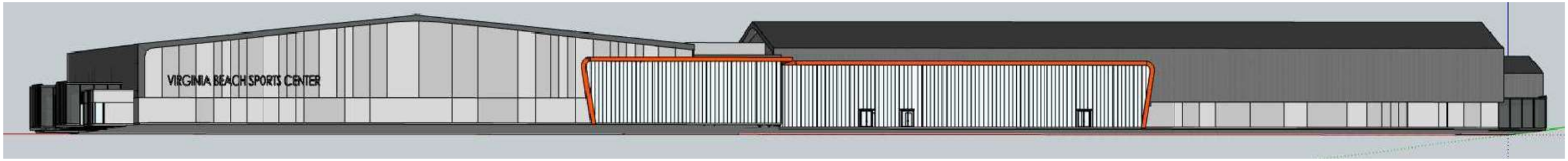
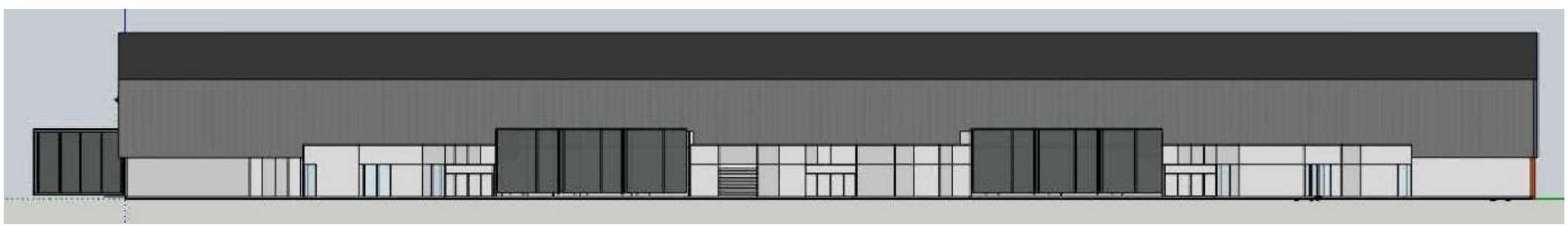
Virginia Beach Sports Center
GMP
6/6/2018



North Elevation

South Elevation

West Elevation



East Elevation

Drawing Date
5/21/2018

VIRGINIA BEACH SPORTS CENTER

VIRGINIA BEACH, VIRGINIA

SITE DATA & CODE INFORMATION

DEVELOPER: CITY OF VIRGINIA BEACH
RICHARD D. MARTINEC
RMARTINE@VBGOV.COM
PHONE: (757) 385-8339

GPIN #: 24175672510000, 24176612040000, 24176691380000, 24177644030000, 24178605150000

INSTRUMENT #: 20060927001472280, 20120427000458110

BENCH MARK: 2417-1, 134-0085

ZONING: OR

WATERSHED: LITTLE NECK CREEK

JPA/WETLANDS REQUIRED: NO

SOIL TYPE : ACREDALE SILT LOAM, ACREDALE URBAN LAND COMPLEX, AUGUSTA LOAM, CHAPANOKE SILT LOAM, STATE LOAM, TETOLUM LOAM, URBAN LAND

PROPOSED USE: INDOOR SPORTS FACILITY AND PARKING LOTS

EXISTING USE: PARKING LOTS/UNDEVELOPED

SITE AREA
TOTAL SITE AREA: 1,152,271 SF (26.45 AC)
DISTURBED AREA: 1,025,104 SF (23.53 AC)
EXISTING PROPERTY IMPERVIOUS AREA: 414,691 SF (9.52 AC, 35.9%)
PROPOSED PROPERTY IMPERVIOUS AREA: 722,225 SF (16.58 AC, 62.7%)

TOTAL AREA ABOVE TIDAL WETLANDS, WATER, MARSH, OR FLOODWAY: 1,055,753 SF (24.24 AC, 91.6%)

PARKING SPACES
TOTAL PROVIDED: 1,113
H/C PROVIDED: 22

UTILITY SERVICES PROVIDED:
WATER
AVERAGE FLOW: XX GPM
PEAK FLOW: XX GPM
SANITARY SEWER
AVERAGE FLOW: XX GPM
PEAK FLOW: XX GPM

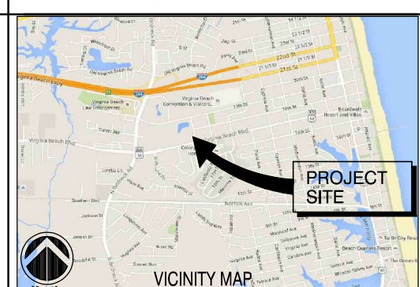
ADVISORY NOTES

1. AFTER OBTAINING THE LAND DISTURBING PERMIT AND AT LEAST 48 HOURS PRIOR TO ANY LAND DISTURBING ACTIVITY, THE CONTRACTOR SHALL CONTACT PLANNING/CIVIL INSPECTIONS AT 385-4558 TO SCHEDULE A PRE-CONSTRUCTION MEETING. FAILURE TO CONTACT PLANNING/CIVIL INSPECTIONS PRIOR TO ANY LAND DISTURBING ACTIVITY MAY RESULT IN A STOP WORK ORDER OR OTHER LEGAL ACTION.
2. CITY REFUSE COLLECTION WILL NOT BE PROVIDED TO THIS SITE.
3. RIGHT-OF-WAY DEDICATIONS YES
4. THIS SITE LIES WITHIN AIRCRAFT ACCIDENT POTENTIAL ZONE AND/OR THE CLEAR ZONE AND NOISE ZONES (70-75 DB LDN AND > 75 DB LDN) AND MAY BE SUBJECT TO AIRCRAFT ACCIDENTS AND/OR ABOVE AVERAGE NOISE LEVELS DUE TO ITS PROXIMITY TO AIRPORT OPERATIONS. NOISE ZONE ATTENUATION MEASURES FOR NEW CONSTRUCTION ARE REQUIRED IN ACCORDANCE WITH THE AIRPORT NOISE ATTENUATION AND SAFETY ORDINANCE AND HEIGHT RESTRICTIONS HAVE BEEN IMPOSED IN ACCORDANCE WITH SECTION 202 (B) OF THE CITY ZONING ORDINANCE.
5. THE PROPERTY DOES NOT FALL IN "FLOODPLAINS SUBJECT TO SPECIAL RESTRICTIONS" (REFER TO SITE PLAN ORDINANCE, SECTION 5B.5(C))
6. THE PROPOSED STRUCTURE IS NOT LOCATED IN A SPECIAL FLOOD HAZARD AREA AS DETERMINED FROM THE NATIONAL FLOOD HAZARD INSURANCE PROGRAM FLOOD INSURANCE RATE MAP (FIRM). COMMUNITY PANEL NUMBER 0126G AND 0128G DATED JANUARY 16, 2015.
7. THE LOWEST FLOOR ELEVATION, INCLUDING BASEMENTS AND ATTACHED GARAGES, IS AT LEAST TWO FEET ABOVE THE ONE-HUNDRED YEAR BASE FLOOD ELEVATION AS ADOPTED BY THE CITY OF VIRGINIA BEACH.
8. HORIZONTAL DATUM: THIS SURVEY IS BASED ON THE VIRGINIA STATE PLANE COORDINATE SYSTEM, SOUTH ZONE, NAD 1983/1993 (HARN). COORDINATE VALUES SHOWN ARE EXPRESSED IN U.S. SURVEY FEET.
9. VERTICAL CONTROL: THIS SURVEY IS BASED ON NAVD, 1988.
10. ALL EXCAVATED MATERIAL SHALL BE DISPOSED OF IN A LAWFUL MANNER.
11. ANY AND ALL MATERIALS OR DEBRIS TRACKED ONTO A PUBLIC OR PRIVATE ROAD SURFACE WILL BE REMOVED AT THE END OF EACH DAY. SEDIMENT WILL BE REMOVED FROM THE ROADS BY SHOVELING OR SWEEPING AND WILL BE TRANSPORTED TO A SEDIMENT CONTROLLED DISPOSAL AREA.
12. THE CERTIFYING DESIGN PROFESSIONAL IS RESPONSIBLE AND LIABLE FOR THE DESIGN AND THE CONTENTS OF THIS APPROVED PLAN.

THIS PROJECT, THE VIRGINIA BEACH SPORTS CENTER, IS PART OF THE PROJECT TITLED "VIRGINIA BEACH ARENA HOTEL CONFERENCE CENTER AND SURROUNDING INFRASTRUCTURE" LISTED ON THE VIRGINIA DEPARTMENT OF ENVIRONMENTAL QUALITY (VDEQ) WEBSITE AS HAVING RECEIVED COVERAGE UNDER THE 2014 CONSTRUCTION GENERAL PERMIT. THIS GENERAL PERMIT WILL EXPIRE ON JUNE 30, 2019.

AS NOTED IN THE LETTER DATED JULY 17, 2015, THIS PROJECT HAS MET THE REQUIRED CONDITIONS AND MAY CONTINUE TO UTILIZE THE STORMWATER DESIGN KNOWN AS "PART IIC TECHNICAL CRITERIA" AS ALLOWED UNDER CITY OF VIRGINIA BEACH STORMWATER ORDINANCE.

LOCATION MAP



ALL CONSTRUCTION METHODS AND MATERIALS WILL CONFORM TO THE LATEST EDITION OF CITY OF VIRGINIA BEACH DEPARTMENT OF PUBLIC WORKS STANDARDS AND SPECIFICATIONS, DEPARTMENT OF PUBLIC UTILITIES SEWER AND WATER SPECIFICATION AND DETAILS, CITY OF VIRGINIA BEACH AMENDMENTS TO VDOT ROAD AND BRIDGE SPECIFICATION, CITY OF VIRGINIA BEACH AMENDMENTS TO VDOT ROAD AND BRIDGE STANDARDS, VIRGINIA DEPARTMENT OF TRANSPORTATION ROAD AND BRIDGE SPECIFICATION, VIRGINIA DEPARTMENT OF TRANSPORTATION ROAD AND BRIDGE STANDARDS, VIRGINIA EROSION AND SEDIMENT CONTROL HANDBOOK, VIRGINIA DEPARTMENT OF CONSERVATION AND RECREATION DIVISION OF SOIL AND WATER CONSERVATION, AND ANY OTHER APPLICABLE CITY OF VIRGINIA BEACH OR STATE ORDINANCES, CODES, AND LAWS PRIOR TO CONSTRUCTION.

PRIOR TO CONSTRUCTION OR EXCAVATION, LOCATE ANY UNDERGROUND UTILITIES (PUBLIC OR PRIVATE) THAT MAY EXIST AND CROSS THROUGH THE AREA OF CONSTRUCTION AND THAT ARE NOT SHOWN ON THESE PLANS. BEFORE DIGGING, CALL "MISS UTILITY" OF VIRGINIA AT 811 OR 1-800-552-7001. DAMAGES WILL BE AT THE EXPENSE OF THE CONTRACTOR. THESE INCLUDE BUT ARE NOT LIMITED TO ELECTRIC, SEWER, WATER, TELEPHONE, CABLE TELEVISION, ETC. REPAIR OR REPLACE, AS DIRECTED BY THE OWNER, AT CONTRACTOR'S EXPENSE ANY EXISTING UTILITIES DAMAGED DURING CONSTRUCTION. ANY TEMPORARY REMOVAL AND REINSTALLATION OF EXISTING STREET LIGHTS SHALL BE COORDINATED WITH DOMINION VIRGINIA POWER AND SHALL BE AT CONTRACTOR'S EXPENSE. DOMINION VIRGINIA POWER MAY REQUIRE SIGNIFICANT ADVANCE NOTICE FOR SCHEDULING WORK.

THE UNDERSIGNED CONSULTING FIRM AGREES THAT THE CITY OF VIRGINIA BEACH AND ITS REPRESENTATIVES SHALL HAVE THE RIGHT TO USE THESE PLANS TO COMPLETE ANY PHYSICAL IMPROVEMENTS THE CITY DEEMS NECESSARY IN THE EVENT THE DEVELOPER DEFAULTS IN HIS/HER OBLIGATIONS TO COMPLETE THESE FACILITIES AS REQUIRED BY CITY CODE. THE UNDERSIGNED DESIGN PROFESSIONAL ALSO AGREES THAT THE CITY MAY USE THESE PLANS FOR ANY PURPOSE THAT CITY FEELS NECESSARY IN ORDER TO COMPLETE THE PROJECT. THE DESIGN PROFESSIONAL CONSULTING FIRM FURTHER AGREES THAT THE RIGHTS TO USE THESE PLANS SHALL BE PROVIDED WITHOUT COST TO THE CITY.

NAME OF ENTITY (CONSULTING FIRM): CLARK NEXSEN, INC.

BY _____ DATE:_____
(AUTHORIZED SIGNATURE)

TITLE:_____

SIGNATURE OF DESIGN
PROFESSIONAL:_____ DATE:_____

The undersigned hereby certifies that all land clearing, construction, development activity and drainage shall be performed in accordance with the approved stormwater management plan.

_____
Applicant/Developer Signature

_____
Title

_____
Date

Name: _____

Address: _____

_____

Telephone: _____ *(daytime)*

CITY OF VIRGINIA BEACH	
APPROVED FOR CONSTRUCTION	
PUBLIC WORKS	
DATE	DIRECTOR OF PUBLIC WORKS
DATE	CITY ENGINEER
DATE	OPERATIONS ENGINEER
PUBLIC UTILITIES	
DATE	DIRECTOR OF PUBLIC UTILITIES
DATE	UTILITIES ENGINEERING MANAGER
DATE	UTILITY OPERATIONS MANAGER
PARKS AND RECREATION	
DATE	PLANNING DESIGN & DEVELOPMENT ADMINISTRATOR

NOTES:
1. PUBLIC UTILITIES WILL SIGN FOR ALL PW MANAGED CIP PROJECTS THAT ARE LOCATED IN THE VICINITY OF ANY PUBLIC UTILITY INFRASTRUCTURE OR INCLUDE PUBLIC UTILITY INFRASTRUCTURE IMPROVEMENTS IN THE PROJECT.
2. THE SGA OFFICE WILL SIGN FOR ALL CIP PROJECTS THAT FALL WITHIN SGA AREAS OR PROJECTS THAT ARE FUNDED WITH SGA FUNDING.
3. PARKS AND RECREATION WILL SIGN FOR ALL P&R PROJECTS THAT ARE MANAGED BY PUBLIC WORKS AND FUNDED BY P&R.
4. THE SIGNATURE BLOCK MAY OR MAY NOT BE REQUIRED ON PROJECTS BEING CONSTRUCTED VIA OPERATION'S ANNUAL SERVICE CONTRACT. IT WILL BE DECIDED BY THE PM AND THE SUPERVISOR. IF THE PROJECT IS A SIMPLE PROJECT WITH NO PU IMPACTS, THEN THE SIGNATURE BLOCK IS NOT REQUIRED. IF THE PROJECT IS MORE COMPLEX AND/OR POLITICALLY SENSITIVE, THEN THE SIGNATURE BLOCK IS REQUIRED.

City of Virginia Beach
MEB General Contractors
VIRGINIA BEACH SPORTS CENTER

1045 19th Street
Virginia Beach, Virginia

DESIGNER
CLARKNEXSEN
4525 Main Street, Suite 1400
Virginia Beach, VA 23462
757.455.5800

CONSULTANT

SEALS

SUBMITTAL
05/18/18
PROGRESS PRINT

REVISIONS

KEY PLAN

SHEET
TITLE SHEET

GI001

SHEET - OF -XX

DESIGN: -
DRAWN: -
REVIEW: -

CN 7142

Spell checked by TWEAVER on 05/14/2018 12:09pm
E:\Projects\7000\7142-HR Regional Sports Pavilion\CAD\Sheets\GI\GI001.dwg Fri, 18 May 2018 - 3:49pm bsilver

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GI002	INDEX OF DRAWINGS
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V-102	EXISTING CONDITIONS PLAN
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V-108	EXISTING CONDITIONS PLAN
C-001	GENERAL NOTES LEGEND AND ABBREVIATIONS
C-002	SURVEY CONTROL
C-003	EXISTING UTILITY STRUCTURE SCHEDULE
C-004	LAYOUT CONTROL
C-005	KEY PLAN
C-006	MAINTENANCE OF TRAFFIC PLAN AND NOTES
C-007	MAINTENANCE OF TRAFFIC NOTES AND DETAILS
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CD108	DEMOLITON PLAN
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CG103	GRADING AND DRAINAGE PLAN
CG104	GRADING AND DRAINAGE PLAN
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ES107	PARTIAL ELECTRICAL SITE PLAN
ES108	PARTIAL ELECTRICAL SITE PLAN
ES501	ELECTRICAL SITE DETAILS
ES502	ELECTRICAL SITE DETAILS

City of Virginia Beach
35 MEB General Contractors
VIRGINIA BEACH SPORTS CENTER

1045 19th Street
Virginia Beach, Virginia

DESIGNER
CLARKNEXSEN
4525 Main Street, Suite 1400
Virginia Beach, VA 23462
757.455.5800

CONSULTANT

SEALS

SUBMITTAL
05/18/18
PROGRESS PRINT

REVISIONS

KEY PLAN

SHEET
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GI002

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CN 7142

Spell checked by TWEAVER on 05/14/2018 12:09pm
E:\Projects\7000\7142-HR Regional Sports Pavilion\CAD\Sheets\G\GI002.dwg Fri, 18 May 2018 - 3:50pm bsilver

GRAPHIC SCALE(S)

1"=25' 0 25' 50' 100'

Virginia Beach
35 MEB General Contractors

VIRGINIA BEACH SPORTS CENTER

1045 19th Street
Virginia Beach, Virginia

DESIGNER

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757.455.5800

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REVISIONS

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V-101

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DRAWN: TAW
REVIEW: -

CN 7142

Spell checked by TWEAVER on 05/14/2018 2:14pm

I:\Projects\7000\7142-HR Regional Sports Pavilion\CAD\Sheets\C\V-101.dwg Fri, 18 May 2018 - 3:50pm bsilver

Spell checked by TWEAVER on 05/14/2018 2:17pm

MATCH LINE - SEE SHEET V-101

MATCH LINE - SEE SHEET V-104

GRAPHIC SCALE(S)

1"=25' 0 25' 50' 100'

Virginia Beach
35 MEB General Contractors

VIRGINIA BEACH SPORTS CENTER

1045 19th Street
Virginia Beach, Virginia

DESIGNER

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REVISIONS

KEY PLAN

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SHEET

EXISTING CONDITIONS PLAN

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DESIGN RMS
DRAWN TAW
REVIEW -

CN 7142

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GRAPHIC SCALE(S)

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h:\Projects\7000\7142-HR Regional Sports Pavilion\CAD\Sheets\C\V-103.dwg Fri, 18 May 2018 - 3:50pm bsilver

Virginia Beach

35 MEB General Contractors

VIRGINIA BEACH SPORTS CENTER

1045 19th Street
Virginia Beach, Virginia

DESIGNER

CLARKNEXSEN

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757.455.5800

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DRAWN TAW
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CN 7142

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GRAPHIC SCALE(S)

1"=25' 0 25' 50' 100'

VB City of Virginia Beach

35 MEB General Contractors

VIRGINIA BEACH SPORTS CENTER

1045 19th Street
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SEALS

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I:\Projects\7000\7142-HR Regional Sports Pavilion\CAD\Sheets\C\V-104.dwg Fri, 18 May 2018 - 3:51pm bsilver

