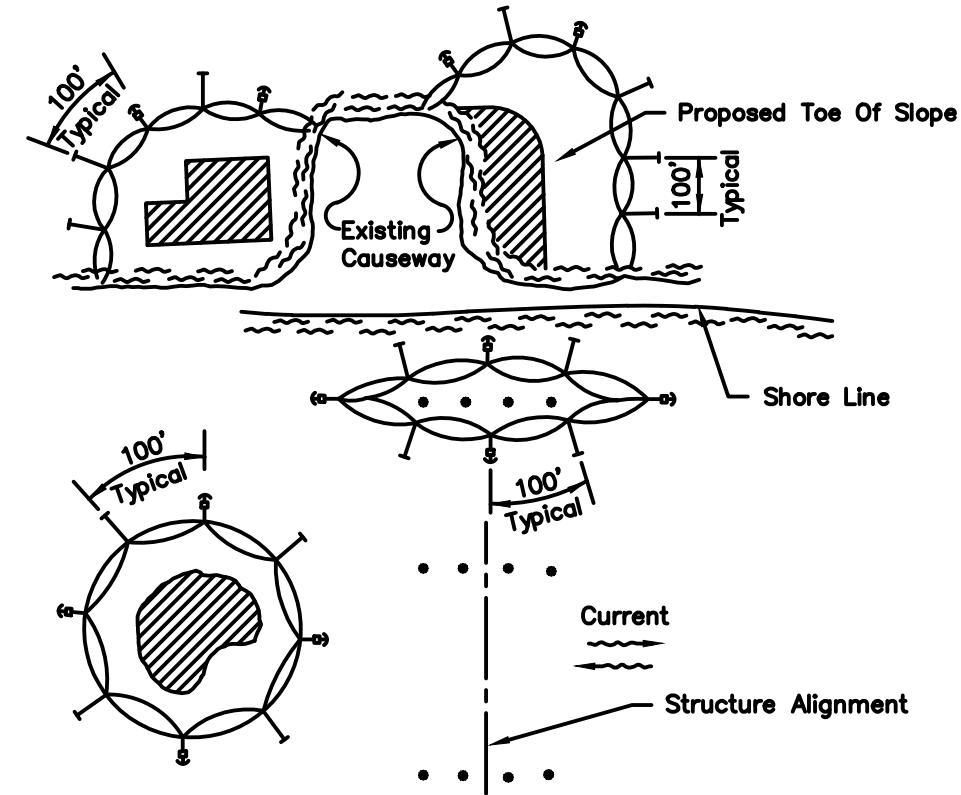


FLOATING TURBIDITY BARRIERS

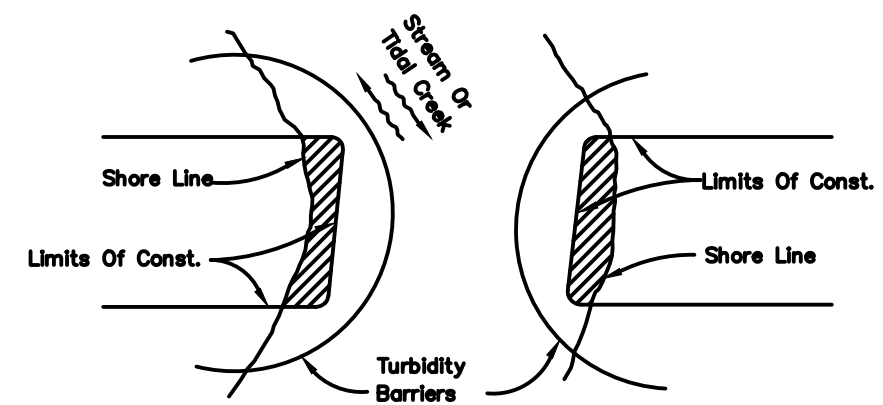
NOTICE:  
COMPONENTS OF TYPES I & TYPE II MAY BE SIMILAR OR IDENTICAL TO PROPRIETARY DESIGNS. ANY INFRINGEMENT ON THE PROPRIETARY RIGHTS OF THE DESIGNER SHALL BE THE SOLE RESPONSIBILITY OF THE USER. SUBSTITUTIONS FOR TYPES I AND II SHALL BE AS APPROVED BY THE ENGINEER.



STAKED TURBIDITY BARRIER



LEGEND  
 • Pile Locations  
 ▨ Dredge Or Fill Area  
 → Mooring Buoy w/Anchor  
 — Anchor  
 ○ Barrier Movement Due To Current Action



Note:  
Turbidity barriers for flowing streams and tidal creeks may be either floating, or staked types or any combinations of types that will suit site conditions and meet erosion control and water quality requirements. The barrier type(s) will be at the Contractors option unless otherwise specified in the plans, however payment will be under the contract lump sum price established in the bid proposal for Erosion & Sediment Control Posts in staked turbidity barriers to be installed in vertical position unless otherwise directed by the Engineer.

- NOTES:
1. Turbidity barriers are to be used in all permanent bodies of water regardless of water depth.
  2. Number and spacing of anchors dependent on current velocities.
  3. Deployment of barrier around pile locations may vary to accommodate construction operations.
  4. Navigation may require segmenting barrier during construction operations.
  5. For additional information see Section 104 of the FDOT Standard Specifications.

TURBIDITY BARRIER APPLICATIONS

TURBIDITY BARRIERS

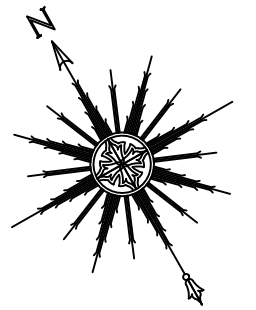
(D-907)  
N.T.S.