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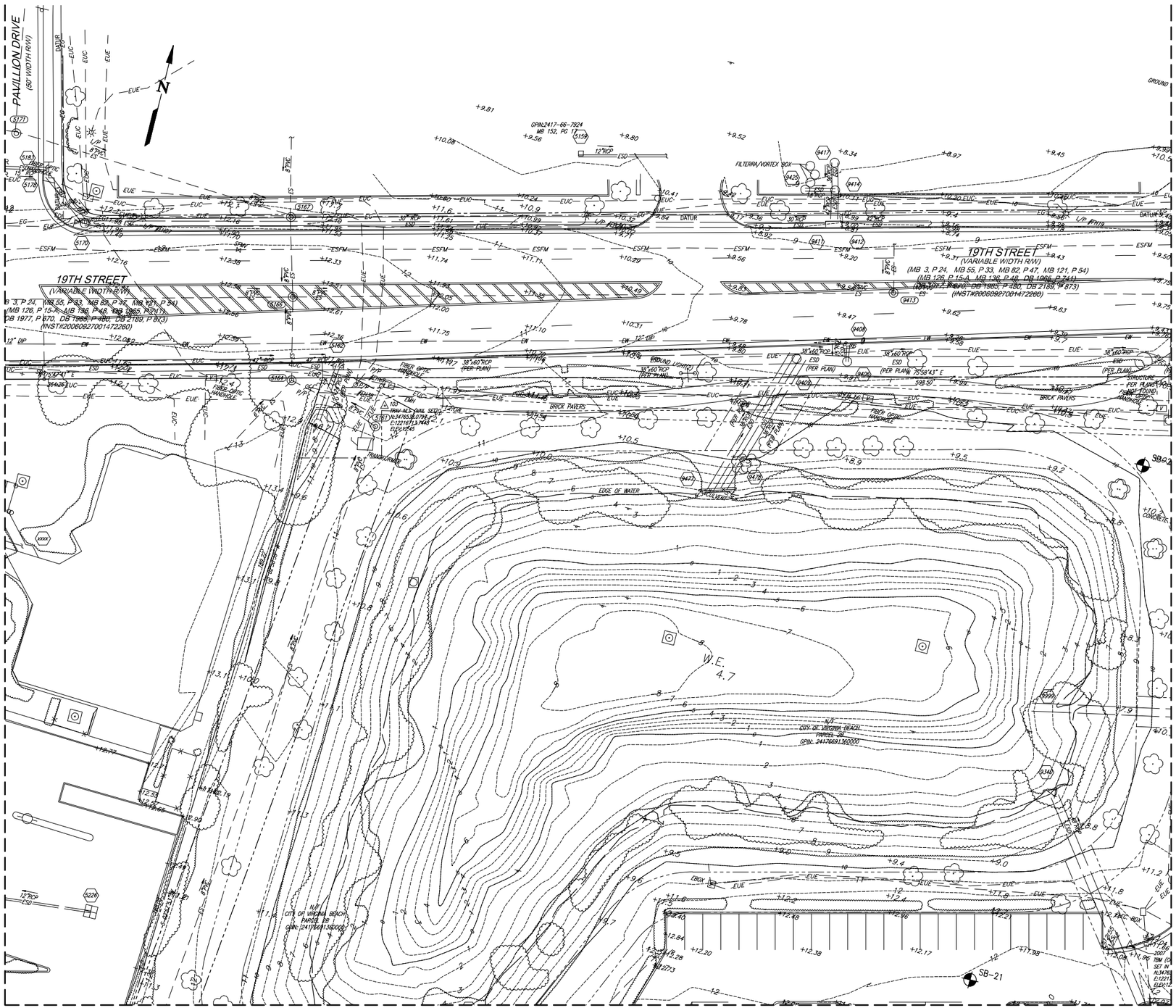

GRAPHIC SCALE(S)

1"=25' 0 25' 50' 100'

VB City of Virginia Beach | 35 MEB General Contractors

VIRGINIA BEACH SPORTS CENTER

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EXISTING CONDITIONS PLAN

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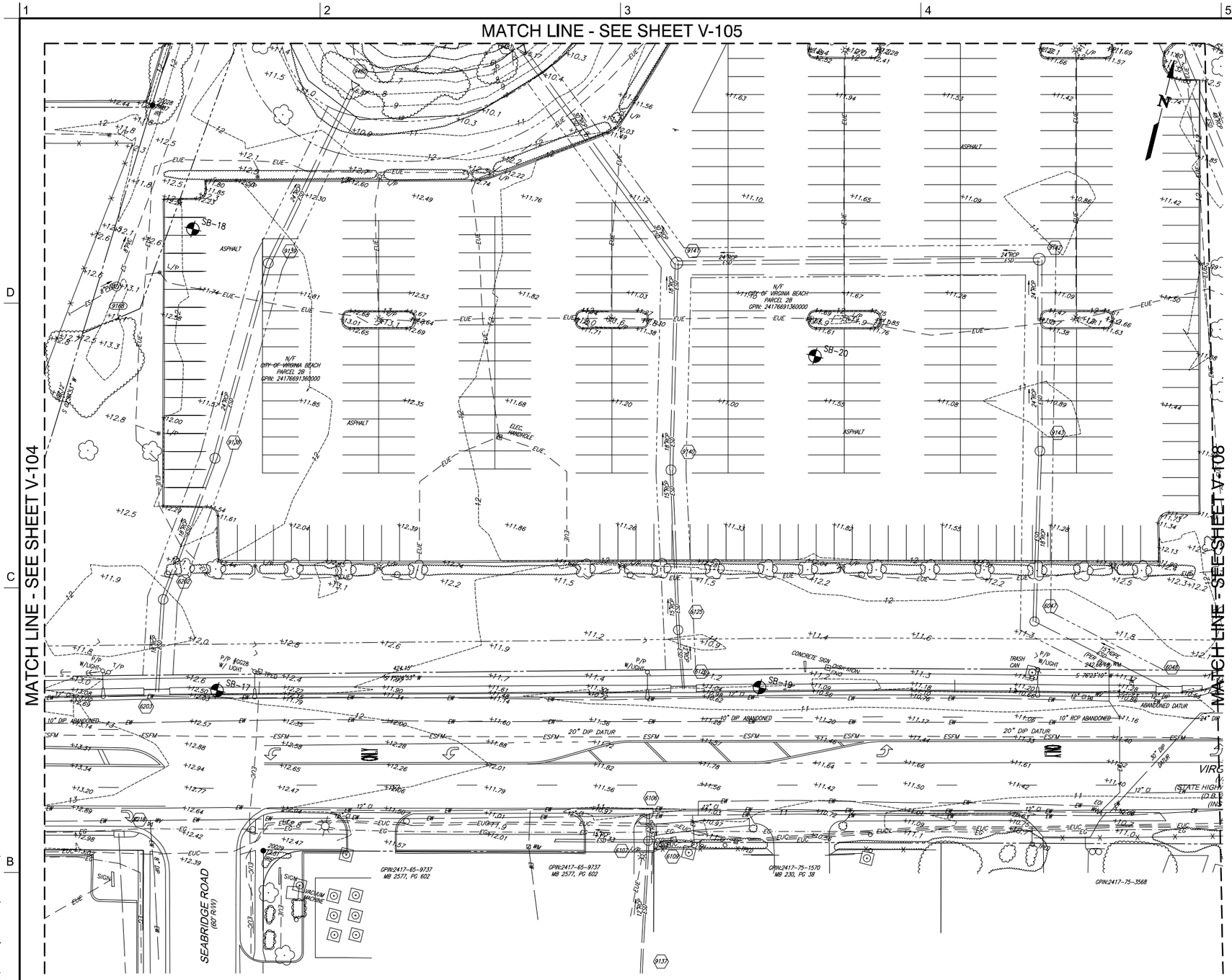
CN 7142

I:\Projects\7000\7142-HR Regional Sports Pavilion\CAD\Sheets\C\V-105.dwg Fri, 18 May 2018 - 3:51pm bsilver

Spell checked by TWEAVER on 05/14/2018 2:21pm



GRAPHIC SCALE(S)

1"=25' 0 25' 50' 100'

Virginia Beach

35 MEB General Contractors

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757.455.5800

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SEALS

SUBMITTAL

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E:\Projects\7000\7142-HR Regional Sports Pavilion\CAD\Sheets\C\V-106.dwg Fri, 18 May 2018 - 3:51pm bsilver

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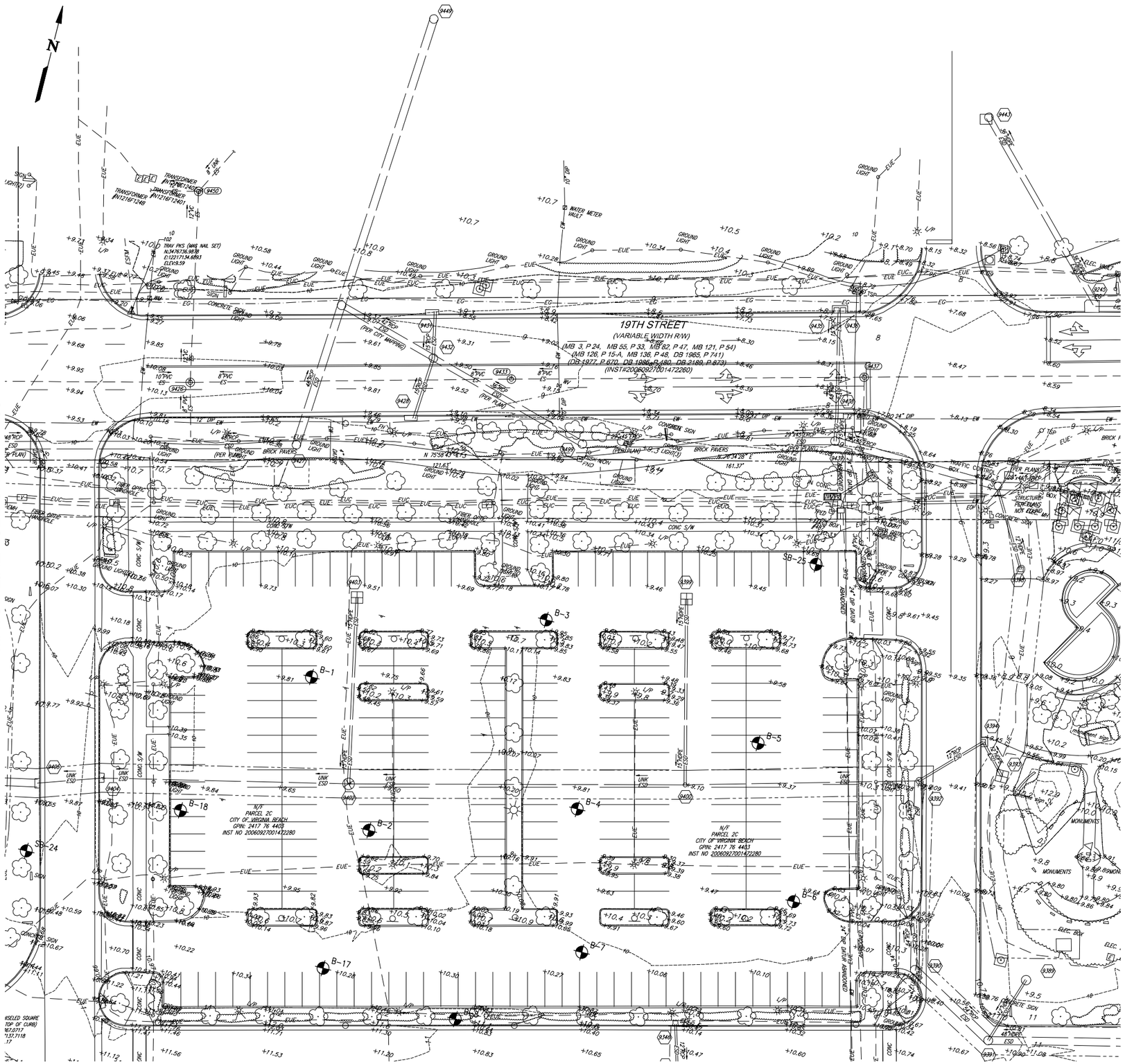

GRAPHIC SCALE(S)

1"=25' 0 25' 50' 100'

City of Virginia Beach
35 MEB General Contractors
VIRGINIA BEACH SPORTS CENTER
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SEALS

SUBMITTAL
05/18/18
PROGRESS PRINT

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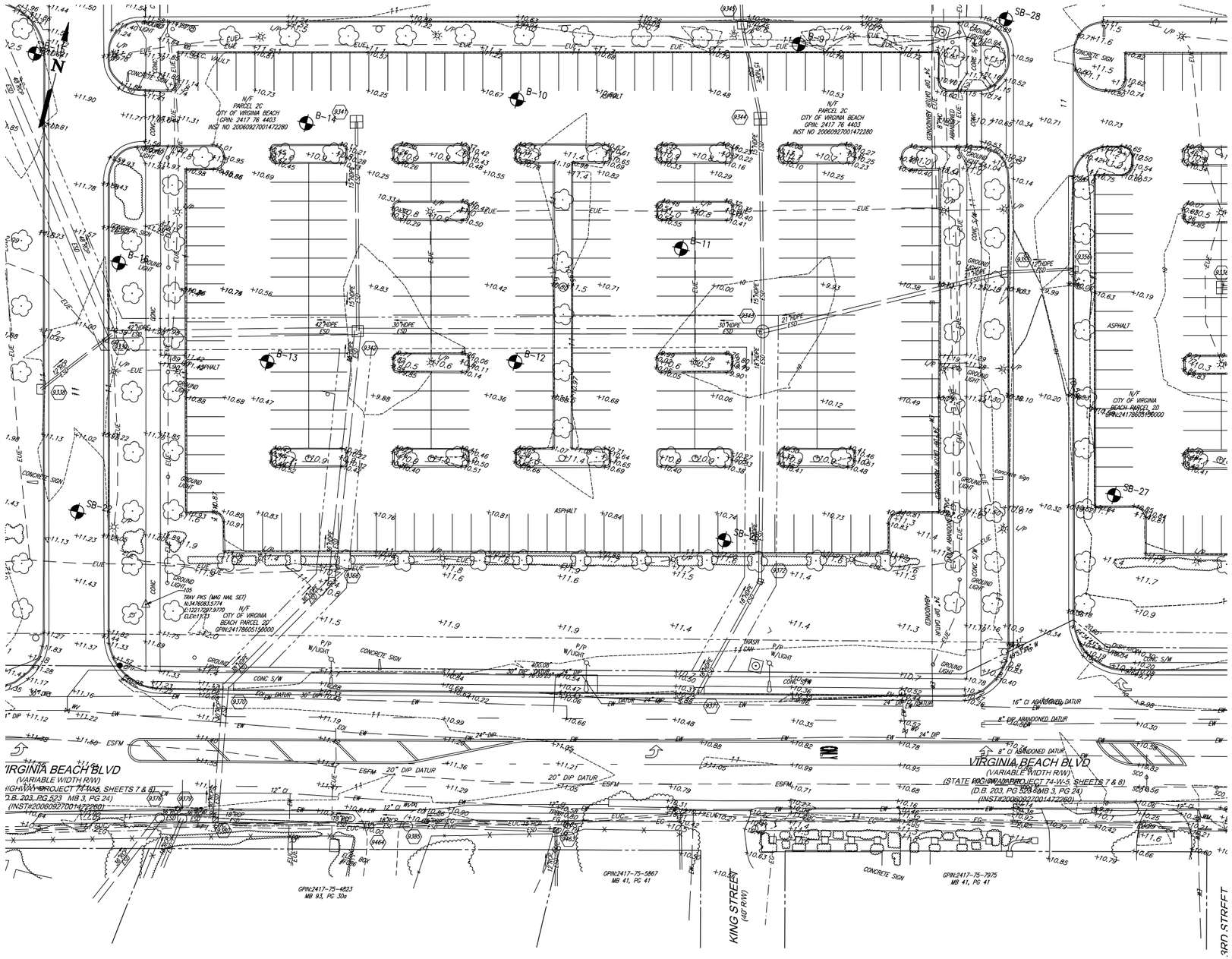
I:\Projects\7000\7142-HR Regional Sports Pavilion\CAD\Sheets\C\V-107.dwg Fri, 18 May 2018 - 3:52pm bsilver

Spell checked by TWEAVER on 05/14/2018 2:24pm

MATCH LINE - SEE SHEET V-107



MATCH LINE - SEE SHEET V-106

GRAPHIC SCALE(S)

1"=25' 0 25' 50' 100'

VB City of Virginia Beach

35 MEB General Contractors

VIRGINIA BEACH SPORTS CENTER

1045 19th Street
Virginia Beach, Virginia

DESIGNER

CLARKNEXSEN

4525 Main Street, Suite 1400
Virginia Beach, VA 23462
757.455.5800

CONSULTANT

SEALS

SUBMITTAL

05/18/18

PROGRESS PRINT

REVISIONS

KEY PLAN

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SHEET

EXISTING CONDITIONS PLAN

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SHEET - OF XX -

DESIGN RMS
DRAWN TAW
REVIEW -

CN 7142

E:\Projects\7000\7142-HR Regional Sports Pavilion\CAD\Sheets\C\V-108.dwg Fri, 18 May 2018 - 3:52pm bsilver

Spell checked by TNEWKER on 05/17/2018 8:10am

GENERAL NOTES

1. CONSTRUCTION IN THE CITY OF VIRGINIA BEACH SHALL CONFORM TO THE LATEST EDITION OF: THE CITY OF VIRGINIA BEACH, PUBLIC WORKS SPECIFICATIONS AND STANDARDS MANUAL, THE CITY OF VIRGINIA BEACH DEPARTMENT OF PUBLIC UTILITIES DESIGN STANDARDS MANUAL, THE CITY OF VIRGINIA BEACH DEPARTMENT OF PUBLIC UTILITIES STANDARD DETAILS, THE VIRGINIA EROSION AND SEDIMENT CONTROL REGULATIONS, THE VIRGINIA EROSION AND SEDIMENT CONTROL HANDBOOK, THE VIRGINIA STORMWATER MANAGEMENT HANDBOOK, THE VIRGINIA DEPARTMENT OF TRANSPORTATION ROAD AND BRIDGE SPECIFICATIONS. THE VIRGINIA DEPARTMENT OF TRANSPORTATION ROAD AND BRIDGE STANDARDS. THE AMERICAN STANDARD FOR NURSERY STOCK AND THE LANDSCAPING GUIDE CITY OF VIRGINIA BEACH, AND ALL OTHER APPLICABLE ORDINANCES AND REGULATIONS UNLESS OTHERWISE NOTED.
2. THE CONTRACTOR WILL OBTAIN A RIGHT-OF-WAY PERMIT FROM THE DSC, CITY OF VIRGINIA BEACH, VIRGINIA, PRIOR TO CONSTRUCTION WITHIN ANY EXISTING PUBLIC RIGHT-OF-WAY OR PUBLIC EASEMENT. A COPY OF THE APPROVED TRAFFIC CONTROL PLAN MUST BE SUBMITTED WITH THE RIGHT-OF-WAY PERMIT APPLICATION.
3. THE CONTRACTOR/RESPONSIBLE LAND DISTURBER (RLD) WILL CONTACT OWNER TO SCHEDULE AN ON-SITE PRE-CONSTRUCTION MEETING AND/OR INSPECTION ACTIVITY 48 HOURS PRIOR TO THE COMMENCEMENT OF ANY LAND DISTURBANCE OR CONSTRUCTION ACTIVITY.
4. THE STORMWATER MANAGEMENT FACILITY (SWMF) SHALL NOT BE EXCAVATED BEYOND THE TYPICAL SECTION(S) AS SHOWN ON THE APPROVED PLAN UNLESS WRITTEN APPROVAL IS OBTAINED FROM THE CITY OF VIRGINIA BEACH, DEPARTMENT OF PUBLIC WORKS (OWNER). SITE MATERIALS EXCAVATED BEYOND THE TYPICAL SECTION(S) SHALL NOT BE USED OR SOLD OFF-SITE UNLESS THE CONTRACTOR COMPLIES WITH THE CURRENT CITY ORDINANCES PERTAINING TO THE OPERATION OF BORROW PITS. EXCAVATION MATERIALS FROM THE SWMF THAT ARE PROPOSED AS BACKFILL MUST BE CERTIFIED FOR THAT PURPOSE, AND APPROVAL IS REQUIRED BY THE DSC'S ENGINEER PRIOR TO USE. BACKFILL MATERIALS MAY BE STOCKPILED AND WILL NOT INTERFERE WITH EXISTING DRAINAGE IN ACCORDANCE WITH THE PWSS SECTION 15.7.
5. HORIZONTAL DATUM: THIS PLAN IS BASED ON THE VIRGINIA STATE PLANE COORDINATE SYSTEM, SOUTH ZONE, NAD 1983/1993 (HARN). COORDINATE VALUES SHOWN ARE EXPRESSED IN U.S. SURVEY FEET. VERTICAL CONTROL: THIS (SURVEY, DRAWING, ETC.) IS BASED ON NAVD, 1988.
6. THE CITY OF VIRGINIA BEACH SHALL ASSUME NO RESPONSIBILITIES OR LIABILITIES FOR THE DAMAGE OR INJURY THAT MAY BE INCURRED AS A RESULT OF ANY ENCROACHMENT INTO A PUBLIC EASEMENT OR RIGHT-OF-WAY.
7. THE CONTRACTOR WILL BE RESPONSIBLE FOR DRIVEWAYS, WALKS, CURBS, PAVEMENT MARKINGS, ETC., THAT MUST BE CUT, REMOVED, OR DAMAGED DURING CONSTRUCTION.
8. CAUTION: WETLANDS MAY BE INVOLVED WITHIN THE BOUNDARY OF DEVELOPMENT. THE CONTRACTOR/RLD MUST COMPLY WITH THE EXACT LIMITS OF CONSTRUCTION. PERMITS MAY BE REQUIRED FROM FEDERAL, STATE, AND LOCAL AGENCIES.