**LEGEND**

— PROPERTY BOUNDARY

**NOTES:**

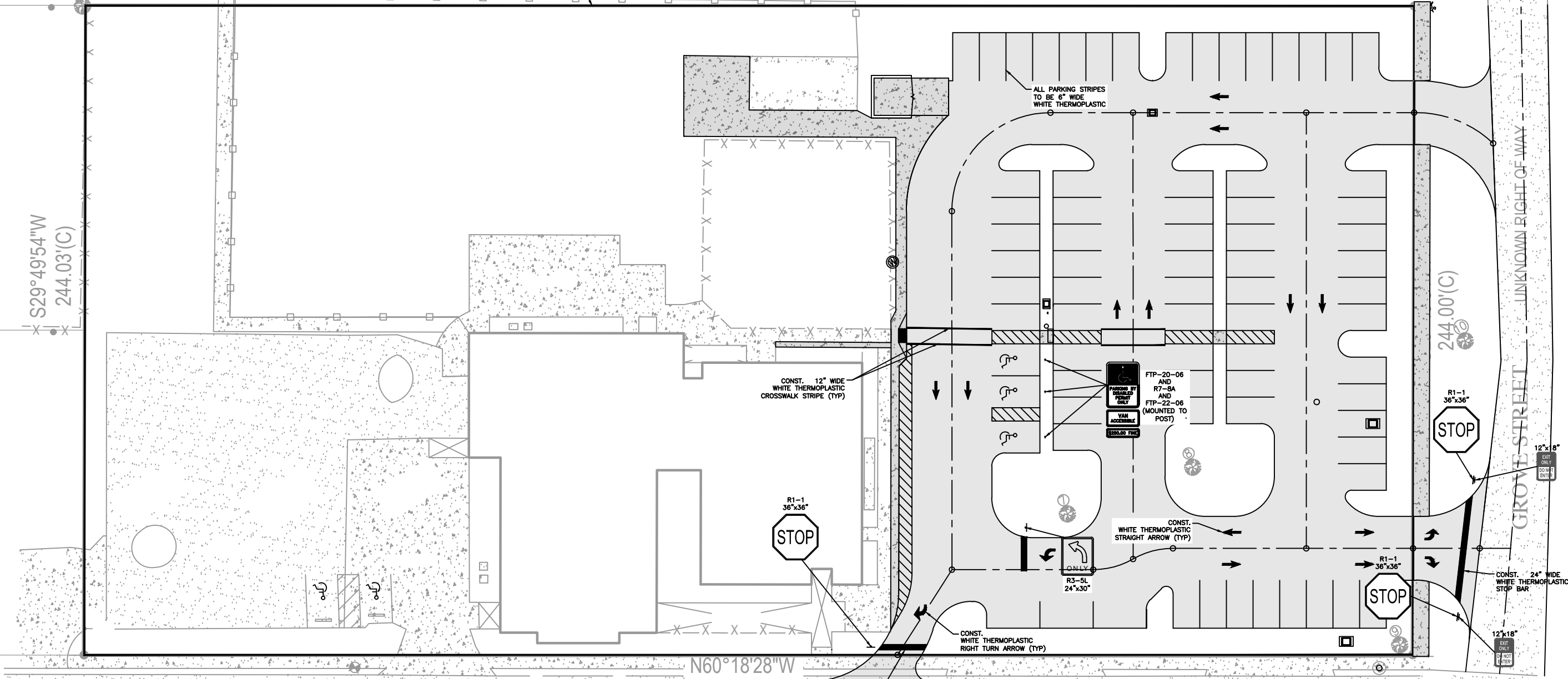
1. SEE MISC. DETAILS FOR ADA PARKING DETAILS
2. PARKING LOT ILLUMINATION SHALL MEET THE REQUIREMENTS OF CITY ORDINANCE 113-160(D).
3. LUMINAIRES WILL BE MOUNTED ON POLES.



ST. JOHNS AVENUE APPARENT 60.0' RIGHT OF WAY

SITE BOUNDARY N60°18'23"W 498.70'(C)

S29°49'54"W  
244.03'(C)



SITE BENCHMARK  
EL. = 18.63'

N60°18'28"W 498.70'(M)

NORTH ORANGE AVENUE MAGNOLIA AVENUE RIGHT OF WAY UNDETERMINED

244.00'(C)

0 20 40

SCALE: 1" = 20'  
SCALE: 1" = 40'  
FOR: 22"x34" SHEET  
FOR: 11"x17" SHEET

**TOCOPI** Engineering, LLC

714 NORTH ORANGE AVENUE, GREEN COVE SPRINGS, FL 32043  
PH: 904-215-1398 E.B. NUMBER: 26383

ENGINEER OF RECORD  
CHARLES SOHM

FLORIDA  
REGISTRATION NUMBER:  
79289

SPRINGS ACADEMY PARKING LOT  
FOR  
SPRINGS CHAPEL CORP.

SIGNAGE & PAVEMENT MARKING PLAN

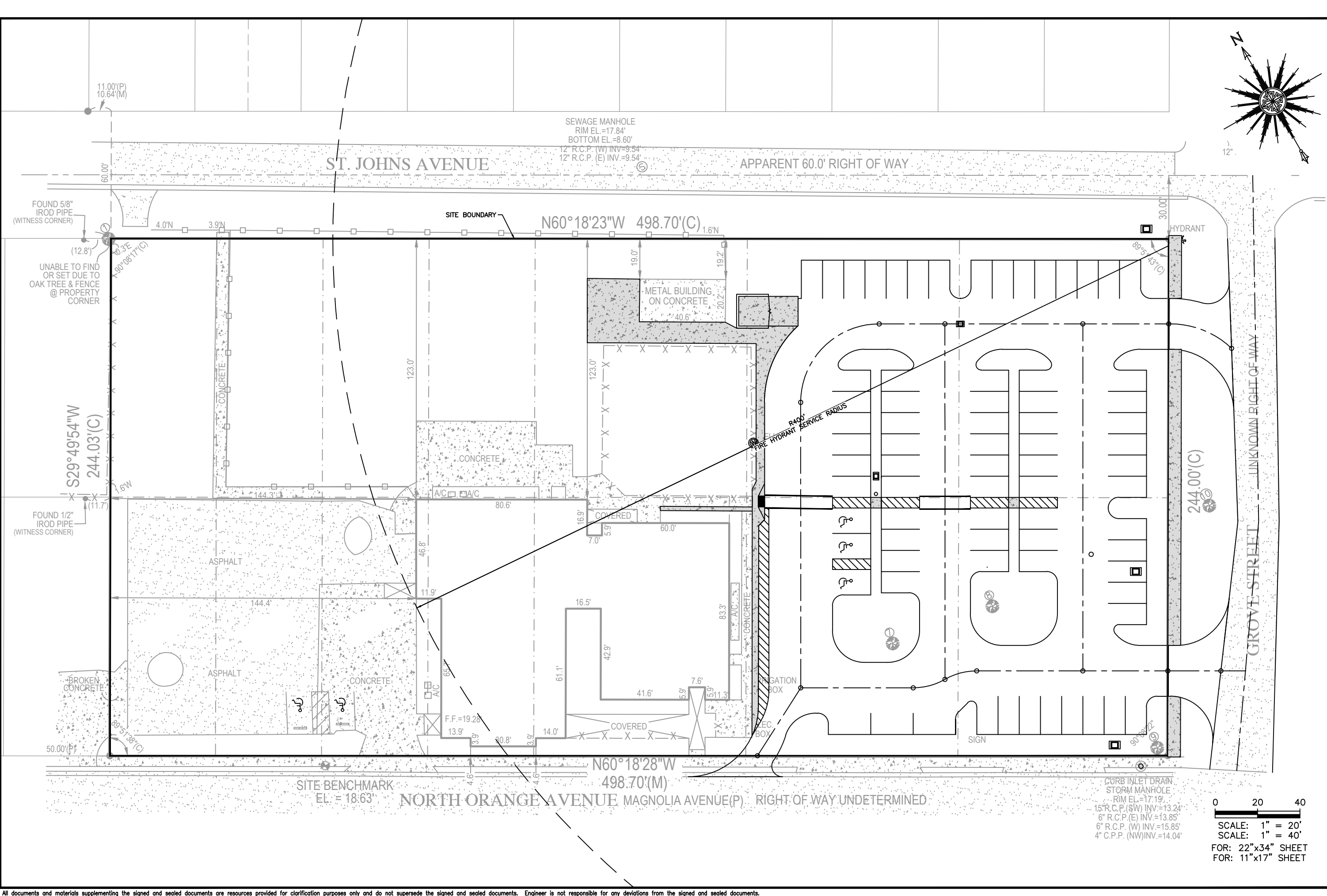
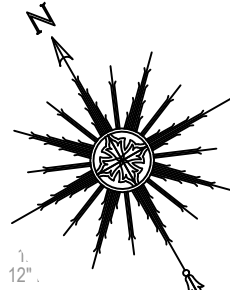
REVISIONS