PAVEMENT AND OPEN CUTS

1. NO OPEN CUTS OF A PUBLIC ROADWAY WILL BE ALLOWED EXCEPT UNDER EXTREME CIRCUMSTANCES. OPEN CUTTING OF PUBLIC ROADWAYS WILL BE PERMITTED WITH PRIOR WRITTEN PERMISSION BY THE OWNER.
2. MINIMUM ON-SITE (PRIVATE PROPERTY) PAVEMENT REPLACEMENT AND DESIGN WILL BE 2-INCHES, SM-9.5A BITUMINOUS CONCRETE SURFACE, OVER A SIX-INCH (6") TYPE I OR II AGGREGATE BASE.
3. PAVEMENT REPLACEMENT AND DESIGN IN CITY RIGHT-OF-WAYS WILL BE IN ACCORDANCE WITH SECTION 5.10 "PAVEMENT REPLACEMENT AND PATCHING" OF THE PWSS.
4. THE MINIMUM PAVEMENT DESIGN WITH THE RIGHT OF WAY OR EASEMENT WILL BE 1 ½-INCHES SM-9.5A BITUMINOUS CONCRETE SURFACE ASPHALT CONCRETE, OVER 3-INCHES BM-25.0A BASE MIX ASPHALT CONCRETE, OVER A 6-INCHES TYPE I NO. 21A AGGREGATE BASE MATERIAL, OVER COMPACTED SUBGRADE IN ACCORDANCE WITH SECTION 5.10 OF THE PUBLIC WORKS SPECIFICATIONS AND STANDARDS.
5. MATERIALS THAT ARE DETERMINED UNSUITABLE FOR FOUNDATIONS, SUBGRADES, OR OTHER ROADWAY PURPOSES WITHIN THE LIMITS OF CONSTRUCTION, WILL BE EXCAVATED BY THE CONTRACTOR, AT HIS OWN EXPENSE, BELOW THE GRADE SHOWN ON THE PLANS. EXCAVATED AREAS WILL BE BACKFILLED WITH APPROVED SUITABLE MATERIALS. EXCAVATED MATERIALS SUITABLE FOR BACKFILL WILL BE STOCKPILED SO AS NOT TO INTERFERE WITH DRAINAGE. UNSUITABLE MATERIAL WILL BE REMOVED FROM THE SITE AND SHALL BE DISPOSED OF IN A LAWFUL MANNER.
6. THE REPLACEMENT OF PAVEMENT WILL BE IN ACCORDANCE WITH STANDARD PAVEMENT PATCHING DETAIL STANDARDS DRAWINGS C-3A, "FLEXIBLE PAVEMENT PATCH FOR LOCAL & COLLECTOR STREETS"; OR C-3B, "FLEXIBLE PAVEMENT PATCH FOR MAJOR & MINOR ARTERIALS"; OR C-4, "RIGID PAVEMENT PATCHING" AND SECTION 5.10 OF THE PWSS.
7. CERTIFICATION OF MATERIALS AND THE TEST RESULTS (E.G., CBR AND PROCTOR, ETC.) FROM EACH SOURCE OF SUPPLY FOR SELECT BORROW AND SELECT MATERIAL WILL BE SUBMITTED TO OWNER BY THE CONTRACTOR PRIOR TO INSTALLATION.
8. CERTIFICATION OF MATERIALS AND TEST RESULTS ON THE FOLLOWING ITEMS WILL BE SUBMITTED TO OWNER BY THE CONTRACTOR BEFORE ANY ROAD CONSTRUCTION IS PERFORMED:
   a. THE PROCTOR TEST ON THE NATIVE SUBGRADE MATERIALS.
   b. THE OPTIMUM MOISTURE CONTENT OF THE AGGREGATE.
   c. THE THEORETICAL MAXIMUM DENSITY OF THE AGGREGATE.
9. ALL CITY INFRASTRUCTURES TO BE REMOVED, I.E. BRICK PAVERS, LIGHT POLES, PLANTERS, ETC., MUST BE DELIVERED TO THE OWNER, OR ARRANGEMENTS MUST BE MADE FOR PICK-UP BY THE PROPER DEPARTMENT.
10. NO CONSTRUCTION IS ALLOWED WITHIN THE RIGHTS OF WAY OF ATLANTIC AND PACIFIC AVENUES AND CONNECTING NUMBERED STREETS BETWEEN ATLANTIC AND PACIFIC AVENUES FROM RUDEE INLET TO 44TH STREET BETWEEN MAY 1 AND OCTOBER 1.

INCIDENTAL CONCRETE

1. ALL CONCRETE WILL BE CLASS "A-3" AIR ENTRAINED (3,000 PSI) IN ACCORDANCE WITH SECTION 217 OF THE VIRGINIA DEPARTMENT OF TRANSPORTATION ROAD AND BRIDGE SPECIFICATIONS UNLESS OTHERWISE SPECIFIED.
2. BOTH CURB AND GUTTER WILL BE CONSTRUCTED IN SECTIONS OF UNIFORM LENGTHS, APPROXIMATELY TEN FEET (10') WITH NO SECTIONS WILL BE LESS THAN SIX FEET (6'). EXPANSION JOINTS WILL BE FORMED AT INTERVALS OF 100 FEET USING ½-INCH PREMOLDED BITUMINOUS FIBER JOINT FILLER. CONSTRUCTION JOINTS ARE REQUIRED AS FOLLOWS:
   a. CURB & GUTTER 100'
   b. FIVE FEET (5') WIDE SIDEWALK 50'
   c. TEN FEET (10') WIDE MULI-USE PATH 50'
3. ALL ENTRANCES WILL BE MADE OF A MINIMUM OF SEVEN INCHES (7") THICK CONCRETE FROM THE EDGE OF PAVEMENT TO THE RIGHT-OF-WAY LINE. THE CONTRACTOR SHALL PROVIDE EXPANSION MATERIAL WHERE NEW CONCRETE MEETS EXISTING CONCRETE.
4. ALL CONCRETE WORK PERFORMED IN THE RIGHT-OF-WAY WILL BE INSPECTED BY THE OWNER'S INSPECTOR.

STORMWATER MANAGEMENT

1. AS-BUILT PLANS MUST BE PREPARED AND SUBMITTED TO AND APPROVED BY THE OWNER FOR ALL SWMF, PRIOR TO THE RELEASE OF THE PERFORMANCE BOND.
2. A TEST PIT IN THE LOCATION OF THE INFILTRATION SWMF IS REQUIRED PRIOR TO THE CONSTRUCTION OF THE SWMF. CONTACT THE OWNER FOR THE APPROPRIATE MEETING. EXFILTRATION TESTS ARE REQUIRED FOR ALL VOLUME CONTROL INFILTRATION SWMF'S IN ACCORDANCE WITH PWSS. EXCAVATION VOLUMES AND LIMITS OF EXCAVATION CAN ONLY BE DETERMINED DURING THE ACTUAL FIELD CONSTRUCTION AND MUST BE APPROVED BY THE OWNER IN THE LOCATION OF THE SWMF PRIOR TO THE CONSTRUCTION.
3. THE CONTRACTOR/RLD MUST CONTACT THE OWNER'S INSPECTOR PRIOR TO ANY CONSTRUCTION.
4. THE CITY OF VIRGINIA BEACH WILL NOT BE RESPONSIBLE FOR THE FUNCTIONING, MAINTENANCE, AND/OR REPAIR OF SWMF'S, EXCLUDING THOSE AREAS AND/OR IMPROVEMENTS LOCATED WITHIN DEDICATED CITY DRAINAGE EASEMENTS AND RIGHT-OF-WAY.
5. ALL ON-SITE SWMF'S WILL BE PROTECTED BY SILT FENCE OR OTHER APPROVED DEVICES AT THE DIRECTION OF THE OWNER'S INSPECTOR DURING ALL STAGES OF CONSTRUCTION TO ENSURE OPTIMUM EFFICIENCY UPON COMPLETION AND TO MINIMIZE EROSION AND SEDIMENT FROM ENTERING INTO THE STRUCTURE DURING CONSTRUCTION.
6. ALL STONE SIZES FOR SWMF'S WILL BE IN ACCORDANCE WITH CHAPTER 8, "STORMWATER MANAGEMENT" OF THE PWSS.
7. ALL SWMF DRAINAGE STRUCTURES WILL BE PROTECTED WITH A MINIMUM OF FOUR FEET (4') OF SOD AROUND THE STRUCTURE AND SILT FENCING WILL BE INSTALLED SURROUNDING THE SOD AS REQUIRED UNLESS OTHERWISE APPROVED BY THE OWNER AND NOTED IN THE PLAN DETAILS.
8. ALL UNDERGROUND SWMF'S MUST BE MARKED WITH A 5" X 5" X ¼" THICK, OR LARGER, STEEL PLATE AT EACH CORNER OR IT MUST BE MARKED WITH WHITE METALLIC MARKING TAPE THAT IS THREE INCHES (3") WIDE AND PLACED ON TOP OF THE SWMF, NOT TO EXTEND ONE FOOT (1') BELOW THE GROUND SURFACE.
9. ALL PIPE JOINTS AND CONNECTIONS MUST BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER, ASTM AND VDOT PROVISIONS, SPECIFICATIONS AND STANDARDS SO AS TO BE SOIL TIGHT AND LEAK RESISTANT.
10. ALL HDPE & PE PIPE SPECIFIED ON THE PLANS AND DELIVERED TO THE SITE SHALL BE TYPE S PIPE IN NO LENGTHS LESS THAN TEN (10) FEET LONG AND SHALL CONFORM TO AASHTO M252 AND AASHTO M294 AND ASTM F2306, FOR MATERIALS AND INSTALLATION WITH SOIL TIGHT CONNECTIONS AND/OR GASKETS CONFORMING TO ASTM F477. PVC RIBBED PIPE SHALL ADHERE TO AASHTO M304 OR ASTM F949.
11. ALL THERMOPLASTIC, HDPE, PE AND NON-CONCRETE PIPE MUST HAVE MINIMUM 2-FEET OF COVER DURING ALL PHASES OF CONSTRUCTION.
12. FLEXIBLE CONNECTORS MUST BE INSTALLED WHEN CONNECTING HDPE PIPE TO CONCRETE OR BRICK STRUCTURES.

INCIDENTAL DRAINAGE

1. TEMPORARY DRAINAGE DURING CONSTRUCTION WILL BE PROVIDED BY THE CONTRACTOR TO RELIEVE AREAS THAT MAY CAUSE DAMAGE TO ROADWAYS AND/OR ADJACENT PROPERTIES AS DIRECTED BY THE OWNER.
2. THE OWNER'S INSPECTOR WILL PERFORM AN ON-SITE INSPECTION OF STORM SEWER PIPE INSTALLATION PRIOR TO ANY BACKFILLING OF THE INSTALLED PIPE.
3. IF PRECAST DRAINAGE STRUCTURES ARE USED, SHOP DRAWINGS WILL BE SUBMITTED TO THE OWNER ALONG WITH THE PROPER CERTIFICATIONS.
4. ALL PROPOSED PUBLIC STORM DRAINAGE STRUCTURES SHALL UTILIZE INLET SHAPING WITH PAVED INVERTS, UNLESS OTHERWISE NOTED, ON THE PLANS FOR EACH STRUCTURE.
5. MINIMUM FINAL HEIGHT OF COVER, FOR ALL STORM SEWER PIPES, SHALL BE TWO FEET (2') OR MANUFACTURER'S RECOMMENDATION. SEE THE PWSS, SECTION 8.2.1"PIPE COVER", FOR FURTHER REQUIREMENTS.
6. ALL CONCRETE STORM SEWER PIPES IN THE CITY RIGHT-OF-WAYS AND EASEMENTS WILL BE TONGUE AND GROOVE. PIPES SUBJECT TO TRAFFIC LOADING WILL BE REINFORCED CONCRETE PIPE AND CONFORM TO THE SPECIFICATIONS FOR CONCRETE STORM SEWER PIPE, AASHTO DESIGNATION M-170, WITH THE MODIFICATION THAT ALL PIPES WILL BE MANUFACTURED WITH 4,000-PSI CONCRETE. ALL PIPE JOINTS WILL BE SEALED IN ACCORDANCE WITH SECTION 302.03 OF THE VIRGINIA DEPARTMENT OF TRANSPORTATION ROAD AND BRIDGE SPECIFICATIONS.
7. ALL STORM SEWER PIPE JOINTS WILL BE INSTALLED, SILT FREE, OR WILL BE COMPLETELY WRAPPED WITH TWO FEET (2') WIDE APPROVED FILTER FABRIC, SECURED IN PLACE PRIOR TO BACKFILLING.
8. ALL PIPE CULVERTS (WATER, SEWER, AND STORM SEWER), LOCATED WITHIN RIGHT-OF-WAY EXCAVATION AREAS THAT ARE SUBJECT TO TRAFFIC LOADS WILL BE BACKFILLED WITH SELECT OR GRANULAR MATERIALS AND PLACED IN SIX-INCH (6") LAYERS AND COMPACTED TO 95 PERCENT THEORETICAL AASHTO DENSITY IN ACCORDANCE WITH SECTION 302.03 OF THE VIRGINIA DEPARTMENT OF TRANSPORTATION ROAD AND BRIDGE SPECIFICATIONS.
9. ALL METAL PIPE CULVERTS AND STORM SEWERS WILL BE INSTALLED IN ACCORDANCE WITH DRAWINGS PB-1 OF THE VIRGINIA DEPARTMENT OF TRANSPORTATION ROAD AND BRIDGE STANDARDS.
10. IF METAL PIPE IS USED, THE CONTRACTOR WILL FURNISH PH CERTIFICATIONS OF THE BACKFILL MATERIAL IF THE BACKFILL MATERIAL HAS NOT BEEN PREVIOUSLY TESTED.
11. ALL NON-CONCRETE STORM SEWER PIPES PLACED IN THE CITY RIGHT-OF-WAY OR IN CITY DRAINAGE EASEMENTS WILL INCORPORATE THE USE AND INSTALLATION OF LOCATOR TAPE/WIRE TO AID IN FUTURE DETECTION.
12. END WALLS AND FLARED END SECTIONS WILL NOT BE CONSTRUCTED ON OUTFALL PIPES UNTIL THE OWNER GIVES APPROVAL ON SITE.
13. RIP RAP MUST BE PROVIDED AT ALL END WALLS AND FLARED END SECTIONS AS REQUIRED BY THE PLANS.

UTILITIES

1. PRIOR TO CONSTRUCTION OR EXCAVATION, THE CONTRACTOR WILL BE RESPONSIBLE FOR LOCATING ALL UNDERGROUND UTILITIES (PUBLIC OR PRIVATE) THAT MAY EXIST AND CROSS THROUGH THE AREA OF CONSTRUCTION. "MISS UTILITY" OF VIRGINIA MUST BE CONTACTED A MINIMUM OF 72 HOURS PRIOR TO EXCAVATING AT "811" OR (1-800-552-7001). THE CONTRACTOR IS RESPONSIBLE FOR REPAIRING ANY EXISTING UTILITIES THAT ARE DAMAGED DURING CONSTRUCTION, AT HIS OWN EXPENSE.
2. THE RELOCATION OF ANY UTILITIES (PUBLIC OR PRIVATE) LOCATED WITHIN THE CITY'S RIGHT-OF-WAY, WILL BE AT THE CONTRACTOR'S EXPENSE, AND COMPLETED PRIOR TO THE PLACEMENT OF ANY PROPOSED ROADWAY BASE MATERIAL OR PAVEMENT IN CONJUNCTION WITH THE SITE WORK. ALL NEW UTILITY LINE INSTALLATIONS MUST BE UNDERGROUND (SUCH AS TELEPHONE, POWER, CABLE TELEVISION, ETC.).
3. WATER METERS AND SEWER CLEANOUTS MUST BE PLACED AT THE RIGHT-OF-WAY OR AT THE PUBLIC UTILITY EASEMENT LINE, (WITHIN THE RIGHT-OF-WAY/EASEMENT), OUTSIDE OF ENTRANCES AND SIDEWALKS.
4. DEFLECTING, OFFSETTING, OR RELOCATING EXISTING UTILITY MAINS WILL NOT BE ALLOWED EXCEPT UNDER EXTREME CIRCUMSTANCES, SUCH EXEMPTIONS WILL BE SUBMITTED TO THE OWNER FOR APPROVAL.
5. TYPE "K" SOFT DRAWN COPPER WILL BE USED FOR OFF-SITE WATER SERVICE LINES, TWO-INCH (2") LINES AND UNDER, IN RIGHT-OF-WAYS AND PUBLIC UTILITY EASEMENTS.
6. THE CONTRACTOR MUST CONTACT PUBLIC UTILITY/INSPECTIONS AT (757-385-4175) AT LEAST 48 HOURS PRIOR TO CONSTRUCTION (PUBLIC OR PRIVATE) LOCATED WITHIN THE CITY'S RIGHT-OF-WAY OR EASEMENT.

BUILDING & FOUNDATION

1. A PERMIT FOR ANY SIGN OR SIGN POLE MUST BE OBTAINED FROM PLANNING/PERMITS AND INSPECTIONS.
2. ONLY FLOOD RESISTANT MATERIAL MAY BE USED BELOW THE 100-YEAR FLOOD ELEVATION.
3. ALL STRUCTURES MUST BE PROPERLY ANCHORED WITH ADEQUATE FOOTING BELOW THE 100-YEAR FLOOD ELEVATION.
4. NO MECHANICAL EQUIPMENT, ELECTRICAL EQUIPMENT, OR ELECTRICAL LINES WILL BE INSTALLED OR LOCATED BELOW ONE FOOT (1') ABOVE THE 100-YEAR FLOOD ELEVATION, EXCEPT UNDERGROUND WIRING OR SIMILAR MATERIALS.
5. ALL BUILDINGS WILL BE ACCESSIBLE IN ACCORDANCE WITH THE AMERICAN FOR DISABILITIES ACT (ADA), (LATEST EDITION) STANDARDS.
6. PARKING, RAMPS, AND BUILDING ACCESS ROUTES MUST BE IN ACCORDANCE WITH THE AMERICAN FOR DISABILITIES ACT (ADA), (LATEST EDITION) STANDARDS.
7. THERE WILL BE NO MORE THAN ½-INCH DIFFERENCE BETWEEN THE FINISHED FLOOR AND THE EXTERIOR SURFACE AT THE ENTRANCE DOOR.
8. A PERMIT TO DEMOLISH ANY EXISTING STRUCTURE WILL BE OBTAINED FROM PLANNING/PERMITS AND INSPECTIONS, PRIOR TO ANY DEMOLITION.

ABBREVIATIONS

AC	AIR CONDITIONING UNIT
BC	BOTTOM OF CURB
BW	BACK OF WALL
CE	CONSTRUCTION ENTRANCE
CD	CHECK DAM
CG	CURB AND GUTTER
DATUR	DATA ACCORDING TO UTILITY RECORD
DO	DIVERSION DIKE
DIP	DUCTILE IRON PIPE
EOI	END OF INFORMATION
ES	EXISTING SANITARY SEWER
ESD	EXISTING STORM DRAIN
EW	EXISTING WATER
FFE	FINISHED FLOOR ELEVATION
FH	FIRE HYDRANT
FL	FLOW LINE
IP	INLET PROTECTION
MAX	MAXIMUM
MIN	MINIMUM
OP	OUTLET PROTECTION
PS	PERMANENT SEEDING
PSI	POUNDS PER SQUARE INCH
PVC	POLYVINYL CHLORIDE
RCP	REINFORCE CONCRETE PIPE
SAF	SAFETY FENCE
SB	SEDIMENT BASIN
SF	SILT FENCE
TC	TOP OF CURB
TP	TREE PROTECTION
TS	TEMPORARY SEEDING
TYP	TYPICAL
WMH	WATER MANHOLE
WV	WATER VALVE

LEGEND

EXISTING	NEW	
BLDG		BUILDING
ASPH		LIGHT DUTY ASPHALT PAVEMENT
		HEAVY DUTY ASPHALT PAVEMENT
CONC		CONCRETE PAVEMENT
GRAVEL		GRAVEL
BRICK		BRICK PAVERS
CONC S/W		CONCRETE SIDEWALK
		BIORETENTION POND
	CE	CONSTRUCTION ENTRANCE
		DEMOLITION
		PROJECT LIMITS
		PROPERTY LINE
		RIGHT-OF-WAY
		LINEAR REMOVAL
		SAWCUT
		REMOVE/DEMOLISH
	IP	INLET PROTECTION
	CIP	CURB INLET PROTECTION
	TP	TREE PROTECTION
	SF	SILT FENCE
		CURB
		CURB & GUTTER
		TREELINE
X	XX	FENCE
		TREE
		SHRUB
		SIGN
		BOLLARD
		TOP OF BANK
		TOE OF SLOPE
		DITCH
15	15	CONTOUR
	15.00 TC15.50 BC15.00	SPOT ELEVATION
24" RCP ESD	SD	STORM DRAIN
DI		DROP INLET
CI		CURB INLET
SDMH		STORM DRAIN MANHOLE
		STORM CLEANOUT
		FLARED END SECTION
		RIPRAP
8" PVC ES	SS	SANITARY SEWER
ESFM 4" DI		SANITARY SEWER FORCE MAIN
SMH		SANITARY SEWER MANHOLE
SCO		SANITARY SEWER CLEANOUT
SFMV		SANITARY SEWER FORCE MAIN VALVE
6" PVC EW	W	WATER LINE
WV		WATER VALVE
WM		WATER METER
		11" BEND
		22.5" BEND
		45" BEND
		90 BEND
		TEE
FH		FIRE HYDRANT
EG 2" PL		GAS LINE
GM		GAS METER
GV		GAS VALVE
EUE		UNDERGROUND ELECTRIC
LP		LIGHT POLE
		GROUND LIGHT
		GUY WIRE
ELEC MH		ELECTRICAL MANHOLE
EBOX		ELECTRICAL BOX
		ELECTRICAL VAULT
EUE		UNDERGROUND ELECTRIC
EOC		OVERHEAD COMMUNICATION
TP		COMMUNICATION POLE
COMM MH		COMMUNICATION MANHOLE
TPED		COMMUNICATION PEDESTAL
		FIBER OPTIC HANDHOLE
		TRAFFIC VAULT
TSP		TRAFFIC SIGNAL POLE
		CONNECT NEW TO EXISTING
		LIMITS OF DISTURBANCE
		DIVERSION DIKE
		DELAY TOWER
		WOOD FENCE
		ENDWALL

City of Virginia Beach

35MEB General Contractors

VIRGINIA BEACH SPORTS CENTER

1045 19th Street
Virginia Beach, Virginia

DESIGNER

CLARKNEXSEN

4525 Main Street, Suite 1400
Virginia Beach, VA 23462
757.455.5800

CONSULTANT

SEALS

SUBMITTAL

05/18/18

PROGRESS PRINT

REVISIONS

KEY PLAN

SHEET

GENERAL NOTES LEGEND AND ABBREVIATIONS

C-001

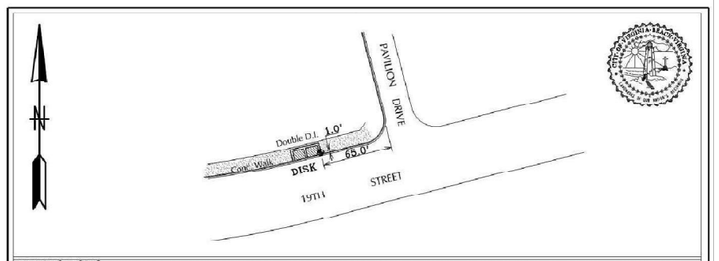
SHEET - OF XX

DESIGN: RMS
DRAWN: TAW
REVIEW: -

CN 7142

J:\Projects\7000\7142-HR Regional Sports Pavilion\CAD\Sheets\C\C-001.dwg Fri, 18 May 2018 - 3:53pm baliver

GPS CONTROL



DESCRIPTION: A STANDARD 2½" GPS BRASS DISK IS LOCATED ON THE NORTHWEST CORNER OF 19TH STREET AND PAVILION DRIVE. DISK IS SET FLUSH IN TOP OF OF CONCRETE COLLAR ON EAST SIDE OF DOUBLE CURB DROP INLET 1.0' NORTH OF BACK OF CURB ON 19TH STREET AND 65.0' SOUTHWEST OF BACK OF CURB AT END OF RADIUS ON THE WEST SIDE OF PAVILION DRIVE.

HORIZONTAL CONTROL :
VIRGINIA STATE PLANE COORDINATE SYSTEM, SOUTH ZONE
NORTH AMERICAN DATUM 1983/2993 HARN (US SURVEY FOOT)

NORTH (FT.): 3,476,559.093 EAST (FT.): 12,216,434.465
NORTH (M.): 1,059,657.331 EAST (M.): 3,723,576.672
LATITUDE: 36° 50'38.96932"N LONGITUDE: 75° 59'34.83870"W
SCALE FACTOR: 0.99998684 CONVERGENCE: 1° 31.293'

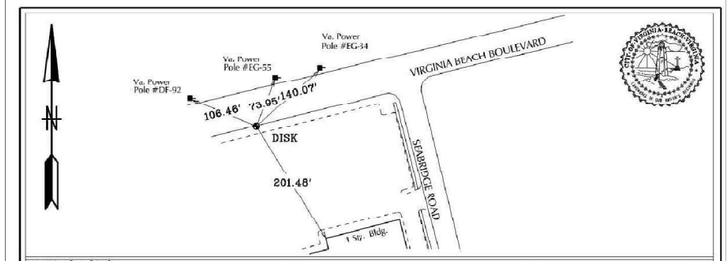
AZIMUTH MARK:
NORTH (FT.): _____ EAST (FT.): _____
NORTH (M.): _____ EAST (M.): _____ M.
GRID BEARING: _____ DISTANCE: _____ FT. _____
HEIGHT OF AZIMUTH MARK: _____ FT. _____ M.

VERTICAL CONTROL :
NORTH AMERICAN VERTICAL DATUM
ELEVATION: 11.64' NAVD 88
ORTHOMETRIC HEIGHT: _____ FT. _____ M.

DATE ESTABLISHED: FEBRUARY 2002 GPS DATE: JAN. 06, 2004
DATE RECOVERED: JAN. 06, 2004 JULIAN DATE: DAY 006 / 04
DATE REVISED: JUNE 13, 2007

GRID: 2417 STATION: 2417-1 SURVEY BUREAU CITY OF VIRGINIA BEACH, VIRGINIA

GPS CONTROL



DESCRIPTION: A STANDARD 3½" ALUMINUM-VEDIT DISK SET IN CONCRETE APPROXIMATELY 3" BELOW GROUND 140.07' SOUTHWEST OF VIRGINIA POWER POLE # EG-34, 73.93' SOUTHWEST OF VIRGINIA POWER POLE # EG-55, 106.46' SOUTHEAST OF VIRGINIA POWER POLE # DF-92, AND 201.48' NORTHWEST OF NORTHWEST CORNER OF ONE STORY BUILDING LOCATED ON THE SOUTH SIDE OF VIRGINIA BEACH BOULEVARD WEST OF SEABRIDGE ROAD.

HORIZONTAL CONTROL :
VIRGINIA STATE PLANE COORDINATE SYSTEM, SOUTH ZONE
NORTH AMERICAN DATUM 1983/2993 HARN (US SURVEY FOOT)

NORTH (FT.): 3,475,784.716 EAST (FT.): 12,216,539.980
NORTH (M.): 1,059,421.300 EAST (M.): 3,723,608.833
LATITUDE: 36° 50'31.28742"N LONGITUDE: 75° 59'33.79405"W
SCALE FACTOR: 0.99998718 CONVERGENCE: 1° 31.304'

AZIMUTH MARK:
NORTH (FT.): _____ EAST (FT.): _____
NORTH (M.): _____ EAST (M.): _____ M.
GRID BEARING: _____ DISTANCE: _____ FT. _____
HEIGHT OF AZIMUTH MARK: _____ FT. _____ M.

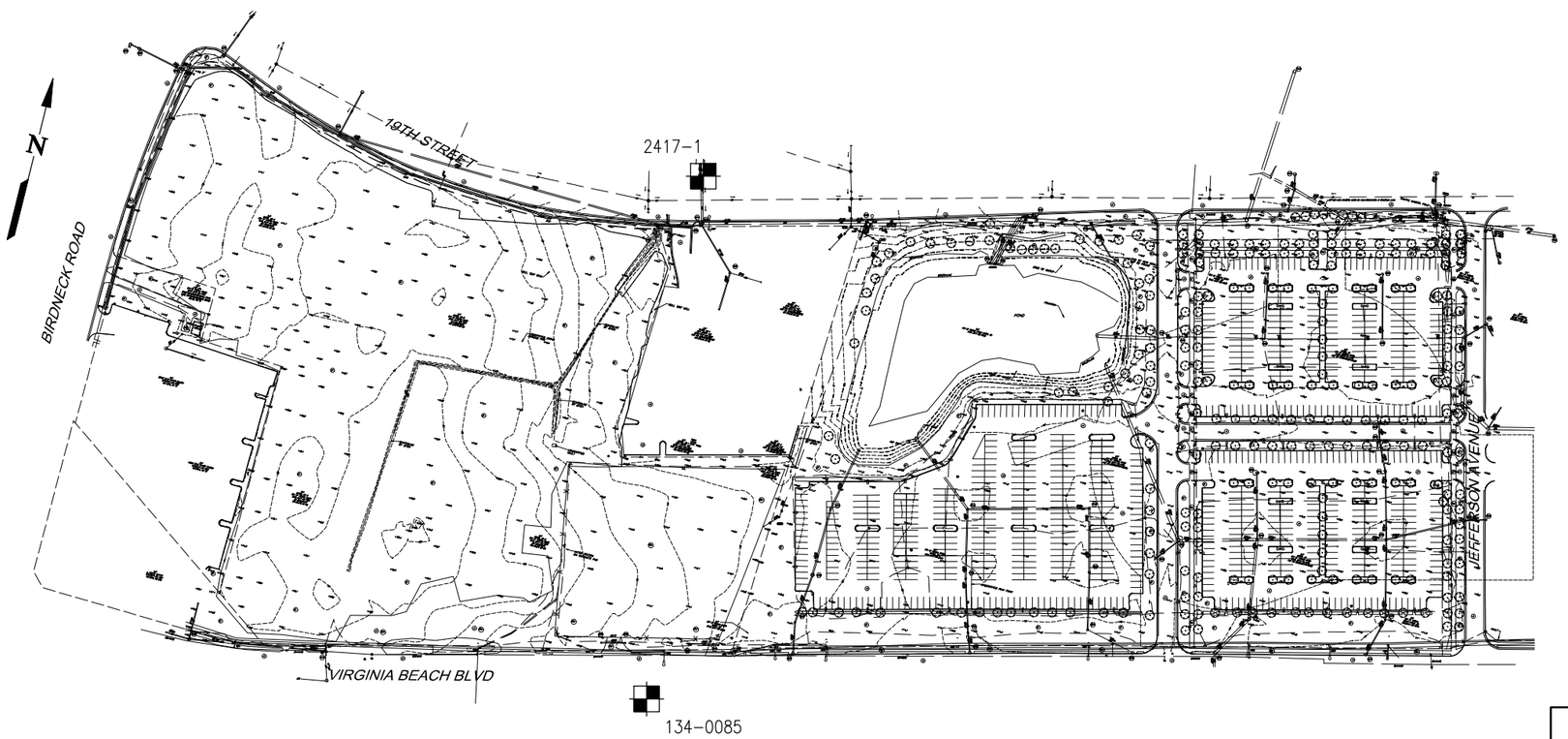
VERTICAL CONTROL :
NORTH AMERICAN VERTICAL DATUM
ELEVATION: 13.93' NAVD 88
ORTHOMETRIC HEIGHT: _____ FT. _____ M.

DATE ESTABLISHED: _____ GPS DATE: JAN. 23, 2004
DATE RECOVERED: JAN. 23, 2004 JULIAN DATE: DAY 023 / 04

GRID: 2417 STATION: 134-0085 SURVEY BUREAU CITY OF VIRGINIA BEACH, VIRGINIA

CERTIFICATION STATEMENT

THIS TOPOGRAPHIC SURVEY COMPLETED UNDER THE DIRECT AND RESPONSIBLE CHARGE OF KEVIN B. WOOD, LS FROM AN ACTUAL GROUND SURVEY MADE UNDER MY SUPERVISION; AND THE ORIGINAL DATA WAS OBTAINED IN APRIL 2018 AND THIS TOPOGRAPHIC SURVEY MEETS MINIMUM ACCURACY STANDARDS UNLESS OTHERWISE NOTED.



GRAPHIC SCALE(S)

1"=100' 0 100' 200' 400'

City of Virginia Beach
35 MEB General Contractors

VIRGINIA BEACH SPORTS CENTER

1045 19th Street
Virginia Beach, Virginia

DESIGNER

CLARKNEXSEN

4525 Main Street, Suite 1400
Virginia Beach, VA 23462
757.455.5800

CONSULTANT

SEALS

SUBMITTAL
05/18/18
PROGRESS PRINT

REVISIONS

KEY PLAN

101	103	105	107
102	104	106	108

SHEET
SURVEY CONTROL

C-002

SHEET - OF -X

DESIGN: RMS
DRAWN: TAW
REVIEW: -

CN 7142

Spell checked by TWEAVER on 05/14/2018 12:06pm

h:\Projects\7000\7142-HR Regional Sports Pavilion\CAD\Sheets\C\C-002.dwg Fri, 18 May 2018 - 3:53pm baliver