PLOT DATE:  
DRAWN BY:  
DESIGNED BY:  
CHECKED BY:  
SCALE:  
JOB NO.:

SHEET NO.

13

Date: 11/25/24 Time: 1:51 PM DWG Name: \\TE-GCS\01-Projects\24-671 Springs Academy Parking Lot GCS Pope\03-CADD\24-671 MASTER PLAN 111224.dwg Layout: 13-S&P



Date: 11/25/24 Time: 1:52 PM DWG Name: \\TE-GCS\01-Projects\24-671 Springs Academy\24-671 Springs Academy Parking Lot GCS Pope\03-CADD\24-671 MASTER PLAN 111224.dwg Layout: 14-FRE

SITE BENCHMARK  
EL. = 18.63'

NORTH ORANGE AVENUE MAGNOLIA AVENUE(P) RIGHT OF WAY UNDETERMINED

CURB INLET DRAIN  
STORM MANHOLE  
RIM EL.=17.19'  
15" R.C.P. (SW) INV.=13.24'  
6" R.C.P. (E) INV.=13.85'  
6" R.C.P. (W) INV.=15.85'  
4" C.P.P. (NW) INV.=14.04'

0 20 40  
SCALE: 1" = 20'  
SCALE: 1" = 40'

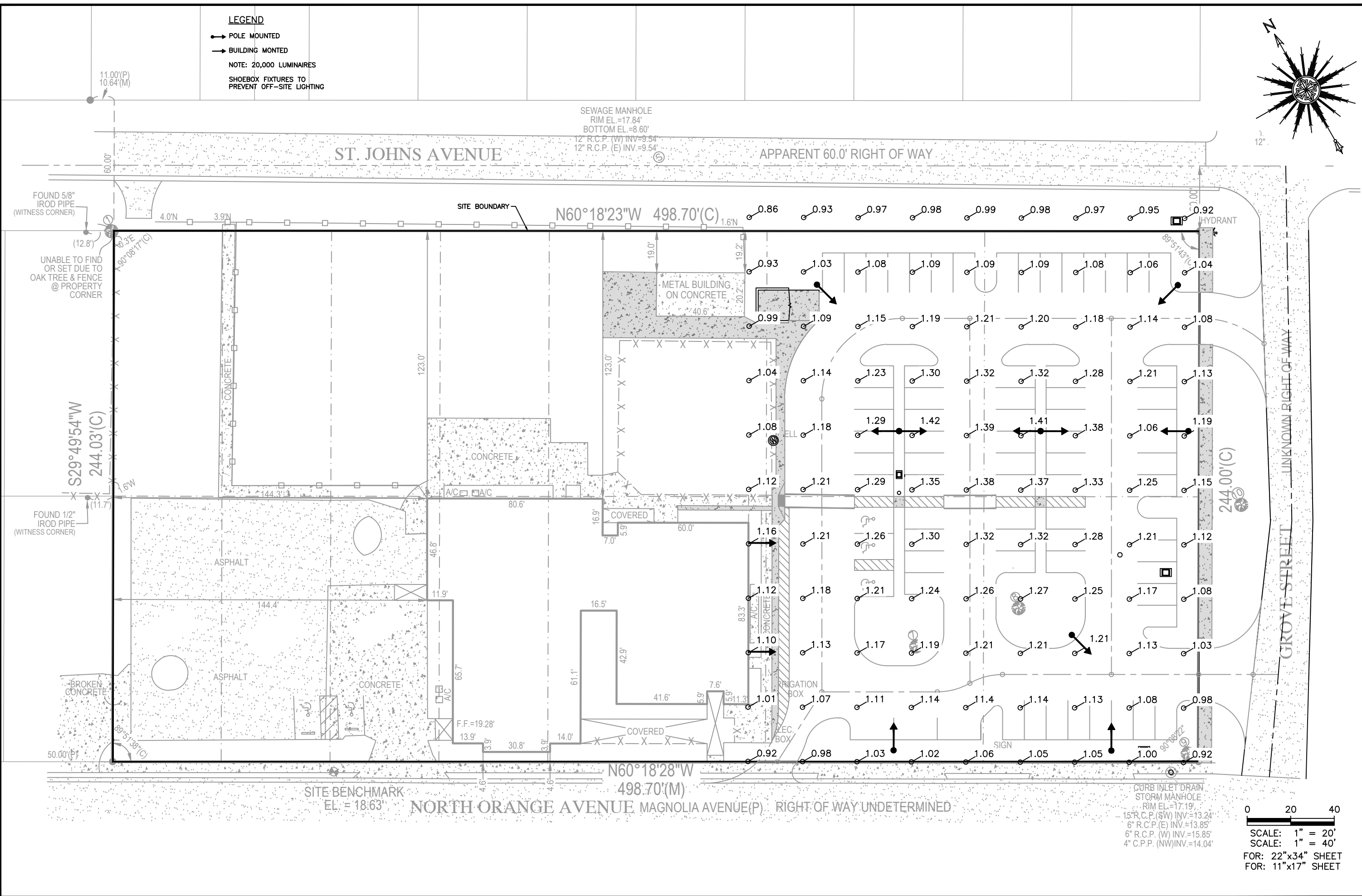
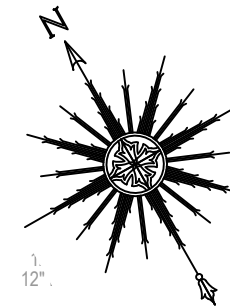
FOR: 22"x34" SHEET  
FOR: 11"x17" SHEET

REVISIONS	

All documents and materials supplementing the signed and sealed documents are resources provided for clarification purposes only and do not supersede the signed and sealed documents. Engineer is not responsible for any deviations from the signed and sealed documents.



- LEGEND**
- ◉ POLE MOUNTED
  - ◉ BUILDING MOUNTED
- NOTE: 20,000 LUMINAIRES  
SHOEBOX FIXTURES TO PREVENT OFF-SITE LIGHTING



**TOCOI** Engineering, LLC

ENGINEER OF RECORD  
CHARLES SOHM

SPRINGS ACADEMY PARKING LOT  
FOR  
SPRINGS CHAPEL CORP.  
PHOTOMETRIC PLAN

REVISIONS

NO.	DESCRIPTION

SHEET NO.  
**14A**

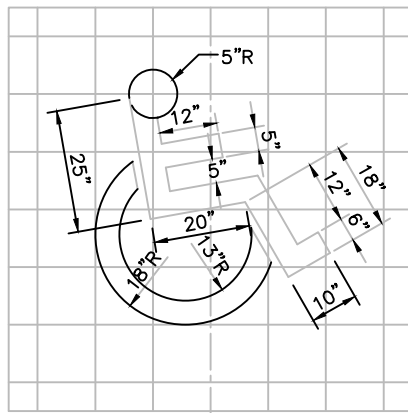
714 NORTH ORANGE AVENUE, GREEN COVE SPRINGS, FL 32043  
PH: 904-215-1398 E.B. NUMBER: 26383

FLORIDA  
REGISTRATION NUMBER:  
79289

0 20 40  
SCALE: 1" = 20'  
SCALE: 1" = 40'  
FOR: 22"x34" SHEET  
FOR: 11"x17" SHEET

Date: 11/25/24 Time: 1:53 PM DWG Name: \\TE-GCS\01-Projects\24-671 Springs Academy Parking Lot\GCS Pope\03-CADD\24-671 MASTER PLAN 111224.dwg Layout: 14-PHOT

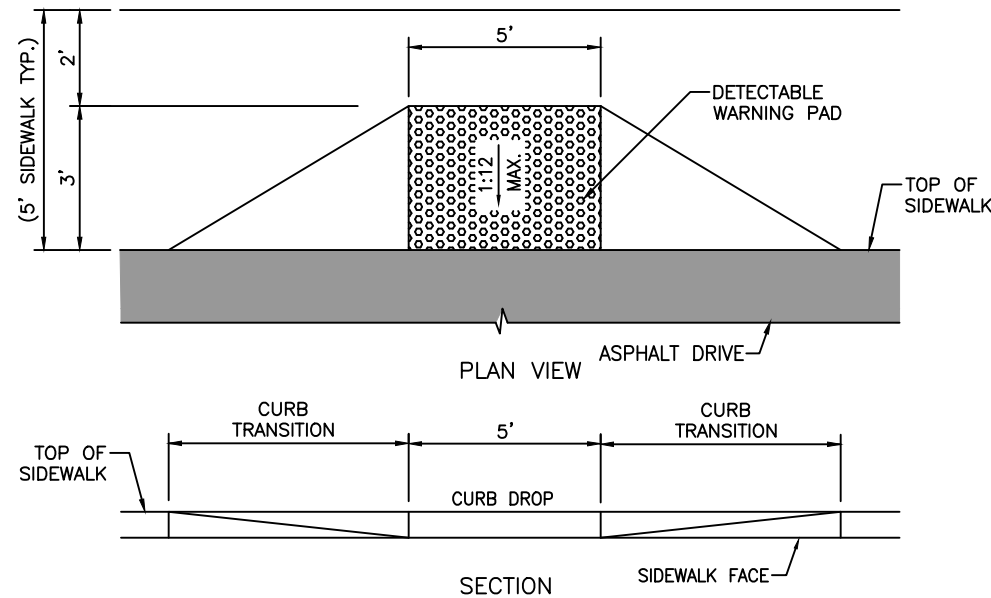
All documents and materials supplementing the signed and sealed documents are resources provided for clarification purposes only and do not supersede the signed and sealed documents. Engineer is not responsible for any deviations from the signed and sealed documents.



PARKING SPACE

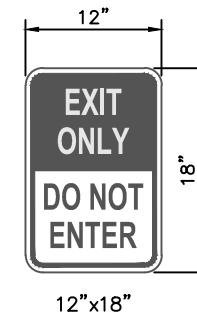
NOTE: SYMBOL SHALL BE PAINTED WITH WHITE TRAFFIC PAINT WITHIN OUTLINE SHOWN.

HANDICAPPED SYMBOL DETAIL  
N.T.S.



NOTE: ALL NEW CONCRETE RAMP SURFACES TO RECEIVE BROOM FINISH. SEE FDOT STANDARD SPECIFICATIONS 522-7.2 (SURFACE REQUIREMENTS)

HANDICAP RAMP DETAIL  
N.T.S.

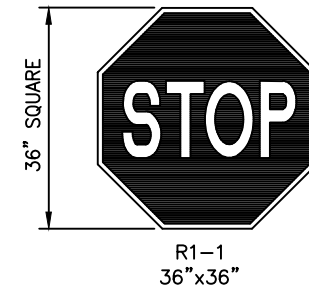


12"x18"

NOTES:

1. ALL LETTERS ARE 1" SERIES.
2. TOP PORTION OF SIGN SHALL HAVE A BLACK BACKGROUND WITH BLACK LEGEND & BORDER.
3. BOTTOM PORTION OF SIGN SHALL HAVE A REFLECTORIZED WHITE BACKGROUND WITH BLOCK OPAQUE LEGEND & BORDER
4. LETTERS AND NUMBERS ON SIGN SHALL HAVE A WIDTH-TO-HEIGHT RATIO BETWEEN 3:5 AND 1:1 AND A STROKE WIDTH-TO-HEIGHT RATIO BETWEEN 1:5 AND 1:10.