Spell checked by TWEAVER on 05/14/2018 12:12pm

STORM SEWER SCHEDULE

- 511 SDMH RIM=6.94 INV IN=2.84 (E) INV OUT=2.85 (W) CONFLICT MANHOLE TOP OF 4" PIPE=5.14
- 511 CI RIM=6.89 INV OUT=2.99 (S)
- 511 CI RIM=6.75 INV IN=3.08 (S) DUAL CI #5114
- 511 CI RIM=6.66 INV OUT=2.70 (N) DUAL CI #5113
- 511 CI RIM=9.35 INV IN=3.72 (SE) INV OUT=3.66 (W)
- 511 SDMH RIM=9.04 INV IN=XXX (W) INV IN=3.36 (N) INV IN=3.43 (E) INV OUT=3.28 (S) DUAL CI #5118
- 511 CI RIM=8.62 INV IN=3.23 (N) INV IN=3.09 (W) INV IN=XXX (E) INV OUT=3.17 (S) DUAL CI #5117
- 511 SDMH RIM=8.84 INV IN=3.19 (S) INV OUT=2.85 (N)
- 512 SDMH RIM=5.79 INV OUT=4.34 (NW)
- 512 SDMH RIM=7.96 INV IN=N/A (N) INV IN=N/A (E) INV OUT=2.41 (W)
- 512 SDMH RIM=8.20 INV IN=2.47 (E) INV IN=N/A (S) INV IN=N/A (SW) INV IN=XXXX (W) INV OUT=2.02 (N) (RECESSED)
- 512 SDMH RIM=8.13 INV IN=3.63 (N) INV IN=2.77 (E) INV OUT=2.74 (NW)
- 512 CI RIM=8.02 INV OUT=3.99 (S)
- 512 CI RIM=8.40 INV OUT=3.85 (S)
- 512 CI RIM=8.11 INV IN=3.61 (S) INV OUT=3.40 (NW)
- 512 SDMH RIM=8.51 INV IN=2.69 (SE) INV OUT=2.71 (NE)
- 512 CI RIM=8.57 INV OUT=3.74 (N)
- 512 CI RIM=8.96 INV IN=6.16 (S) INV OUT=6.05 (W)
- 513 CI RIM=8.96 INV IN=6.16 (S) INV OUT=6.16 (N)
- 513 DI RIM=9.23 INV OUT=6.28 (N)
- 513 DI RIM=9.54 INV IN=5.54 (E) INV IN=5.52 (S) INV OUT=5.39 (NW)
- 513 SDMH RIM=9.13 INV IN=5.82 (N) INV IN=5.90 (N) INV OUT=5.87 (W) INV OUT=5.89 (W)
- 513 CI RIM=9.20 INV IN=5.94 (N) INV IN=5.94 (N) INV IN=5.91 (E) INV IN=5.88 (E) INV IN=5.93 (S) INV OUT=5.90 (W)
- 513 CI RIM=9.04 INV OUT=5.76 (N)
- 514 CI RIM=9.45 INV OUT=5.17 (S)
- 515 DI RIM=7.18 INV OUT=4.60 (N)
- 515 CI RIM=9.12 INV OUT=6.28 (E)
- 516 CI RIM=12.17 INV IN=5.07 (W) INV OUT=5.10(E)
- 517 SDMH RIM=11.81 INV IN=5.51 (NW) INV OUT=5.35 (E)
- 517 CI RIM=11.53 INV OUT=6.88 (SE) DUAL CI #5183
- 518 CI RIM=11.55 INV IN=6.90 (W) INV OUT=5.70 (SE) DUAL CI #5178
- 518 CDI RIM=11.72 INV IN=10.10 (E) DUAL CI #5193
- 519 CDI RIM=11.69 INV IN=9.92 (E) INV OUT=6.99 (E) DUAL CI #5188
- 519 CI RIM=14.56 INV OUT=11.02 (N)
- 520 CI RIM=16.45 INV OUT=13.14 (W)
- 520 CI RIM=11.71 INV IN=7.12 (N) OUT=6.67 (S) DUAL CI #5207
- 520 CI RIM=11.70 INV IN=7.23 (N) DUAL CI #5206
- 521 CB RIM=12.19 INV IN=6.68 (S) INV IN=6.66 (W) INV OUT=6.65 (E)
- 521 CI RIM=11.72 INV IN=7.02 (W) DUAL MANHOLE #5215
- 521 CI RIM=11.75 INV IN=6.77 (N) INV OUT=6.27 (E) DUAL CI #5214
- 522 CB RIM=11.78 INV IN=7.26 (SE) INV IN=6.43 (W) DUAL MANHOLE #5215
- 522 CB RIM=12.08 INV IN=8.46 (E) INV IN=7.59 (S) INV OUT=7.60 (NW)
- 522 CB RIM=11.69 INV IN=8.11 (SW) INV OUT=7.91 (NE)
- 523 CB RIM=11.49 INV OUT=9.00 (E)
- 524 CB RIM=11.24 INV IN=8.59 (E) INV IN=8.74 (W) INV OUT=8.65 (N)
- 525 CB RIM=11.53 INV IN=8.93 (E) INV OUT=8.86 (W)
- 526 CB RIM=11.28 INV OUT=8.94 (W)
- 529 CI RIM=16.54 INV IN=13.32 (E) INV IN=13.89 (W) INV OUT=13.41 (N)
- 529 CI RIM=17.14 INV OUT=12.27 (S)
- 529 CI RIM=17.16 INV IN=11.27 (N) INV OUT=11.04 (E)
- 526 CI RIM=16.52 INV IN=12.92 (N) INV OUT=xxxx (XXX) (SURCHARGED)
- 526 CI RIM=16.42 INV OUT=12.71 (SW)
- 526 SDMH RIM=16.31 INV IN=XXXX INV OUT=XXX COULD NOT OPEN
- 527 CI RIM=16.80 INV IN=12.61 (SE) INV OUT=12.44 (W)
- 529 CI RIM=17.70 INV IN=13.61 (E) INV OUT=13.08 (W)
- 531 CB RIM=17.00 INV IN=13.23 (SE) INV OUT=13.18 (W)
- 531 DI RIM=16.70 INV IN=14.47 (NE) INV OUT=14.43 (E)
- 531 DI RIM=16.81 INV IN=14.33 (W) INV OUT=14.21 (S)
- 604 DI RIM=11.11 INV IN=7.11 (SE) INV OUT=7.06 (N)
- 604 CI RIM=11.19 INV OUT=7.14 (NW)
- 610 CI RIM=11.16 INV OUT=8.41 (S)
- 610 DMH RIM=11.50 INV IN=8.41 (N) INV IN=8.42 (E) INV IN=8.41 (S) INV OUT=7.59 (W)
- 610 DI RIM=10.32 INV IN=XXX INV OUT=XXXX (FULL OF TRASH)
- 610 DI (DOUBLE) RIM=10.33 INV OUT=8.52 (W)
- 612 DI RIM=10.42 INV IN=6.64 (S) INV OUT=6.47 (N)
- 612 CI RIM=11.00 INV OUT=7.00
- 620 DI RIM=11.17 INV IN=6.88 (S) INV OUT=6.72 (N)
- 620 DMH RIM=12.61 INV OUT=8.26 (N)
- 621 CI RIM=12.78 INV IN=XXX INV OUT=XXXX (PIPE RECESSED) (FULL OF SILT)
- 622 PIPE END INV=13.75
- 623 PIPE END INV=13.48
- 623 PIPE END INV=12.09
- 624 PIPE END INV=11.46
- 100 DI RIM=15.36 INV IN=1.96 (SE) INV OUT=13.36 (NW)
- 105 CI RIM=16.56 INV OUT=13.48 (E)
- 109 DI RIM=16.48 INV OUT=15.47 (SW)
- 111 DI RIM=16.99 INV OUT=14.69 (S)
- 116 DI RIM=16.65 INV IN=13.83 (N) INV OUT=13.84 (SW)
- 117 DI RIM=17.10 INV IN=14.73 (N) INV OUT=14.77 (S)
- 118 DI RIM=17.16 INV IN=14.44 (N) INV OUT=14.52 (S)
- 119 DI RIM=17.09 INV IN=14.43 (N) INV OUT=14.47 (NW)
- 120 DI RIM=16.52 INV IN=14.09 (SE) INV OUT=14.12 (NW)
- 912 DMH RIM=17.11 INV IN=13.94 (NE) INV OUT=13.91 (SW)
- 912 DMH RIM=16.38 INV OUT=13.65 (NW)
- 912 PIPE END INV=13.65
- 912 PIPE END INV=13.70
- 912 CI RIM=16.96 INV OUT=15.08 (N)
- 912 DMH RIM=17.23 INV IN=15.38 (S) INV OUT=14.95 (NW)
- 912 PIPE END INV=13.93
- 912 DMH RIM=16.93 BOTTOM INV=14.53
- 912 DI RIM=18.39 INV OUT=15.39 (N)
- 913 DI RIM=18.84 INV IN=14.87 (S) INV OUT=14.54 (W)
- 913 CI RIM=19.26 INV IN=XXX INV OUT=XXXX (FULL OF TRASH)
- 913 CI RIM=19.11 INV IN=XX INV OUT=XX (FULL OF TRASH)
- 913 DMH RIM=18.25 INV IN= (XX) INV OUT= (XXX) (SURCHARGED) (SILTED)
- 913 CI RIM=17.55 INV IN= XXX INV OUT= XXX (FULL OF SILT)
- 913 SDMH RIM=14.05 INV IN=11.01 (W) INV OUT=10.95 (E)
- 913 CI RIM=13.78 INV IN= XXX INV OUT= XXX (FULL OF SILT/TRASH)
- 913 DI RIM=10.73 INV OUT=8.45 (N)
- 913 DI RIM=11.11 INV IN=6.51 (S) INV OUT=6.51 (N)
- 913 DI RIM=11.18 INV IN=6.26 (S) INV OUT=6.26 (N)
- 914 DI RIM=10.59 INV IN=6.45 (S) INV OUT=6.45 (N)
- 914 DI RIM=10.63 INV IN=5.84 (E) INV IN=5.84 (S) INV OUT=5.81 (NW)
- 914 DI RIM=10.58 INV IN=6.29 (S) INV OUT=6.28 (W)
- 914 DI RIM=10.53 INV IN=6.88 (S) INV OUT=6.71 (N)
- 914 DMH RIM=18.42 INV IN=13.30 (N) INV IN=13.15 (E) INV OUT=12.87 (W)
- 914 CI RIM=16.75 INV IN=12.07 (E) INV OUT=12.09 (W)
- 922 DMH RIM=9.95 INV IN=5.14 (N) INV IN=5.05 (SE) INV OUT=5.07 (W)
- 922 DMH RIM=9.66 INV IN=5.43 (N) INV IN=5.37 (N) INV IN=5.50 (E) INV OUT=5.49 (W)
- 923 DMH RIM=9.66 INV IN=5.50 (N) INV IN=5.42 (N) INV IN=5.42 (E) INV OUT=5.33 (W)
- 923 CI RIM=9.40 INV IN=5.22 (E) INV OUT=5.26 (W)
- 923 DMH RIM=9.61 INV IN=5.04 (N) 6" INV IN=5.01 (N) 8" INV IN=4.98 (E) INV OUT=4.93 (W)
- 923 DMH RIM=9.54 INV IN=5.04 (N) 8" INV IN=5.00 (N) 8" INV IN=4.90 (E) INV IN=5.47 (SW) INV OUT=4.88 (W)
- 923 CI RIM=9.29 INV OUT=5.60 (N)
- 923 CI RIM=9.64 INV OUT=6.83 (SE)
- 923 CI RIM=9.15 INV IN=4.94 (N) 8" INV IN=4.93 (N) 8" INV IN=4.61 (E) INV OUT=4.46 (SW)
- 924 DMH RIM=8.81 INV IN=4.41 (NE) INV OUT=4.38 (W)
- 924 CI RIM=8.56 INV IN=4.10 (E) INV OUT=4.03 (W)
- 924 DMH RIM=9.52 INV IN=4.58 (NE) INV IN=4.45 (E) INV OUT=4.32 (SW)
- 924 CI RIM=8.67 INV OUT=4.55 (SW) (UNABLE TO VERIFY CONNECTION)
- 924 CI RIM=8.14 INV IN=3.74 (E) INV OUT=3.70 (NW)
- 925 DI RIM=9.57 INV OUT=5.77 (N)
- 925 DI RIM=9.54 INV IN=5.70 (S) INV OUT=5.54(N)
- 925 CI RIM=9.94 INV OUT=6.39 (W)
- 925 CI RIM=9.95 INV IN=6.10 (E) INV IN=5.45 (S) INV OUT=5.40 (W)
- 926 DI RIM=9.62 INV IN=5.25 (N) INV IN=5.22 (E) INV OUT=5.22 (W)
- 926 DI RIM=9.06 INV IN=6.04 (NW) INV OUT=5.95 (S)
- 926 DI RIM=8.91 INV OUT=5.58 (S)
- 926 DI RIM=8.92 INV IN=5.07 (N) INV IN=4.74 (E) INV OUT=4.13 (W)
- 926 DI RIM=8.94 INV IN= NOT VISABLE INV IN=3.64 (E) INV IN=3.37 (S) INV OUT=2.83 (W)
- 926 MH RIM=9.80 INV CL=5.84 (MANHOLE SURCHARGED)
- 926 DI RIM=8.88 INV OUT=5.72 (S)
- 926 DMH RIM=9.79 INV IN=6.41 (E) INV IN=6.36 (S) INV OUT=6.40 (NW) (OUTSIDE OF PROJECT)
- 927 DMH RIM=9.84 INV IN=6.43 (SE) INV OUT=6.34 (N) (OUTSIDE OF PROJECT)
- 927 DI RIM=8.95 INV OUT=6.78 (E)
- 927 CI RIM=9.35 INV IN=3.48 (N) INV IN=3.90 (E) INV OUT=3.65 (W)
- 927 CI RIM=9.23 INV IN=5.08 (SE) INV OUT=5.12 (W)
- 927 DI RIM=9.84 INV IN=6.59 (E) INV IN=5.27 (S) INV OUT=5.29 (N)
- 927 DI RIM=9.27 INV IN=6.74 (SE) INV OUT=6.78 (W)
- 927 CI RIM=8.83 INV IN=4.93 (E) INV IN=4.96 (S) INV OUT=4.83 (N)
- 928 DMH RIM=9.65 INV IN=3.19 (E) TOP OF PIPE IN=7.50 (S) TOP OF PIPE OUT=7.50 (N)
- 928 CI RIM=8.65 INV=3.67 (S) INV OUT=3.71 (N)
- 928 CI RIM=8.68 INV=3.30 (S) INV OUT=3.00 (N)
- 928 DI RIM=8.19 INV IN=5.11 (S) INV OUT=5.01 (NW)
- 928 DMH RIM=7.63 INV IN=4.66 (E) INV IN=4.58 (W) INV OUT=4.52 (NE)
- 929 DI RIM=8.25 INV IN=5.05 (S) INV IN=4.96 (W) INV OUT=4.65 (E)
- 929 DI RIM=8.26 INV IN=5.35 (SW) INV OUT=5.35 (E)
- 929 DI RIM=8.65 INV IN=5.33 (W) INV OUT=5.41 (E)
- 929 DI RIM=7.80 INV IN=5.02 (W) INV OUT=4.94 (E)
- 929 DI RIM=7.98 INV IN=4.90 (W) INV OUT=4.75 (E)
- 929 DI RIM=8.29 INV IN=5.19 (W) INV OUT=5.22 (E)
- 929 FES INV OUT=3.53
- 930 FES INV OUT=3.60
- 930 PIPE END INV=3.46
- 930 PIPE END INV=3.72
- 931 OUTFALL STRUCTURE RIM=6.68 INV OUT=3.94
- 931 DI RIM=9.45 INV IN=5.45 (S) INV IN=5.45 (SW) INV OUT=4.83 (N)
- 932 FES INV OUT=4.78
- 932 FES INV OUT=4.21
- 932 DI RIM=8.07 INV OUT=5.01 (N)
- 932 FES INV OUT=4.86
- 932 DI RIM=8.82 INV OUT=6.04 (SE)
- 932 DI RIM=8.62 INV OUT=6.13 (NE)
- 932 DI RIM=8.78 INV IN=5.93 (SW) INV IN=5.92 (NW) INV OUT=5.73 (NE)
- 932 CI (DOUBLE BASIN) RIM=9.86
- 932 CI (DOUBLE BASIN) RIM=9.84 INV OUT=5.80 (W)
- 933 DI RIM=9.15 INV IN=5.58 (E) INV IN=4.60 (SE) INV OUT=4.45 (W)
- 933 DI RIM=9.44 INV OUT=7.15 (W)
- 933 DI RIM=9.98 INV IN=6.76 (E) INV IN=3.83 (S) INV IN=7.24 (W) INV OUT=3.67 (N)
- 933 CI RIM=10.36 INV IN=3.58 (S) INV OUT=3.66 (NE)
- 933 CI RIM=10.32 INV IN=3.68 (SW) INV OUT=3.75 (N)
- 933 DI RIM=10.08 INV OUT=7.37 (E)
- 933 DI RIM=9.40 INV OUT=6.28 (E)
- 933 DI RIM=9.20 INV IN=3.82 (E) INV IN=4.27 (S) INV IN=5.70 (W) INV OUT=3.90 (E)
- 933 CI RIM=10.95 INV OUT=6.94 (NE)
- 933 CI RIM=10.95 INV IN=3.57 (E) INV IN=6.62 (SW) INV OUT=3.56 (NW)
- 934 FES INV=2.87
- 934 DI RIM=9.98 INV OUT=4.36 (S)
- 934 DI RIM=9.49 INV IN=3.98 (N) INV IN=3.90 (E) INV IN=3.87 (S) INV OUT=3.79 (W)
- 934 CI RIM=9.61 INV IN=4.75 (N) INV IN=4.79 (E) INV IN=4.78 (S) INV OUT=4.37 (W)
- 934 DI RIM=9.98 INV IN=5.62 (N) INV OUT=5.22 (S)
- 934 DI RIM=10.44 INV IN=5.88 (N) INV OUT=5.54 (S)
- 934 DI RIM=10.51 INV OUT=6.09 (S)
- 935 CI RIM=10.23 INV IN=5.20 (E) INV OUT=5.18 (W)
- 935 CI RIM=10.10 INV OUT=5.40 (W)
- 937 CI RIM=8.88 INV OUT=4.05 (N) (PIPE RECESSED) CL OF STRUCTURE
- 937 CI RIM=8.73 INV OUT=4.12 (N)
- 937 CI RIM=10.33 INV IN=5.33 (S) INV OUT=5.23 (N)
- 937 DMH RIM=11.13 INV IN=7.15 (SW) INV OUT=6.88 (E)
- 937 DMH RIM=11.08 INV IN=6.90 (SW) INV IN=6.91 (W) INV OUT=6.88 (E)
- 938 DI RIM=10.93 INV IN=7.13 (E) INV IN=6.81 (W) INV OUT=6.66 (N)
- 938 DMH RIM=10.85 INV IN=8.18 (E) INV OUT=7.05 (W)
- 938 DMH RIM=9.80 INV=1.94 (PIPE RECESSED) CL OF STRUCTURE
- 938 DMH RIM=10.58 INV IN=2.32 (NW) INV OUT=1.88 (W)
- 938 DI RIM=8.98 INV OUT=4.90 (SW)
- 939 DMH RIM=10.29 INV IN=2.09 (SE) INV OUT=1.85 (N)
- 939 DMH RIM=10.67 INV IN=4.66 (NE) INV IN=2.21 (E) INV OUT=2.16 (NW)
- 939 DMH RIM=9.35 INV IN=5.42 (NE) INV=1.92 (CL OF STRUCTURE) SURCHARGED
- 939 DI RIM=8.55 INV OUT=6.18 (NW)
- 939 DMH RIM=9.36 INV IN=6.06 (SE) INV OUT=5.72 (SW)
- 939 DI RIM=8.30 INV OUT=5.15 (NW)
- 939 DI RIM=9.15 INV OUT=6.16 (S)
- 940 DI RIM=9.06 INV=1.31 (CL OF STRUCTURE) SURCHARGED
- 940 DI RIM=9.26 INV=0.67 (CL OF STRUCTURE) SURCHARGED
- 940 DI RIM=9.32 INV=6.11
- 940 DI RIM=10.01 INV=0.83 (CL OF STRUCTURE) SURCHARGED
- 940 DI RIM=9.93 INV=0.62 (CL OF STRUCTURE) SURCHARGED
- 940 DMH RIM=9.92 INV IN=5.40 (N) INV IN=4.44 (W) INV OUT=4.38 (E)
- 940 DI RIM=9.37 INV OUT=5.51 (S)
- 940 DMH RIM=9.72 INV=4.15 (CL OF STRUCTURE) PIPES NOT VISIBLE
- 941 CI (DOUBLE BASIN) RIM=8.86 INV IN=4.95 (W)
- 941 CI (DOUBLE BASIN) RIM=8.86 INV IN=3.80 (N) INV OUT=3.57 (E)
- 941 DMH RIM=9.55 INV IN=3.83 (N) INV IN=3.64 (W) INV OUT=3.82 (S)
- 941 DMH RIM=8.78 INV=3.84 (CL OF STRUCTURE)
- 942 DMH RIM=9.38 INV OUT=3.55 (E)
- 942 DMH RIM=10.34 INV IN=3.44 (W) INV OUT=3.28 (NE)
- 942 CI RIM=9.58 INV OUT=4.12 (N)
- 943 CI RIM=9.19 INV OUT=4.42 (S)
- 943 DMH RIM=9.58 INV=3.33 (CL OF STRUCTURE)
- 943 CI (DOUBLE BASIN) RIM=7.96
- 943 CI (DOUBLE BASIN) RIM=8.00 INV OUT=5.16 (S)
- 943 DI RIM=8.29 INV IN=4.42 (N) INV OUT=4.38 (S)
- 944 DI RIM=8.74 INV OUT=5.07 (NE)
- 944 DI RIM=8.71 INV OUT=5.35 (NE)
- 944 CI RIM=8.56 INV IN=3.58 (SE)
- 944 DMH RIM=9.20 INV=2.80 (CL OF STRUCTURE)
- 945 DMH RIM=9.13 INV IN=4.78 (S) INV IN=4.88 (NW) INV OUT=4.58 (N)
- 945 DMH RIM=9.54 INV IN=4.56 (N) INV IN=4.26 (NE) INV IN=4.61 (S) INV OUT=4.38 (SW) UNABLE TO VERIFY CONNECTIONS
- 946 DI RIM=10.28 INV IN=8.43 (S) INV OUT=8.53 (W)
- 946 DI RIM=10.12 INV=7.60 CL OF STRUCTURE (COVERED IN FILTER FABRIC)
- 946 CI RIM=9.95 INV IN=5.32 (S) INV OUT=5.11 (N) (RECESSED PIPE)
- 946 CI RIM=9.70 INV OUT=5.56 (NW)
- 946 CI RIM=9.30 INV OUT=5.15 (NW)
- 946 DI RIM=10.15 INV IN=5.02 (SE) INV OUT=5.02 (NW)
- 946 DI RIM=10.28 INV OUT=8.24 (SW) UNABLE TO VERIFY CONNECTION
- 947 DI RIM=8.88 INV OUT=5.76 (E)
- 947 CI RIM=8.73 INV IN=5.26 (W) INV OUT=5.26 (E)
- 947 DI RIM=9.12 (FULL OF LEAVES & DIRT)
- 947 PIPE END RIM=5.32
- 947 PIPE END RIM=5.37
- 948 PIPE END RIM=6.87
- 948 PIPE END RIM=5.17
- 948 PIPE END RIM=6.77
- 948 PIPE END RIM=14.76
- 949 PIPE END RIM=14.35
- 949 DMH RIM=9.72 INV IN=3.82 (E) INV OUT=3.72 (NW)
- 950 DMH RIM=9.34 INV IN=5.09 (SW) INV OUT=4.87 (N)
- 950 PIPE END INV=3.24
- 950 DI RIM=7.23 INV IN=4.62 (E) INV OUT=3.83 (W)
- 950 PIPE END INV=5.68
- 951 CI (DOUBLE BASIN) RIM=7.81 INV=3.21
- 951 CI (DOUBLE BASIN) RIM=7.81
- 952 DMH RIM=8.80 INV=1.25 (CL OF STRUCTURE)
- 999 PIPE END RIM=1.9 ELEVATION ESTIMATED LOCATION PROVIDED BY WATERWAYS INC.