SIGN DETAILS

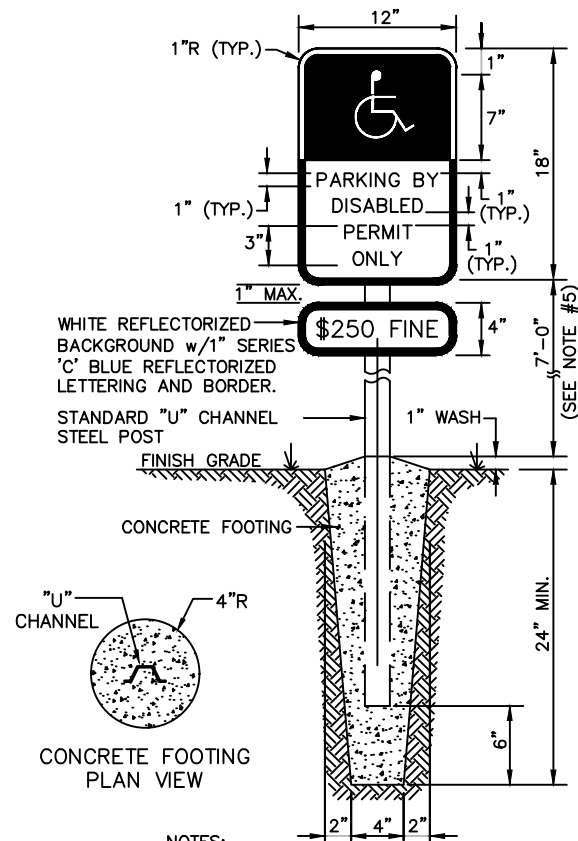


36" SQUARE  
R1-1  
36"x36"

NOTE:

THE STOP SIGN SHALL BE OCTAGON WITH WHITE MESSAGE AND BORDER ON A RED BACKGROUND.  
THE POSTS AND BRACKETS WILL BE PER FDOT STANDARD INDEX 11860 AND 11861.

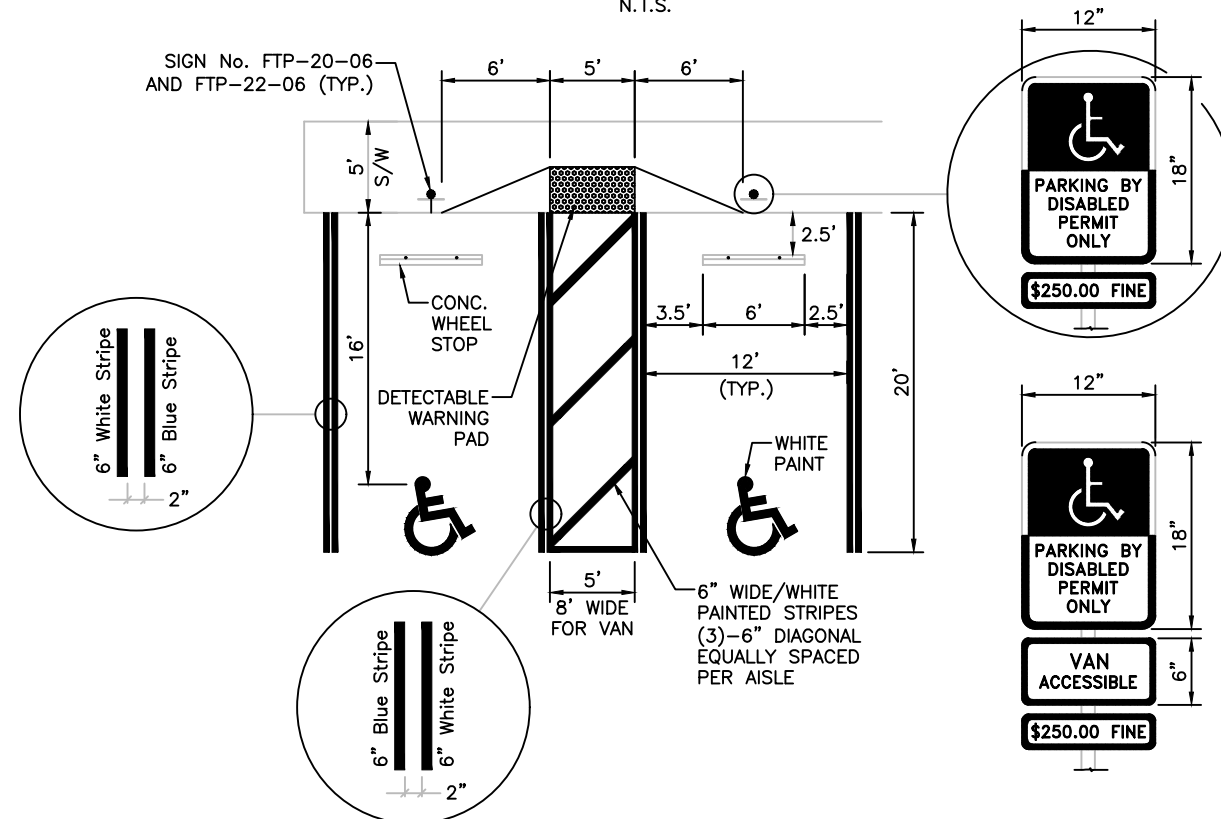
STOP SIGN DETAILS



NOTES:

1. ALL LETTERS ARE 1" SERIES.
2. TOP PORTION OF SIGN SHALL HAVE A REFLECTORIZED BLUE BACKGROUND WITH WHITE REFLECTORIZED LEGEND & BORDER.
3. BOTTOM PORTION OF SIGN SHALL HAVE A REFLECTORIZED WHITE BACKGROUND WITH BLOCK OPAQUE LEGEND & BORDER
4. LETTERS AND NUMBERS ON SIGN SHALL HAVE A WIDTH-TO-HEIGHT RATIO BETWEEN 3:5 AND 1:1 AND A STROKE WIDTH-TO-HEIGHT RATIO BETWEEN 1:5 AND 1:10.
5. SIGNS SHALL NOT BE OBTURED BY A VEHICLE PARKED IN THE SPACE.
6. HANDICAPPED PARKING SPACE SIZE, STRIPING, AND SIGNAGE SHALL BE IN ACCORDANCE WITH ALL APPLICABLE CITY, STATE, & FEDERAL REGULATIONS.

HANDICAP SIGN DETAIL  
N.T.S.

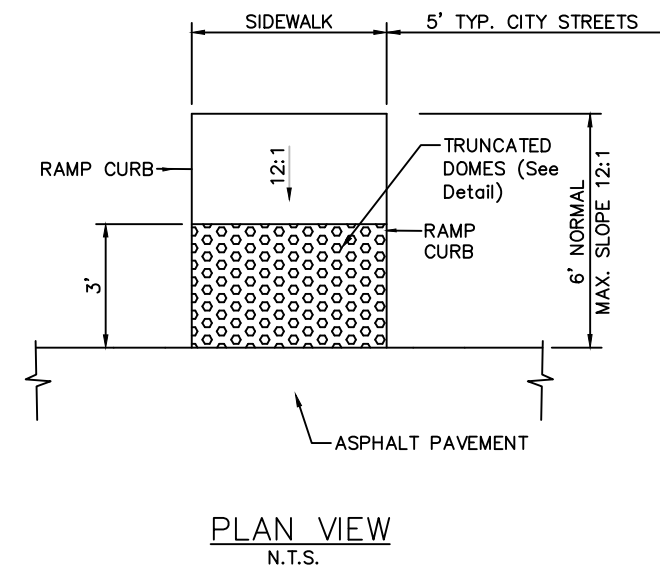


SIGN No. FTP-20-06 AND FTP-22-06 (TYP.)

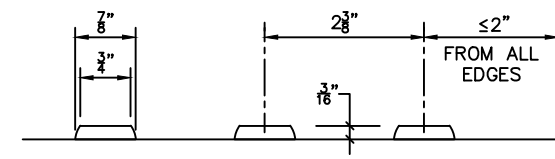
NOTES:

1. EACH SUCH PARKING SPACE SHALL BE CONSPICUOUSLY OUTLINED IN BLUE PAINT, AND SHALL BE POSTED AND MAINTAINED WITH A PERMANENT, ABOVE-GRADE SIGN BEARING THE INTERNATIONAL SYMBOL OF ACCESSIBILITY OR THE CAPTION "PARKING BY DISABLED PERMIT ONLY", OR BEARING BOTH SUCH SYMBOLS AND CAPTION. SUCH SIGNS SHALL NOT BE OBTURED BY A VEHICLE PARKED IN THE SPACE. ALL HANDICAPPED PARKING SPACES MUST BE DESIGNED AND MARKED IN ACCORDANCE WITH THE STANDARDS ADOPTED BY THE DEPARTMENT OF TRANSPORTATION.
2. THE FTP-22-06 PANEL SHALL BE MOUNTED BELOW THE FTP-20-06 SIGN.

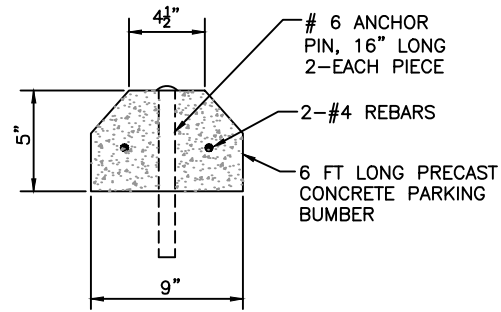
HANDICAP PARKING DETAIL  
N.T.S.



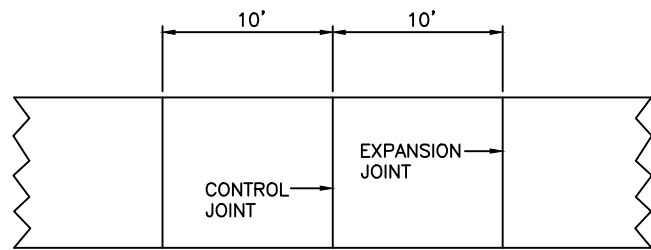
TRUNCATED DOME -  
DETECTABLE WARNING PAD DETAIL  
N.T.S.



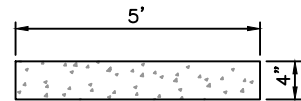
REVISIONS



CONCRETE PARKING BLOCK  
N.T.S.



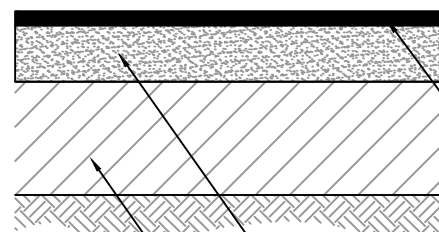
PLAN



SECTION

- 1/2" EXPANSION JOINTS PLACED AT 20' O.C. WITH TOOLED CONTROL JOINTS (1 1/2" DEEP) EVERY 10' O.C.
- SIDEWALKS SHALL BE CONSTRUCTED OF PORTLAND CEMENT CONCRETE, CLASS NON-STRESS (NS), AND ALL METHODS OF CONSTRUCTION AND MATERIALS SHALL BE IN ACCORDING TO THE LATEST EDITION OF THE FLORIDA DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS.

CONCRETE SIDEWALK  
N.T.S.

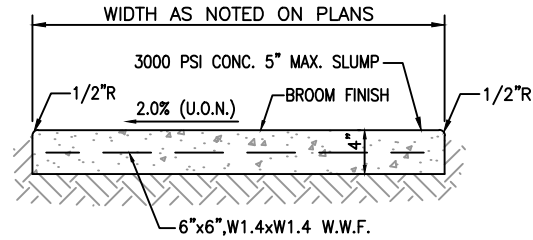


UNDERCUT ALL UNSUITABLE MATERIAL AND BACKFILL WITH CLEAN FREE-DRAINING SAND (BOTTOM OF CUT SHALL BE 24" MIN. BELOW FINISH GRADE)

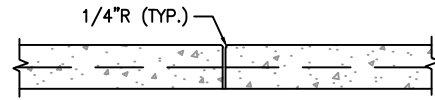
1-1/2" THICK ASPHALT  
6" COMPACTED LIMEROCK BASE COURSE (100% MAX. DENSITY AASHTO T-180 & LBR 100)

12" STABILIZED SUBGRADE (98% MAX. DENSITY AASHTO T-180 & LBR 40)

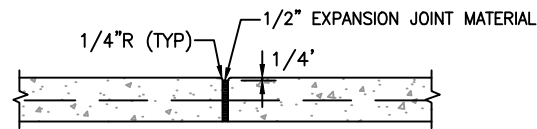
NEW ASPHALT PAVEMENT SECTION  
N.T.S.