SANITARY SEWER SCHEDULE

- 511 SMH RIM=7.30 INV IN=1.50 (E) INV OUT=1.45 (W)
- 511 SMH RIM=8.35 INV IN=0.73 (N) INV IN=0.76 (E) INV OUT=0.65 (S)
- 513 SMH RIM=8.80 INV IN=4.79 (N) INV OUT=4.67 (W)
- 513 SMH RIM=9.29 COULD NOT OPEN
- 513 SMH RIM=9.21 COULD NOT OPEN
- 513 SMH RIM=9.48 INV IN=3.57 (N) INV IN=3.45 (E) INV OUT=3.45 (W)
- 516 SMH RIM=12.70 INV IN=5.40 (SW) INV OUT=5.42 (NW)
- 516 SMH RIM=12.07 INV IN=4.78 (SE) INV IN=4.28 (SW) INV OUT=3.95 (N)
- 516 SMH RIM=12.74 INV IN=3.69 (N) INV IN=3.75 (S) INV IN=3.77 (W) INV OUT=3.71 (E)
- 516 SMH RIM=12.30 INV IN=3.82 (N) INV IN=3.94 (W) INV OUT=3.92 (S)
- 517 SMH RIM=11.52 COULD NOT OPEN
- 520 SMH RIM=12.42 INV IN=6.61 (NW) INV OUT=5.25 (S)
- 521 SMH RIM=12.75 INV IN=4.82 (N) INV IN=5.03 (S) INV IN=4.96 (W) INV OUT=4.82 (E)
- 522 SMH RIM=16.40 INV IN=9.77 (N) INV IN=8.30 (W) INV OUT=8.08 (E)
- 523 SMH RIM=16.76 INV IN=10.11 (W) INV OUT=9.56 (E)
- 523 SMH RIM=16.86 INV IN=11.51 (N) INV OUT=10.98 (E)
- 524 SMH RIM=17.98 INV IN=8.26 (N) INV IN=8.27 (S) INV IN=8.33 (W) INV OUT=8.18 (E)
- 525 SMH RIM=17.07 INV IN=9.46 (W) INV OUT=9.44 (E)
- 916 SMH RIM=13.42 INV IN=7.71 (SE) INV OUT=7.78 (NE)
- 922 SMH RIM=9.92 INV IN=2.16 (E) INV IN=2.22 (S) INV OUT=2.13 (W)
- 923 SMH RIM=9.40 INV IN=3.10 (NE) INV IN=2.70 (E) INV OUT=2.65 (W)
- 923 SMH RIM=9.73 COULD NOT OPEN BROKEN DUST COVER
- 923 SMH RIM=9.42 INV IN=1.66 (NE) INV IN=1.53 (E) INV OUT=1.56 (S)
- 924 SMH RIM=9.16 INV IN=1.21 (NE) INV IN=0.38 (E) INV OUT=0.45 (W)
- 927 SMH RIM=9.60 INV IN=-4.91 (E) INV IN=-5.05 (W) INV OUT=-5.04 (S)
- 927 SMH RIM=9.79 INV IN=-5.96 (N) INV OUT=-6.09 (SE)
- 928 SMH RIM=8.66 INV IN=-0.45 (N) INV IN=-4.49 (DROP) INV IN=1.20 (W) INV IN=-4.56 (DROP) INV OUT=-4.58 (E)
- 928 SMH RIM=8.66 INV IN=1.59 (S) INV IN=1.55 (W) INV OUT=1.57 (E)
- 928 SMH RIM=9.13 INV IN=3.50 (S) INV IN=3.58 (W) INV OUT=3.13 (N)
- 928 SMH RIM=9.07 INV IN=2.39 (S) INV OUT=2.28 (N)
- 929 SMH RIM=9.18 INV IN=2.26 (S) INV IN=2.37 (W) INV OUT=2.26 (E)
- 929 SMH RIM=8.77 INV IN=2.68 (SW) INV OUT=2.77 (N)
- 929 SMH RIM=9.74 INV IN=4.08 (NW) INV OUT=4.02 (E)
- 932 SMH RIM=10.16 INV OUT=4.61 (SE)
- 943 SMH RIM=9.66 INV IN=1.88 (N) INV IN=1.92 (W) INV OUT=1.66 (E)
- 942 SMH RIM=10.12 INV IN=-2.08 (E) INV IN=-2.51 (W) INV OUT=-2.57 (N)
- 943 SMH RIM=9.33 INV IN=-1.39 (E) INV OUT=-1.43 (W)
- 943 SMH RIM=8.35 UNABLE TO OPEN
- 945 SMH RIM=10.40 INV IN=-2.33 (NE) INV IN=-2.72 (S) INV OUT=-2.63 (W)
- 951 SMH RIM=8.70 INV OUT=1.78 (W)
- 952 SMH RIM=8.92 INV OUT=2.12 (S)

WATER SCHEDULE

- 529 WMH RIM=18.12

SURVEYOR'S NOTES

1. THE MERIDIAN SOURCE OF THIS PLAT IS BASED ON THE VIRGINIA STATE PLANE COORDINATE SYSTEM, SOUTH ZONE, NAD 1983/1993 (HARN). COORDINATE VALUES ARE EXPRESSED IN U.S. SURVEY FEET.
2. CITY OF VIRGINIA BEACH CONTROL MONUMENTS UTILIZED FOR THIS PROJECT: 2417-1 AND 134-0085.
3. FIELD SURVEY PERFORMED BY PENNONI ASSOCIATES, INC. DURING APRIL AND MAY 2018.
4. FLOOD INFORMATION: THE PROPERTY SHOWN HEREON FALLS WITHIN FLOOD ZONE "X" (AREAS DETERMINED TO BE OUTSIDE THE 0.2% ANNUAL CHANCE FLOODPLAIN), ACCORDING TO F.E.M.A.'S FLOOD INSURANCE RATE MAP (F.I.R.M.) FOR THE CITY OF VIRGINIA BEACH, VIRGINIA, COMMUNITY PANEL NUMBER 515531 0128 G, MAP REVISED: 01/16/2015 & NUMBER 515531 0126 G, MAP REVISED: 01/16/2015.
5. THE PROPERTY SHOWN HEREON IS ZONED "OR" (OCEAN RESORT) BY THE CITY OF VIRGINIA BEACH, VIRGINIA.
   - 5.1. ON MARCH 17, 2015 CITY COUNCIL CREATED A SPECIAL EXECPTION FOR ALTERNATIVE COMPLIANCE TO THE OCEANFRONT RESORT (OR) DISTRICT FORM-BASED CODE REGARDING BUILDING PLACEMENT REQUIREMENTS, MAXIMUM BUILDING HEIGHT AND MAJOR VENUE SIGN STANDARDS.
6. ALL OR A PORTION OF THIS SUBDIVISION IS LOCATED IN THE CHESAPEAKE BAY PRESERVATION AREA (CBPA) AND IS SUBJECT TO THE PROVISIONS OF THE CHESAPEAKE BAY PRESERVATION AREA ORDINANCE.
7. UTILITY DESIGNATED "BY PLAN" ARE REFERENCED BY RECORD DRAWINGS FOR THE VIRGINIA BEACH CONVENTION CENTER, PREPARED BY SOM SKIDMORE,OWINGS & MERRILL LLP AND CONSULTANT ENGINEERS CLARK NEXSEN, DATED 10/8/2007
8. TEMPORARY BENCHMARK BM-1 ELEVATION 12.17'. TEMPORARY BENCHMARK BM-2 ELEVATION 9.16' CHISELED SQUARE IN TOP OF CONCRETE. TEMPORARY BENCHMARK BM-3 ELEVATION 17.52' CHISELED SQUARE IN TOP OF CONCRETE.

UTILITY NOTES:

THE SUBSURFACE UTILITIES SHOWN ON THE MAP OF SURVEY WERE IDENTIFIED USING THE INDUSTRY STANDARD DETECTION METHODOLOGIES IN STRICT ACCORDANCE WITH THE AMERICAN SOCIETY OF CIVIL ENGINEERS (ASCE) STANDARD GUIDELINE FOR THE COLLECTION AND DEPICTION OF EXISTING SUBSURFACE UTILITY DATA.

QUALITY LEVELS AND DEFINITIONS PER CI/ASCE STANDARD NO. 38-02:

QUALITY LEVEL "D" (D.A.T.U.R.) - DEPICTED ACCORDING TO UTILITY RECORD INFORMATION AND IN-FIELD VISUAL INSPECTION. NO ELECTRONIC DESIGNATING INFORMATION WAS OBTAINED.

QUALITY LEVEL "C" - EXISTING UTILITY STRUCTURES HAVE BEEN FIELD LOCATED AND SURVEYED TO ASSIST IN THE DEPICTING OF THE UTILITIES SHOWN ON THE RECORDS. NO ELECTRONIC DESIGNATING INFORMATION WAS OBTAINED.

QUALITY LEVEL "B" - INFORMATION WAS OBTAINED THROUGH THE APPLICATION OF APPROPRIATE SURFACE GEOPHYSICAL METHODS TO DETERMINE THE EXISTENCE AND APPROXIMATE HORIZONTAL POSITION OF THE SUBSURFACE UTILITIES.

THERE IS A 6" GAS LINE ON THE NORTHERN SIDE OF 19TH STREET AND A 12" GAS LINE ON VIRGINIA BEACH BLVD, NONE OF WHICH APPEAR TO SERVICE THE SITE AREA.

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SEALS

SUBMITTAL

05/18/18

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REVISIONS

KEY PLAN

SHEET

EXISTING UTILITY STRUCTURE SCHEDULE

C-003

SHEET - OF XX -

DESIGN RMS
DRAWN TAW
REVIEW -

CN 7142

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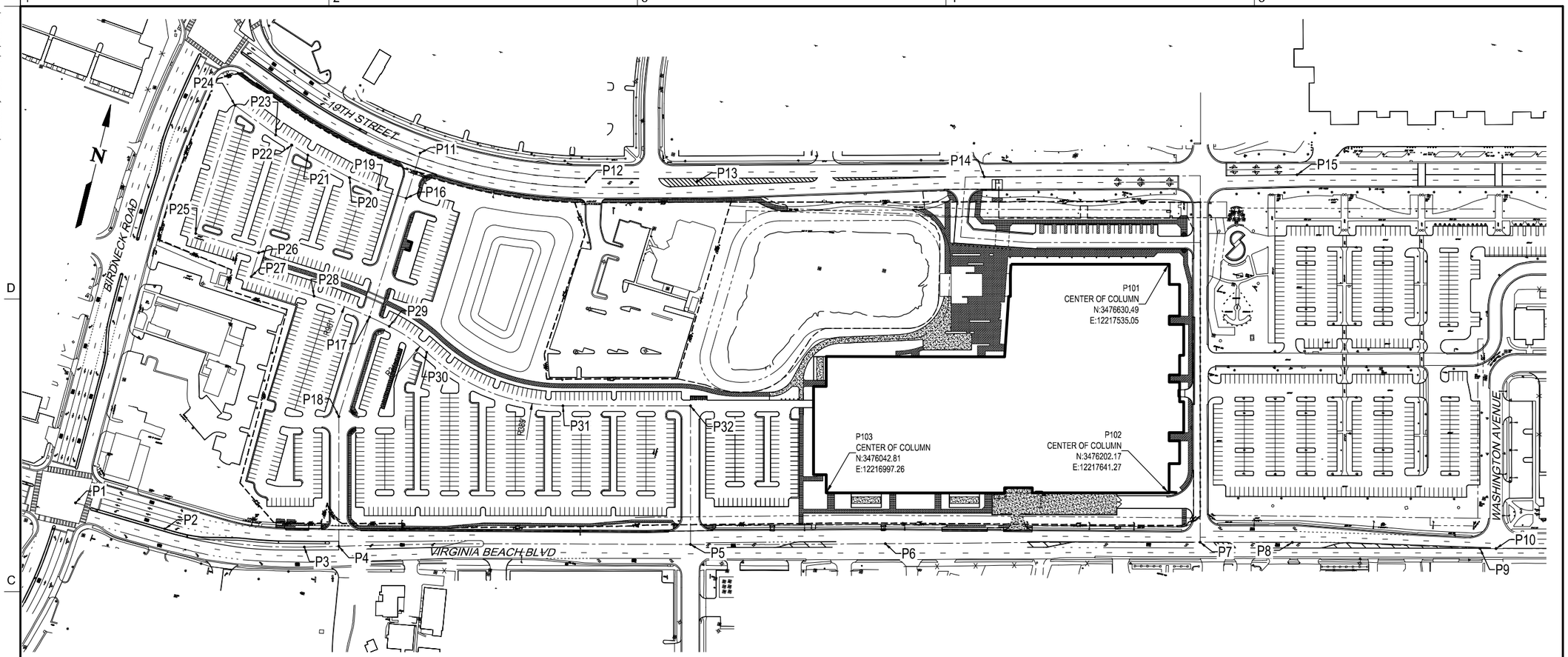

POINT TABLE		
POINT #	NORTHING	EASTING
1	3475669.84	12215584.30
2	3475662.60	12215765.18
3	3475693.54	12216036.70
4	3475711.25	12216101.49
5	3475879.58	12216764.35
6	3475972.29	12217131.82
7	3476122.61	12217725.47
8	3476165.47	12217899.42
9	3476242.03	12218256.72
10	3476249.43	12218286.90
11	3476490.97	12216070.72
12	3476514.24	12216397.17
13	3476567.12	12216606.74
14	3476710.70	12217146.69
15	3476861.20	12217736.23
16	3476399.17	12216065.58
17	3476158.18	12216052.09
18	3475955.88	12216040.77
19	3476402.41	12216008.67
20	3476411.42	12215949.16

POINT TABLE		
POINT #	NORTHING	EASTING
21	3476434.39	12215859.77
22	3476445.89	12215824.70
23	3476457.40	12215789.62
24	3476493.95	12215699.30
25	3476234.07	12215684.76
26	3476226.92	12215812.56
27	3476178.65	12215809.86
28	3476171.50	12215937.66
29	3476149.80	12216093.85
30	3476118.39	12216176.57
31	3476081.14	12216458.63
32	3476140.89	12216699.55
101	3476630.49	12217535.05
102	3476202.17	12217641.27
103	3476042.81	12216997.26

WORKPOINT POINT TABLE			
POINT #	DESCRIPTION	NORTHING	EASTING
101	CENTER OF COLUMN	3476630.49	12217535.05
102	CENTER OF COLUMN	3476202.17	12217641.27
103	CENTER OF COLUMN	3476042.81	12216997.26

GRAPHIC SCALE(S)

1"=100' 0 100' 200' 400'

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\\Projects\7000\7142-HR Regional Sports Pavilion\CAD\Sheets\C\C-004.dwg Fri, 18 May 2018 - 3:54pm bsilver

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35MEB General Contractors

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SEALS

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KEY PLAN

SHEET

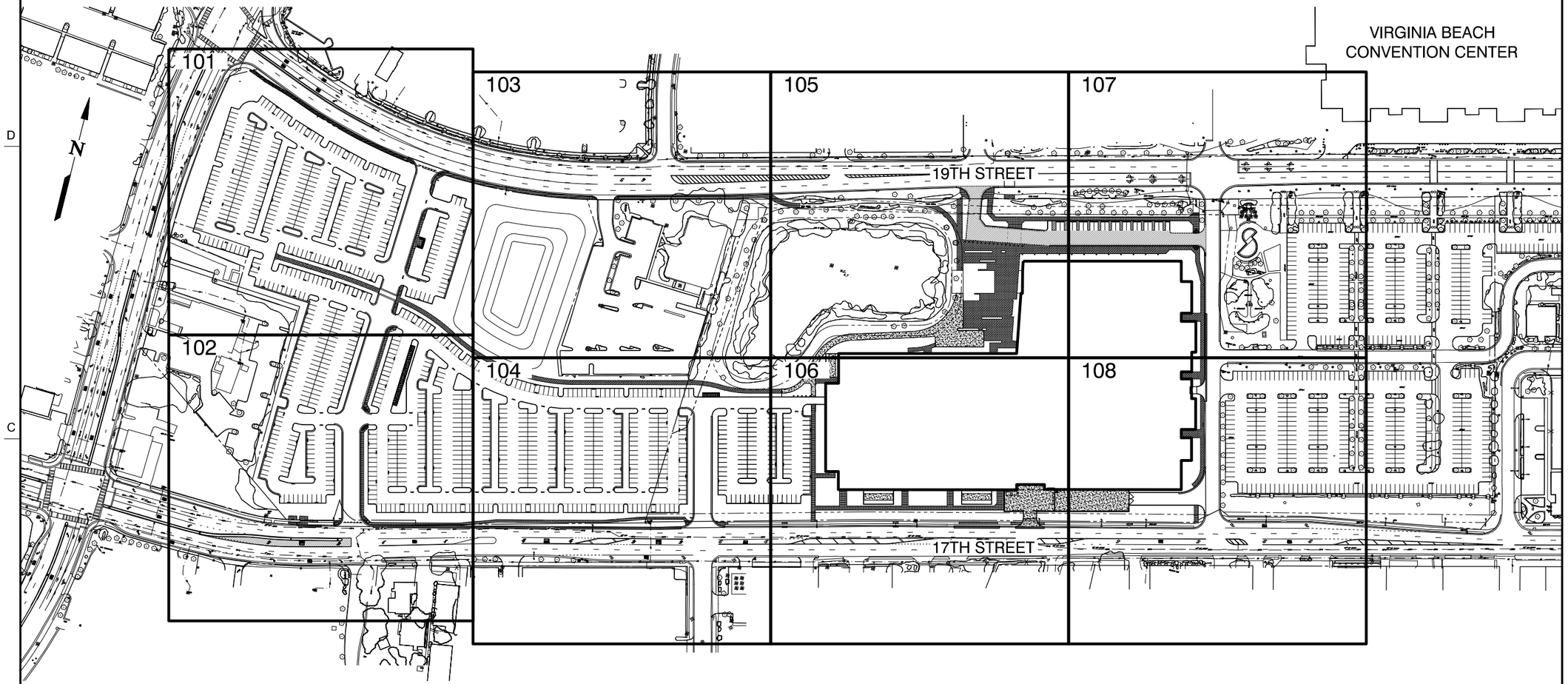
LAYOUT CONTROL

C-004

SHEET - OF XX

DESIGN: RMS
DRAWN: TAW
REVIEW: -

CN 7142



GRAPHIC SCALE(S)

1"=100' 0 100' 200' 400'

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REVISIONS

KEY PLAN

SHEET

KEY PLAN

C-005

SHEET - OF XX

DESIGN:
DRAWN:
REVIEW:

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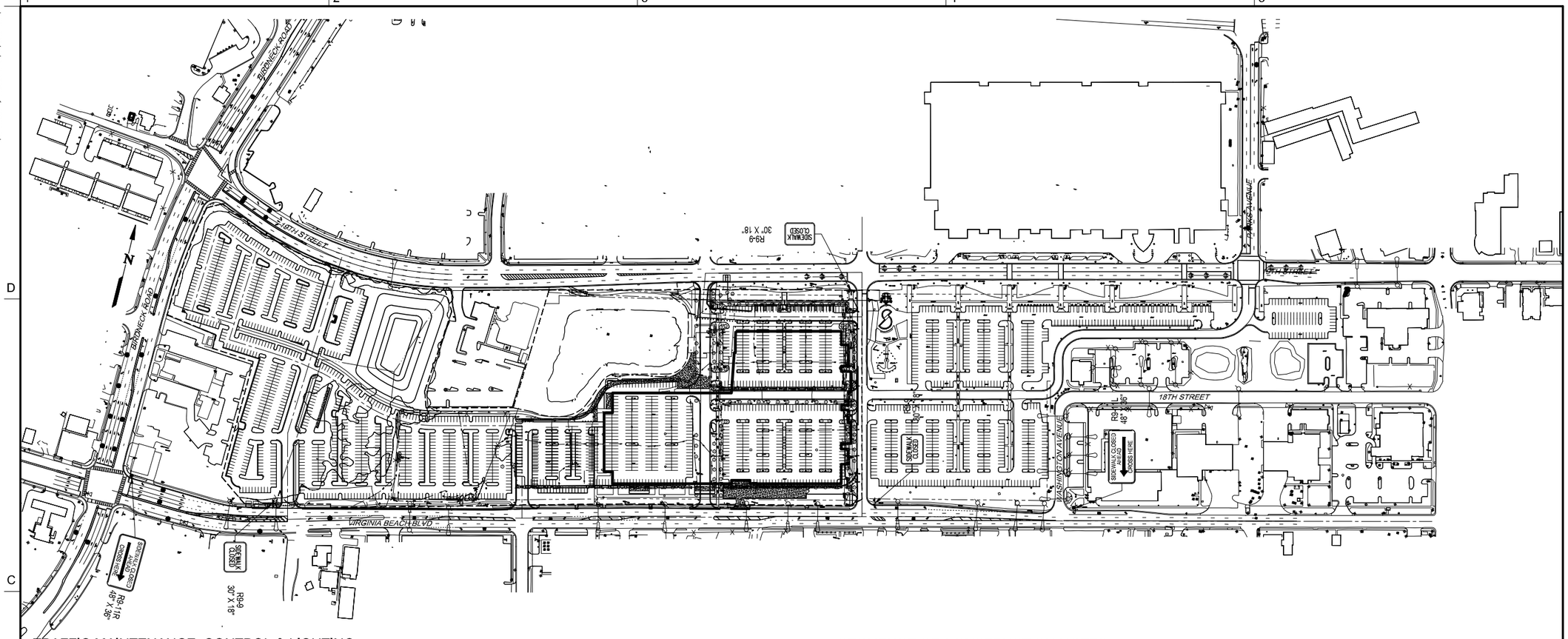

TRAFFIC MAINTENANCE, CONTROL & LIGHTING

1. TYPE III BARRICADES WITH PUBLIC NOTICE OF STREET EXTENSION SIGNS ARE REQUIRED AT THE TERMINATION OF STREETS, AS DIRECTED BY PUBLIC WORKS/TRAFFIC ENGINEERING.

2. WHERE PARKING AREAS WILL BE ILLUMINATED, ALL SOURCES OF ILLUMINATION MUST BE SHIELDED TO PREVENT ANY DIRECT REFLECTION TOWARDS RESIDENTIAL AREAS AND CITY STREETS.

3. ALL STRIPING IN THE PUBLIC RIGHT-OF-WAY MUST BE OF THERMOPLASTIC MATERIAL FOR LANE LINES, STOP BARS, CROSSWALKS, ETC. ALL LEGENDS AND ARROWS MUST BE OF VDOT APPROVED TYPE B, CLASS VI PREFORMED PAVEMENT MESSAGE MARKING MATERIAL.

4. THE CITY OF VIRGINIA BEACH, TRAFFIC ENGINEERING BUREAU IS RESPONSIBLE FOR REVIEWING AND APPROVING ALL TRAFFIC MAINTENANCE AND CONTROL PLANS AND REVIEWING THE SEQUENCE OF CONSTRUCTION PLANS ESSENTIAL TO COMPLETE THIS PROJECT.

5. ALL TRAFFIC MAINTENANCE AND CONTROL DEVICES, METHODS AND APPLICATIONS WILL CONFORM TO THE FOLLOWING PUBLICATIONS INCLUDING ALL CURRENT EDITIONS AND REVISIONS:
   a. MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES FOR STREET AND HIGHWAYS ISSUED BY THE U.S. DEPARTMENT OF TRANSPORTATION, FEDERAL HIGHWAY ADMINISTRATION. (MUTCD)
   b. VIRGINIA DEPARTMENT OF TRANSPORTATION ROAD AND BRIDGE STANDARDS VOL. II.
   c. VIRGINIA DEPARTMENT OF TRANSPORTATION ROAD AND BRIDGE SPECIFICATIONS.
   d. VIRGINIA DEPARTMENT OF TRANSPORTATION WORK AREA PROTECTION MANUAL.
   e. CITY OF VIRGINIA BEACH, PUBLIC WORKS SPECIFICATIONS AND STANDARDS MANUAL.

6. WORK HOURS IN ROADWAY OPEN TO TRAFFIC AND/OR PEDESTRIAN AREA:
   a. MONDAY THROUGH SATURDAY: WORK WILL BE COMPLETED BETWEEN THE HOURS OF 9:00 A.M. AND 4:00 P.M. ONLY.
   b. SUNDAYS AND HOLIDAYS: NO WORK MAY BE COMPLETED IN THE ROADWAY OR PEDESTRIAN AREAS UNLESS OTHERWISE NOTED OR APPROVED IN WRITING BY THE OWNER.
   c. ADDITIONAL RESTRICTIONS MAY APPLY BASED ON TRAFFIC CONDITIONS.
   EXTENDED WORK HOURS AND WORKDAYS MAY BE REQUESTED WITH A WRITTEN REQUEST TO THE OWNER. THIS REQUEST MUST BE SUBMITTED AT LEAST FIVE (5) WORKING DAYS PRIOR TO THE EXTENDED WORK PERIODS. (PLEASE NOTE THAT IF WORK IS TO BE CONDUCTED IN THE RESORT AREA, CERTAIN RESTRICTIONS APPLY FROM APRIL TO OCTOBER. PLEASE CONTACT TRAFFIC ENGINEERING FOR THESE RESTRICTIONS).

7. TRAFFIC CONTROL PLANS:
   TRAFFIC CONTROL PLANS ARE INCLUDED IN THE CONSTRUCTION PLANS FOR THE REFERENCED PROJECT; HOWEVER, FIELD CONDITIONS MAY REQUIRE MODIFICATIONS. IF THE CONTRACTOR FEELS THAT THE TRAFFIC CONTROL PLAN(S) INCLUDED WITH THIS PROJECT DOES NOT SUIT CONDITIONS AT A WORK SITE, THEN THE CONTRACTOR SHALL SUBMIT TO THE OWNER A REVISED PLAN TO MAINTAIN TRAFFIC. THE REVISED PLAN SHALL INCLUDE SITE-SPECIFIC TRAFFIC DETAILS AND SHALL IDENTIFY THE SEQUENCE OF CONSTRUCTION. THE CONTRACTOR WILL SUBMIT THE REVISED TRAFFIC CONTROL PLAN(S) A MINIMUM 10 CALENDAR DAYS PRIOR TO THE START OF WORK. THE CONTRACTOR WILL NOT DISRUPT TRAFFIC PATTERNS UNTIL THE OWNER HAS APPROVED THE REVISED TRAFFIC CONTROL PLAN. THE OWNER RESERVES THE RIGHT TO MODIFY ANY TRAFFIC CONTROL PLAN(S) AS NECESSARY IN THE INTEREST OF PUBLIC SAFETY OR TRAFFIC EFFICIENCY. PRIOR TO BEGINNING WORK, IT IS THE CONTRACTOR'S RESPONSIBILITY TO INSURE THAT ALL REQUIREMENTS HAVE BEEN MET AND THAT ALL TRAFFIC CONTROL DEVICES HAVE BEEN INSTALLED ACCORDING TO THE APPROVED TRAFFIC CONTROL PLAN(S).

8. THE CONTRACTOR SHALL CHECK ALL TRAFFIC MAINTENANCE AND CONTROL DEVICES AND WORK ZONES BEFORE, DURING, AND AFTER EACH WORKDAY TO ENSURE PROPER OPERATION. ON WEEKENDS, HOLIDAYS, OR ANY NON-WORKING DAY, THE CONTRACTOR SHALL BE RESPONSIBLE FOR CHECKING THE TRAFFIC MAINTENANCE AND CONTROL DEVICES DAILY FOR PROPER OPERATION.

9. TWO-WAY TRAFFIC WILL BE MAINTAINED AT ALL TIMES DURING CONSTRUCTION UNLESS TRAFFIC ENGINEERING HAS APPROVED ANOTHER ALTERNATIVE FOR TRAFFIC CONTROL, SUCH AS A LANE CLOSURE OR A TEMPORARY STREET CLOSURE. RESIDENT AND EMERGENCY ACCESS WILL BE MAINTAINED AT ALL TIMES DURING CONSTRUCTION REGARDLESS IF A STREET CLOSURE IS IN EFFECT OR NOT.

10. IF THERE IS AN APPROVAL FROM TRAFFIC ENGINEERING FOR A LANE CLOSURE OR A TEMPORARY STREET CLOSURE, ALL LANES OF TRAFFIC WILL BE REOPENED TO TRAFFIC AT THE CONCLUSION OF EACH CONSTRUCTION DAY, UNLESS A 24-HOUR TEMPORARY STREET CLOSURE IS APPROVED AND IN EFFECT.

11. IN ALL CASES IN WHICH EXISTING OR ESTABLISHED TRAFFIC PATTERNS WILL BE DISRUPTED, THE CONTRACTOR WILL NOTIFY ALL AFFECTED RESIDENTS AND/OR BUSINESSES A MINIMUM OF 48 HOURS IN ADVANCE OF THE ANTICIPATED DISRUPTION BY DISTRIBUTING DOOR-TO-DOOR NOTICES. A COPY OF THE NOTICE SHALL BE FORWARDED TO TRAFFIC ENGINEERING FOR REVIEW AND APPROVAL PRIOR TO BEGINNING WORK.

12. AT NIGHT OR DURING NON-CONSTRUCTION HOURS, ALL EXCAVATED AREAS ARE TO BE BACKFILLED OR SECURED AND PROTECTED BY USING APPROVED SAFETY DEVICES OR MATERIALS.

13. IN ACCORDANCE WITH THE VIRGINIA OCCUPATIONAL SAFETY AND HEALTH STANDARDS (CONSTRUCTION INDUSTRIAL) 29 CFR, PART 1929, 1989 EDITION, ALL CONTRACTOR EMPLOYEES AND SUBCONTRACTOR(S) EMPLOYEES EXPOSED TO VEHICULAR TRAFFIC WILL BE PROVIDED WITH AND REQUIRED TO WEAR WARNING VESTS MARKED WITH OR MADE OF REFLECTORIZED OR HIGH VISIBILITY MATERIALS.

14. FOR CONSTRUCTION OPERATIONS LASTING MORE THAN 14 DAYS, THE CONTRACTOR WILL INSTALL "ROAD WORK AHEAD" (W21-4, 48" X 48") AND "END ROAD WORK" (G20-2A, 48" X 24") WARNING SIGNS ON 6" X 6" WOODEN GROUND MOUNTED POSTS. THESE SIGNS MUST BE INSTALLED PRIOR TO BEGINNING CONSTRUCTION WORK AND WILL BE REMOVED AFTER COMPLETION OF ALL CONSTRUCTION ACTIVITIES.

15. FOR ALL APPROVED CONSTRUCTION/TRUCK ENTRANCES, THE CONTRACTOR WILL INSTALL "TRUCKS ENTERING HIGHWAY" (48" X 48" ORANGE AND BLACK) WARNING SIGNS ON 6" X 6" WOODEN GROUND MOUNTED POSTS. THESE SIGNS WILL BE INSTALLED 500 FEET IN ADVANCE OF ALL APPROVED CONSTRUCTION ACCESS/ENTRANCE POINTS AND BE INSTALLED A MINIMUM 72" ABOVE THE FINISHED GRADE FROM THE BOTTOM OF THE SIGN.

16. ANY TRAFFIC CONTROL DEVICES INCLUDING BUT NOT LIMITED TO PAVEMENT MARKINGS, SIGNS, AND TRAFFIC CONTROL SIGNAL EQUIPMENT DAMAGED OR DESTROYED BY THE CONTRACTOR MUST BE REPLACED AT THE CONTRACTOR'S EXPENSE UNLESS THEIR REMOVAL OR DESTRUCTION IS CALLED FOR BY THE PLANS.

17. FOR ANY FURTHER INFORMATION ON TRAFFIC MAINTENANCE AND CONTROL REQUIREMENTS, PLEASE CONTACT THE TRAFFIC ENGINEERING BUREAU, 2405 COURTHOUSE DRIVE, VIRGINIA BEACH, VIRGINIA 23456-9031, (757) 385-4131 FAX: (757) 385-4913.

SEQUENCE OF CONSTRUCTION NOTES

1. WORK ZONES FOR CONSTRUCTION ACTIVITIES FOR REMOVING AND INSTALLING CURB AND GUTTER AND SIDEWALKS ALONG CITY OF VIRGINIA BEACH ROADWAYS SHALL USE SHORT TERM OPERATIONS AS OUTLINED IN NOTE 7 OF THE TRAFFIC MAINTENANCE, CONTROL & LIGHTING NOTES UTILIZING FIGURES TTC-35.0, TTC-63.1, TTC-5.1 AND TTC-16.1 OF THE VIRGINIA WORK AREA PROTECTION MANUAL

2. WORK ZONES IN THE CENTER LANES OF VIRGINIA BEACH BLVD. FOR INSTALLATION OF THE MEDIAN AND MODIFICATION OF THE EXISTING PAVEMENT MARKING SHALL USE SHORT TERM OPERATIONS AS OUTLINED IN NOTE 7 OF THE TRAFFIC MAINTENANCE, CONTROL & LIGHTING NOTES UTILIZING FIGURES TTC-42.1 OF THE VIRGINIA WORK AREA PROTECTION MANUAL.

GRAPHIC SCALE(S)

1"=150' 0 150' 300' 600'

City of Virginia Beach
35MEB General Contractors

VIRGINIA BEACH SPORTS CENTER

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SEALS

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05/18/18

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REVISIONS

KEY PLAN

SHEET

MAINTENANCE OF TRAFFIC PLAN AND NOTES

C-006

SHEET - OF XX

DESIGN: RMS
DRAWN: TAW
REVIEW: -

CN 7142

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Typical Traffic Control

Sidewalk Closure and Bypass Sidewalk Operation

(Figure TTC-35.0)

NOTES

Standard:

1. **When crosswalks or other pedestrian facilites are closed or relocated, temporary facilities shall be detectable and shall include accessibility features consistent with the features present in the existing pedestrian facility.**

Guidance:

2. *Where high speeds are anticipated, a temporary traffic barrier and, if necessary, a crash cushion should be used to separate the temporary sidewalks from vehicular traffic.*
3. *Audible information devices should be considered where midblock closings and changed crosswalk areas cause inadequate communication to be provided to pedestrians who have visual disabilities.*
4. *Temporary markings should be considered for operations exceeding three days in duration.*

Option:

5. Only the TTC devices related to pedestrians are shown. Other devices, such as lane closure signing or ROAD NARROWS (W5-1) signs, may be used to control vehicular traffic.
6. For nighttime closures, Type A Flashing warning lights may be used on barricades that support signs and close sidewalks.
7. Signs, such as KEEP RIGHT (R4-V7R) and KEEP LEFT (R4-V7L), may be placed along a temporary sidewalk to guide or direct pedestrians.

Standard:

8. **All sidewalk closures shall be closed with Type 3 Barricades.**

Typical Traffic Control

Logging Operations

(Figure TTC-63.1)

NOTES

Standard:

1. **Prior to the installation of the entrance and placement of any traffic control devices, the appropriate state/local agencies shall be notified.**

Guidance:

2. *Care should be exercised when establishing the location of the permitted temporary entrance to insure maximum possible sight distance in advance of the entrance, and should be based on the posted speed limit and at least equal to or greater than the values in the Intersection Sight Distance (ISD) table.*

Intersection Sight Distance (ISD)

Posted Speed Limit (mph)	20	25	30	35	40	45	50	55	60	65	70
Minimum ISD	195	240	290	335	385	430	480	530	575	625	670

3. *Sign spacing distance should be 500'-800' where the posted speed limit is greater than 45 mph, and 250'-500' where the posted speed limit is 45 mph or less.*

Standard:

4. **TRUCKS ENTERING HIGHWAY (W11-V4) sign shall be used to warn of logging trucks entering roadways. LOG TRUCKS ENTERING HIGHWAY sign is not allowed for use.[1]**
5. **On divided highways having a median wider than 8', right and left sign assemblies shall be used. Median barrier is considered to be part of the shoulder and its measurement shall be used to determine the total width of the shoulder.**

Guidance:

6. *For operations that disrupt (stop) traffic on the travelway, Typical Traffic Control Figure TTC-25, Lane Closure on a Two-Lane Roadway Using Flaggers, or Typical Traffic Control Figure TTC-16 or 17, Outside or Inside Lane Closure Operation on Four Lane Roadway, should be used.*

Standard:

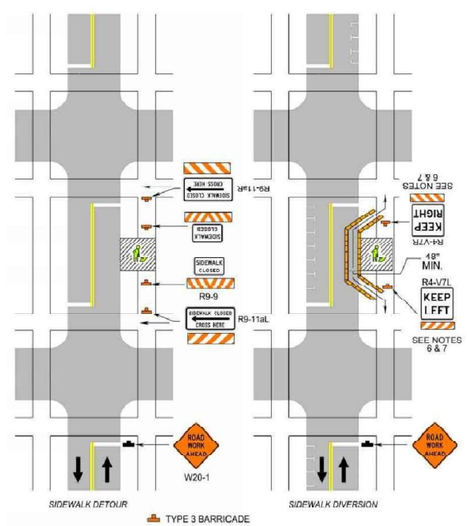
7. **Flaggers shall be state certified and have their certification card in their possession when performing flagging duties (see Section 6E.01, Qualifications for Flaggers).**
8. **The organization receiving the entrance permit shall be responsible for the removal of all debris (gravel, mud, dust, hauled materials, etc.), obstructions and irregularities caused by the operation in accordance with Section 105 of the Road and Bridge Specifications.**

Guidance:

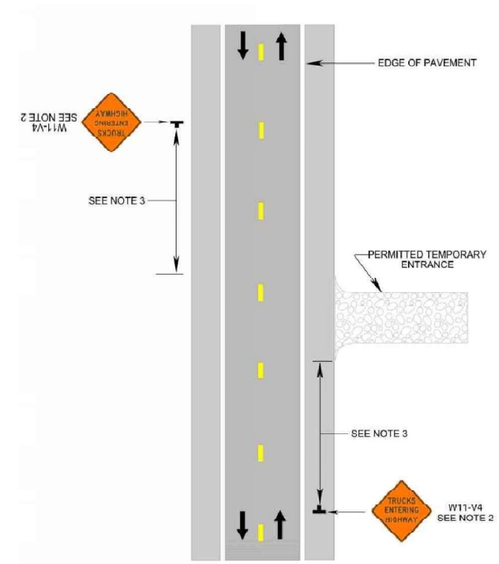
9. *For the removal of debris on the roadway, Typical Traffic Control Figure TTC-14, Moving/Mobile Operation on a Two-Lane Roadway, or Typical Traffic Control Figure TTC-13, Moving/Mobile Operation on a Multi-Lane Roadway, should be used.*

1: Revision 1 – 4/1/2015

Sidewalk Closure and Bypass Sidewalk Operation
(Figure TTC-35.0)



Logging Operations
(Figure TTC-63.1)



City of Virginia Beach
35 MEB General Contractors
VIRGINIA BEACH SPORTS CENTER

1045 19th Street
Virginia Beach, Virginia

DESIGNER
CLARKNEXSEN
4525 Main Street, Suite 1400
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757.455.5800

CONSULTANT

SEALS

SUBMITTAL
05/18/18
PROGRESS PRINT

REVISIONS

KEY PLAN

SHEET
MAINTENANCE OF TRAFFIC NOTES AND DETAILS

C-007

SHEET - OF XX -

DESIGN: RMS
DRAWN: TAW
REVIEW: -

CN 7142

Spell checked by TWEAVER on 05/14/2018 12:20pm

h:\Projects\7000\7142-HR Regional Sports Pavilion\CAD\Sheets\C\C-007.dwg Fri, 18 May 2018 - 3:55pm bsilver

Typical Traffic Control

Shoulder Operation with Minor Encroachment

(Figure TTC-5.1)

NOTES

Standard

1. **For required sign assemblies for multi-lane roadways see Note 1, TTC-4.**

Guidance

2. *Sign spacing should be 1300'-1500' for Limited Access highways. For all other roadways, the sign spacing should be 500'-800' where the posted speed limit is greater than 45 mph, and 350'-500' where the posted speed limit is 45 mph or less.*
3. *When work takes up part of a lane on a high volume roadway; vehicular traffic volumes, vehicle mix, speed and capacity should be analyzed to determine whether the affected lane should be closed. Unless the lane encroachment analysis permits a remaining lane width of 10 feet, the lane should be closed. If the closure operation is on a Limited Access highway, the minimum lane width is 11 feet.*

Option:

4. The ROAD WORK AHEAD (W20-1) sign on an intersecting roadway may be omited where drivers emerging from that roadway will encounter another advance warning sign prior to this activity area.