WALK SECTION

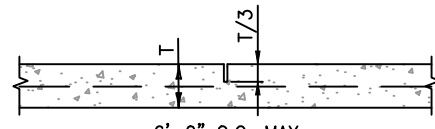


CONSTRUCTION JOINT



EXPANSION JOINTS 36'-0" O.C. MAX. PROVIDE AT EVERY SIDEWALK INTERSECTION

EXPANSION JOINT

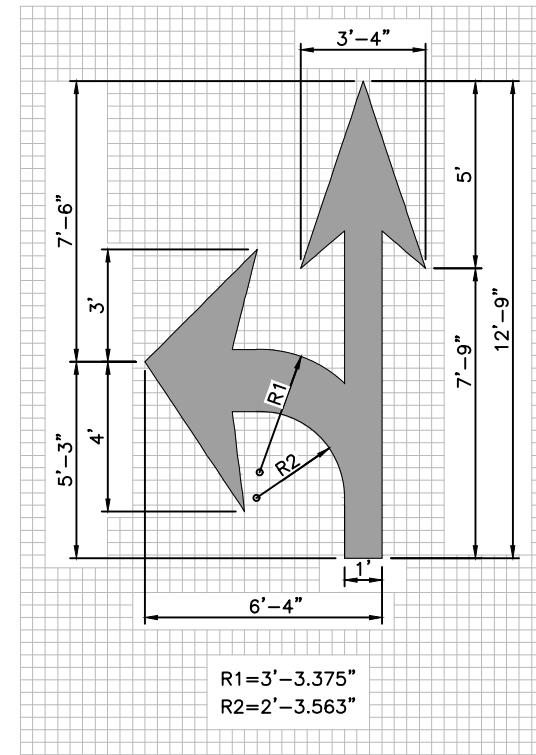


SAWCUT

- 1/2" EXPANSION JOINTS PLACED AT 20' O.C. WITH
- TOOLED CONTROL JOINTS (1 1/2" DEEP) EVERY 10' O.C.

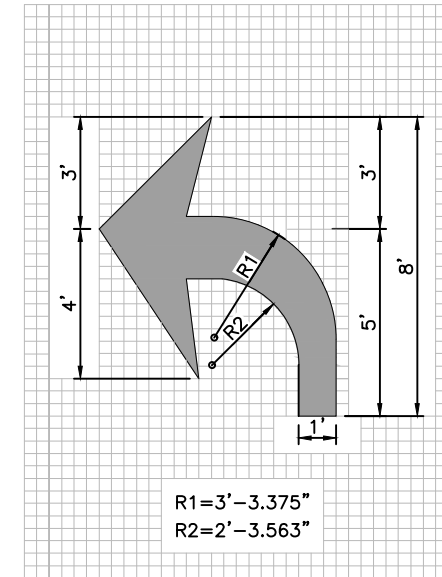
SIDEWALKS SHALL BE CONSTRUCTED OF COQUINA CONCRETE, CLASS NON-STRESS (NS), AND ALL METHODS OF CONSTRUCTION AND MATERIALS SHALL BE IN ACCORDING TO THE LATEST EDITION OF THE FLORIDA DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS.

SIDEWALK DETAILS  
N.T.S.



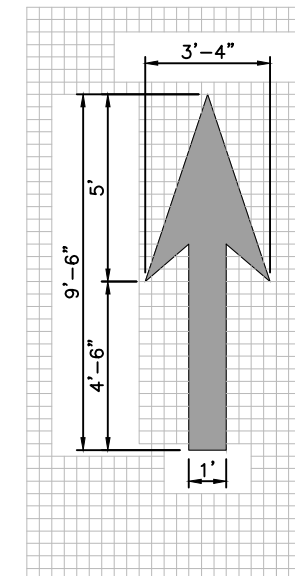
R1=3'-3.375"  
R2=2'-3.563"

TURN AND THROUGH LANE-USE ARROW

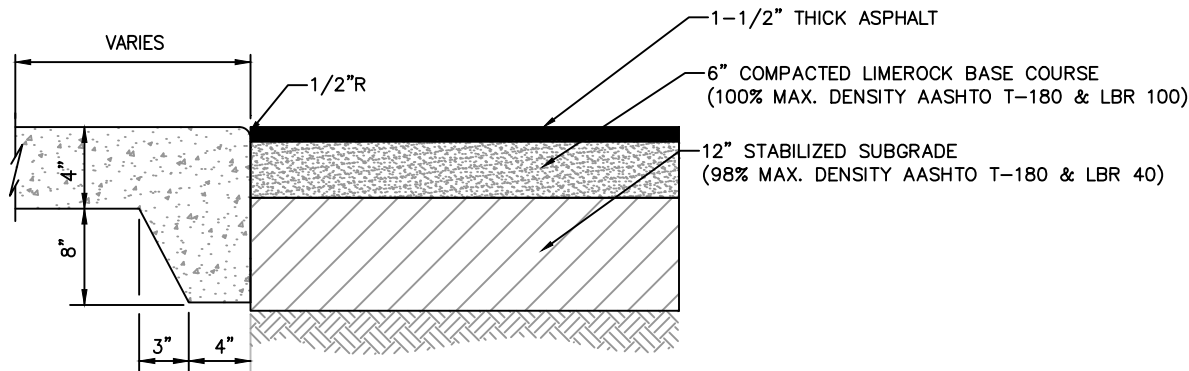


R1=3'-3.375"  
R2=2'-3.563"

TURN LANE-USE ARROW (LEFT TURN SHOWN - RIGHT TURN SIMILAR)



THROUGH LANE-USE ARROW



NOTE: UNDERCUT ALL UNSUITABLE MATERIAL AND BACKFILL WITH CLEAN FREE-DRAINING SAND (BOTTOM OF CUT SHALL BE 24" MIN. BELOW FINISH GRADE)

SIDEWALK DETAIL AT PAVEMENT AND NEW ASPHALT PAVEMENT SECTION  
N.T.S.

Date: 11/15/24 Time: 10:32 AM DWG Name: \\TE-GCS\01-Projects\24-671 Springs Academy Parking Lot GCS Pope\03-CADD\15-24-671 MISC DETAILS.dwg Layout: 15B



PROJECT: \_\_\_\_\_

**STORM WATER POLLUTION PREVENTION PLAN  
INSPECTION AND MAINTENANCE REPORT FORM**

TO BE COMPLETED EVERY 7 DAYS AND WITHIN 24 HOURS OF  
A RAINFALL EVENT OF 0.25 INCHES OR MORE

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

INSPECTOR'S QUALIFICATIONS:  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

DAYS SINCE LAST RAINFALL: \_\_\_\_\_ AMOUNT OF LAST RAINFALL \_\_\_\_\_ INCHES

STABILIZATION MEASURES

INSPECTION AREA (DESCRIPTION OF LOCATION)	DATE SINCE LAST DISTURBED	DATE OF NEXT DISTURBANCE	STABILIZED ? (YES/NO)	STABILIZED WITH	CONDITION

STABILIZATION REQUIRED:  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

TO BE PERFORMED BY: \_\_\_\_\_ ON OR BEFORE: \_\_\_\_\_

PAGE 1 OF 4

PROJECT: \_\_\_\_\_

**STORM WATER POLLUTION PREVENTION PLAN  
INSPECTION AND MAINTENANCE REPORT FORM**

STRUCTURAL CONTROLS

EARTH DIKES/SWALES

DIKE OR SWALE	FROM	TO	IS DIKE/SWALE STABILIZED ?	IS THERE EVIDENCE OF WASHOUT OR OVERTOPPING

MAINTENANCE REQUIRED FOR EARTH DIKE/SWALE:  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

TO BE PERFORMED BY: \_\_\_\_\_ ON OR BEFORE: \_\_\_\_\_

CATCH BASIN/CURB INLET/OUTFALL TURBIDITY CONTROLS

STRUCTURE/ OUTFALL	ARE TURBIDITY CONTROLS IN PLACE	ANY EVIDENCE OF CLOGGING/WASHOUT OR BYPASSING ?	ARE TURBIDITY CONTROLS IN NEED OF REPLACING ?	DOES SILT NEED TO BE REMOVED FROM AROUND CONTROL

MAINTENANCE REQUIRED FOR CATCH BASIN/CURB INLETS/OUTFALLS TURBIDITY CONTROLS:  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

TO BE PERFORMED BY: \_\_\_\_\_ ON OR BEFORE: \_\_\_\_\_

PAGE 2 OF 4

PROJECT: \_\_\_\_\_

**STORM WATER POLLUTION PREVENTION PLAN  
INSPECTION AND MAINTENANCE REPORT FORM**

SEDIMENT BASIN

DEPTH OF SEDIMENT IN BASIN	DEPTH OF SEDIMENT SIDE BASIN	ANY EVIDENCE OF OVERTOPPING OF THE EMBANKMENT ?	CONDITION OF OUTFALL FROM SEDIMENT BASIN

MAINTENANCE REQUIRED FOR SEDIMENT BASIN:  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

TO BE PERFORMED BY: \_\_\_\_\_ ON OR BEFORE: \_\_\_\_\_

OTHER CONTROLS

STABILIZED CONSTRUCTION ENTRANCE

DOES MUCH SEDIMENT GET TRACKED ON TO ROAD ?	IS THE GRAVEL CLEAN OR IS IT FILLED WITH SEDIMENT?	DOES ALL TRAFFIC USE THE STABILIZED ENTRANCE TO LEAVE THE SITE ?	IS THE CULVERT BENEATH THE ENTRANCE WORKING? (IF APPLICABLE)

MAINTENANCE REQUIRED FOR STABILIZED CONSTRUCTION ENTRANCE:  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

TO BE PERFORMED BY: \_\_\_\_\_ ON OR BEFORE: \_\_\_\_\_

PAGE 3 OF 4

PROJECT: \_\_\_\_\_

**STORM WATER POLLUTION PREVENTION PLAN  
INSPECTION AND MAINTENANCE REPORT FORM**

CHANGES REQUIRED TO THE POLLUTION PREVENTION PLAN:  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

REASONS FOR CHANGES:  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

I CERTIFY UNDER PENALTY OF LAW THAT THIS DOCUMENT AND ALL ATTACHMENTS WERE PREPARED UNDER MY DIRECTION OR SUPERVISION IN ACCORDANCE WITH A SYSTEM DESIGNED TO ASSURE THAT QUALIFIED PERSONNEL PROPERLY GATHERED AND EVALUATED THE INFORMATION SUBMITTED, BASED ON MY INQUIRY OF THE PERSON OR PERSONS WHO MANAGE THE SYSTEM, OR THOSE PERSONS DIRECTLY RESPONSIBLE FOR GATHERING THE INFORMATION, THE INFORMATION SUBMITTED IS, TO THE BEST OF MY KNOWLEDGE AND BELIEF, TRUE, ACCURATE, AND COMPLETE. I AM AWARE THAT THERE ARE SIGNIFICANT PENALTIES FOR SUBMITTING FALSE INFORMATION, INCLUDING THE POSSIBILITY OF FINE AND IMPRISONMENT FOR KNOWING VIOLATIONS.

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

PAGE 4 OF 4

NOTE TO CONTRACTOR:  
THIS IS THE CONTRACTORS CERTIFICATION REQUIRED BY THE EPA'S NATIONAL POLLUTION DISCHARGE ELIMINATION SYSTEM (NPDES), STORM WATER POLLUTION PREVENTION PLAN FOR CONSTRUCTION SITES OVER 5 ACRES. THIS CERTIFICATION MUST BE COMPLETED WEEKLY AND AFTER EVERY RAINFALL EVENT OVER 0.25 INCHES. IT IS SUGGESTED THAT THIS SHEET BE REMOVED FROM THE PLAN SET AND DUPLICATED AS NEEDED BY THE CONTRACTOR.

REVISIONS

SHEET NO.  
17

SPRINGS ACADEMY PARKING LOT  
FOR  
SPRINGS CHAPEL CORP.  
SWPPP CONTRACTOR CERTIFICATION

ENGINEER OF RECORD  
CHARLES SOHM  
FLORIDA  
REGISTRATION NUMBER:  
79289

**TOCOI** Engineering, LLC  
714 NORTH ORANGE AVENUE, GREEN COVE SPRINGS, FL 32043  
PH: 904-215-1388 E.B. NUMBER: 26383