Standard:

5. **A shadow vehicle with either an arrow board operating in the caution mode, or at least one high-intensity amber rotating, flashing, or oscillating light shall be parked 80' - 120' in advance of the first work crew.**
6. **Vehicle hazard warning signals shall not be used instead of the vehicle's high-intensity amber rotating, flashing, or oscillating lights. Vehicle hazard warning signals can be used to supplement high-intensity amber rotating, flashing, or oscillating lights.**
7. **Taper length (L) and channelizing device spacing shall be at the following:**

Taper Length (L)				
Speed Limit (mph)	Lane Width (Feet)			
	9	10	11	12
25	95	105	115	125
30	135	150	165	180
35	185	205	225	245
40	240	270	295	320
45	405	450	495	540
50	450	500	550	600
55	495	550	605	660
60	540	600	660	720
65	585	650	715	780
70	630	700	770	840
Minimum taper lengths for Limited Access highways shall be 1000 feet.				
Shoulder Taper = ⅓ L Minimum				

Channelizing Device Spacing		
Location	Speed Limit (mph)	
	0 - 35	36 +
Transition Spacing	20'	40'
Travelway Spacing	40'	80'
Construction Access*	80'	120'
* Spacing may be increased to this distance, but shall not exceed one access per ¼ mile.		

On roadways with paved shoulders having a width of 8 feet or more, channelizing devices shall be used to close the shoulder in advance of the merging taper to direct vehicular traffic to remain within the traveled way.

8. **The buffer space length shall be as shown in Table 6H-3 on Page 6H-5 for the posted speed limit.**
9. **A truck-mounted attenuator (TMA) shall be used on Limited Access highways and multi-lane roadways with posted speed limit equal to or greater than 45 mph.**
10. **When a side road intersects the highway within the temporary traffic control zone, additional traffic control devices shall be placed as needed.**

1: Revision 1 – 4/1/2015

Typical Traffic Control

Outside Lane Closure Operation on a Four-Lane Roadway

(Figure TTC-16.1)

NOTES

Standard:

1. **On divided highways having a median wider than 8', right and left sign assemblies shall be required.**

Guidance:

2. *Sign spacing should be 1300'-1500' for Limited Access highways. For all other roadways, the sign spacing should be 500'-800' where the posted speed limit is greater than 45 mph, and 350'-500' where the posted speed limit is 45 mph or less.*
3. *Care should be exercised when establishing the limits of the work zone to insure maximum possible sight distance in advance of the transition, based on the posted speed limit and at least equal to or greater than the values in Table 6H-3. For Limited Access highways a minimum of 1000' is desired.*
4. *All vehicles, equipment, workers, and their activities should be restricted to one side of the pavement.*

Standard:

5. **Taper Length (L) and Channelizing Device Spacing shall be:**

Taper Length (L)				
Speed Limit (mph)	Lane Width (Feet)			
	9	10	11	12
25	95	105	115	125
30	135	150	165	180
35	185	205	225	245
40	240	270	295	320
45	405	450	495	540
50	450	500	550	600
55	495	550	605	660
60	540	600	660	720
65	585	650	715	780
70	630	700	770	840
Minimum taper lengths for Limited Access highways shall be 1000 feet.				
Shoulder Taper = ⅓ L Minimum				

Channelizing Device Spacing		
Location	Speed Limit (mph)	
	0 - 35	36 +
Transition Spacing	20'	40'
Travelway Spacing	40'	80'
Construction Access*	80'	120'
* Spacing may be increased to this distance, but shall not exceed one access per ¼ mile.		

On roadways with paved shoulders having a width of 8 feet or more, channelizing devices shall be used to close the shoulder in advance of the merging taper to direct vehicular traffic to remain within the traveled way.

6. **An arrow board shall be used when a lane is closed. When more than one lane is closed, a separate arrow board shall be used for each closed lane (see Figure TTC-18).**
7. **The buffer space length shall be shown in Table 6H-3 on Page 6H-5 for the posted speed limit.**
8. **A shadow vehicle with either a Type B or C arrow board operating in the caution mode, or at least one high intensity amber rotating, flashing, or oscillating light shall be parked 80'-120' in advance of the first work crew. When the posted speed limit is 45 mph or greater, a truck-mounted attenuator shall be used.**
9. **Vehicle hazard warning signals shall not be used instead of the vehicle's high-intensity amber rotating, flashing, or oscillating lights but can be used to supplement the amber rotating, flashing, or oscillating lights.**
10. **When a side road intersects the highway within the TTC zone, additional TTC devices shall be placed as needed.**

1: Revision 1 – 4/1/2015

Typical Traffic Control

Interior Lane Closure Operation on a Multi-Lane Roadway

(Figure TTC-42.1)

NOTES

Guidance:

1. *Sign spacing distance should be 1300'-1500' for Limited Access highways, and on all other roadways 500'-800' where the posted speed limit is greater than 45 mph, and 350'-500' where the posted speed limit is 45 mph or less.*
2. *Care should be exercised when establishing the limits of the work zone to insure maximum possible sight distance in advance of the transition, based on the posted speed limit and at least equal to or greater than the values in Table 6H-3. For Limited Access highways a minimum of 1000' is desired.*

Standard:

3. **On divided highways having a median wider than 8', right and left sign assemblies shall be required.**
4. **Taper Length (L) and Channelizing Device Spacing shall be:**

Taper Length (L)				
Speed Limit (mph)	Lane Width (Feet)			
	9	10	11	12
25	95	105	115	125
30	135	150	165	180
35	185	205	225	245
40	240	270	295	320
45	405	450	495	540
50	450	500	550	600
55	495	550	605	660
60	540	600	660	720
65	585	650	715	780
70	630	700	770	840
Minimum taper lengths for Limited Access Highways shall be 1000 feet.				
Shoulder Taper = ⅓ L Minimum				

Channelizing Device Spacing		
Location	Posted Speed (mph)	
	0 - 35	36 +
Transition Spacing	20'	40'
Travelway Spacing	40'	80'
Construction Access*	80'	120'
* Spacing may be increased to this distance, but shall not exceed one access per ¼ mile.		

On roadways with paved shoulders having a width of 8 feet or more, channelizing devices shall be used to close the shoulder in advance of the merging taper to direct vehicular traffic to remain within the traveled way.

5. **The buffer space length shall be as shown in Table 6H-3 on Page 6H-5 for the posted speed limit.**
6. **A shadow vehicle with either a Type B or C arrow board operating in the caution mode, or at least one high intensity amber rotating, oscillating, or flashing light shall be parked 80'-120' in advance of the first work crew. When the posted speed limit is 45 mph or greater, a truck-mounted attenuator shall be used.**
7. **For long-term work zones existing conflicting pavement markings and markers shall be removed and temporary pavement markings and markers shall be installed per Figure TTC-60.**

Option:

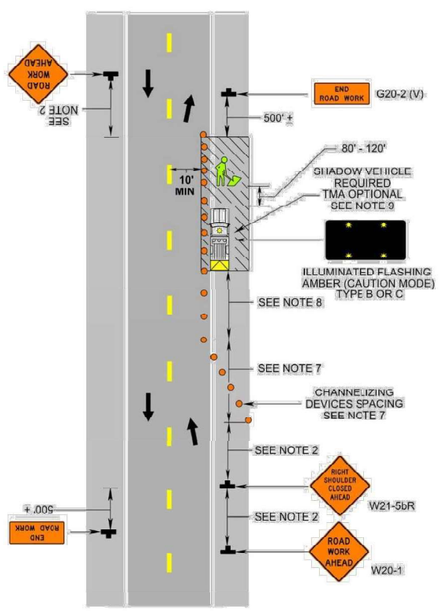
8. For short-term stationary work (less than 3 days duration), lanes may be delineated by channelizing devices or removable pavement markings instead of temporary pavement markings.

Guidance:

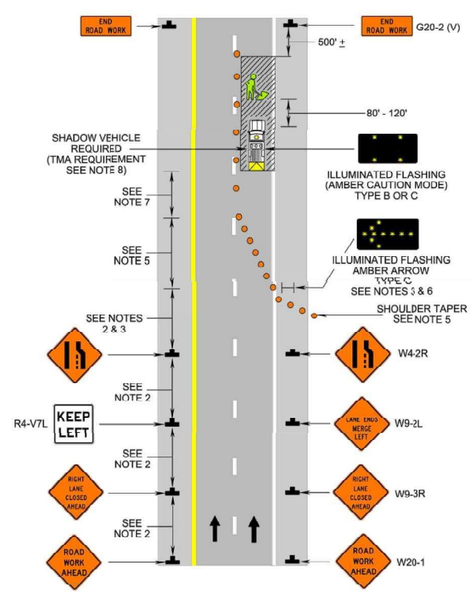
9. *When channelizing devices have the potential of leading vehicular traffic out of the intended traffic space, the channelizing devices should be extended a distance with 4 additional channelizing devices beyond the downstream end of the transition area as depicted.*
10. *For locations with a high volume of left turning movements, the graphic NO LEFT TURN (R3-2) signs should be used.*

1: Revision 1 – 4/1/2015

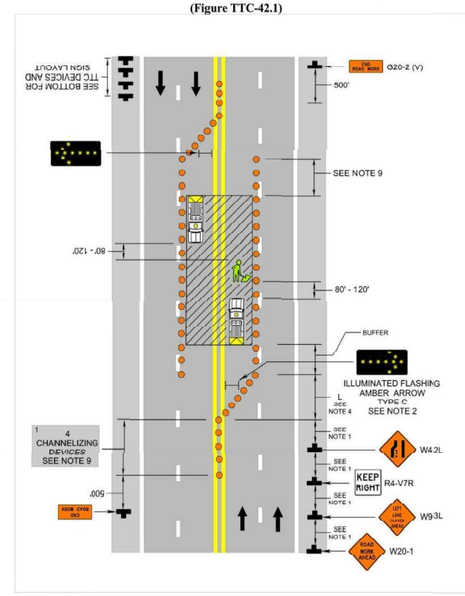
Shoulder Operation with Minor Encroachment
(Figure TTC-5.1)



Outside Lane Closure Operation on a Four-Lane Roadway
(Figure TTC-16.1)



Interior Lane Closure Operation on a Multi-Lane Roadway
(Figure TTC-42.1)



1: Revision 1 – 4/1/2015

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E:\Projects\7000\7142-HR Regional Sports Pavilion\CAD\Sheets\C\C-008.dwg Fri, 18 May 2018 - 3:55pm bsilver

City of Virginia Beach
MEB General Contractors
VIRGINIA BEACH SPORTS CENTER
1045 19th Street
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CONSULTANT

SEALS

SUBMITTAL
05/18/18
PROGRESS PRINT

REVISIONS

KEY PLAN

SHEET
MAINTENANCE OF TRAFFIC NOTES AND DETAILS

C-008

SHEET - OF XX -

DESIGN RMS
DRAWN TAW
REVIEW -

CN 7142

DEMOLITION NOTES

1. REMOVE SIGN AND POST
2. CLEAR AND GRUB
3. RELOCATE REGULATORY SIGN AND POST
4. REMOVE CONCRETE PAD
5. REMOVE STORM DRAIN PIPE
6. SAWCUT AND REMOVE CONCRETE WALK

GRAPHIC SCALE(S)

1"=25' 0 25' 50' 100'

City of Virginia Beach

MEB General Contractors

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CONSULTANT

SEALS

SUBMITTAL

05/18/18

PROGRESS PRINT

REVISIONS

KEY PLAN

	103	105	107
102	104	106	108

SHEET

DEMOLITON PLAN

CD101

SHEET - OF XX -

DESIGN RMS
DRAWN TAW
REVIEW -

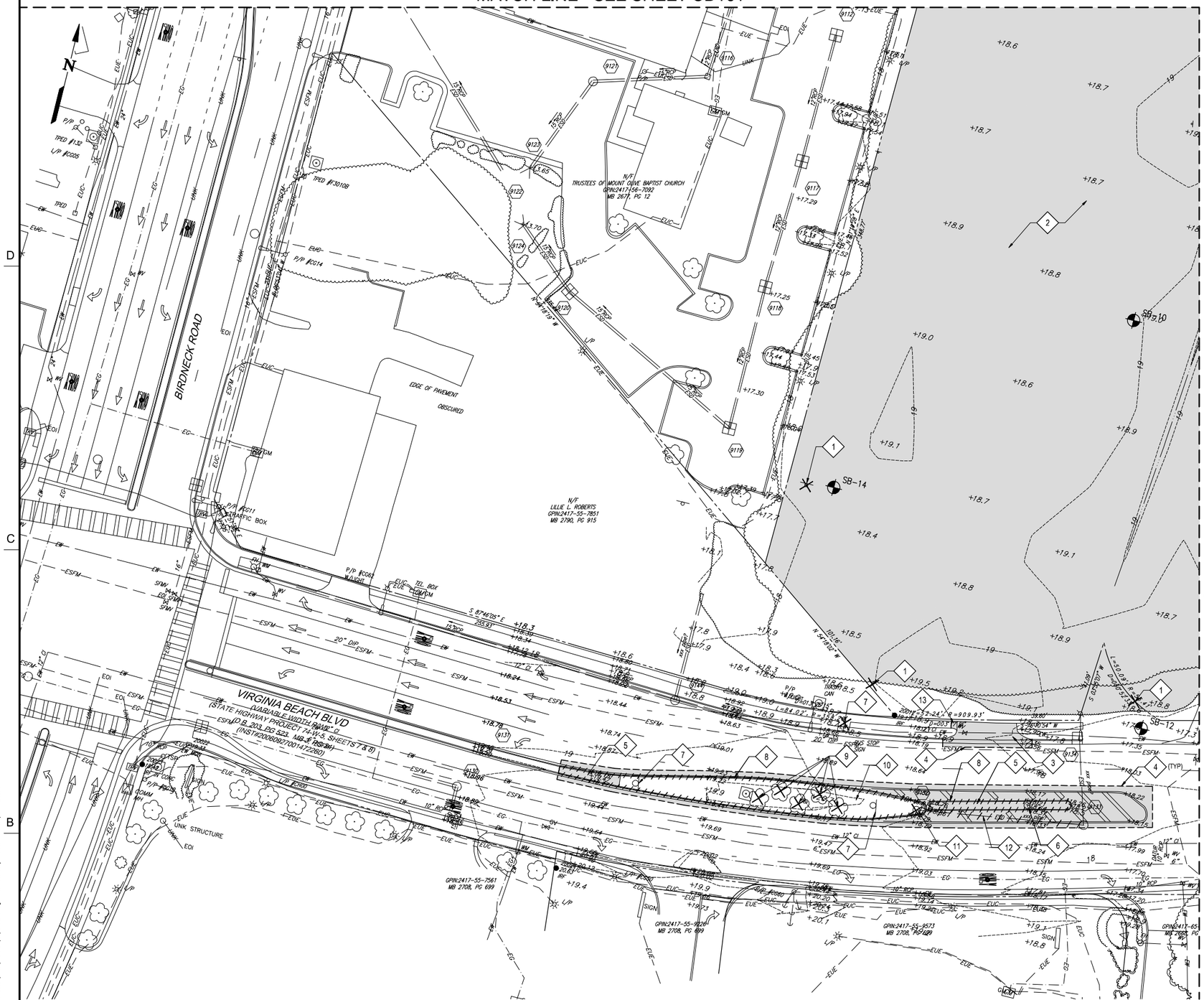
CN 7142

Spell checked by TWEAVER on 05/14/2018 12:22pm

I:\Projects\7000\7142-HR Regional Sports Pavilion\CAD\Sheets\C\CD101.dwg Fri, 18 May 2018 - 3:55pm bsilver

Spell checked by TWEAVER on 05/14/2018 12:23pm

MATCH LINE - SEE SHEET CD101



MATCH LINE - SEE SHEET CD104

DEMOLITION NOTES

1. REMOVE SIGN AND POST
2. CLEAR AND GRUB
3. REMOVE CONCRETE ENTRANCE AND GUTTER
4. SAWCUT AND REMOVE ASPHALT PAVEMENT
5. REMOVE CONCRETE MEDIAN
6. RELOCATE REGULATORY SIGN AND POST
7. RELOCATE INFORMATIONAL SIGN AND POST
8. REMOVE CURB
9. REMOVE TREE
10. REMOVE LANDSCAPING
11. REMOVE STORM DRAIN STRUCTURE
12. REMOVE STORM DRAIN LINE
13. REMOVE CONCRETE SIDEWALK TO NEAREST JOINT

GRAPHIC SCALE(S)

1"=25' 0 25' 50' 100'

City of Virginia Beach

MEB General Contractors

VIRGINIA BEACH SPORTS CENTER

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SEALS

SUBMITTAL
05/18/18
PROGRESS PRINT

REVISIONS

KEY PLAN

101	103	105	107
	104	106	108

SHEET
DEMOLITON PLAN

CD102

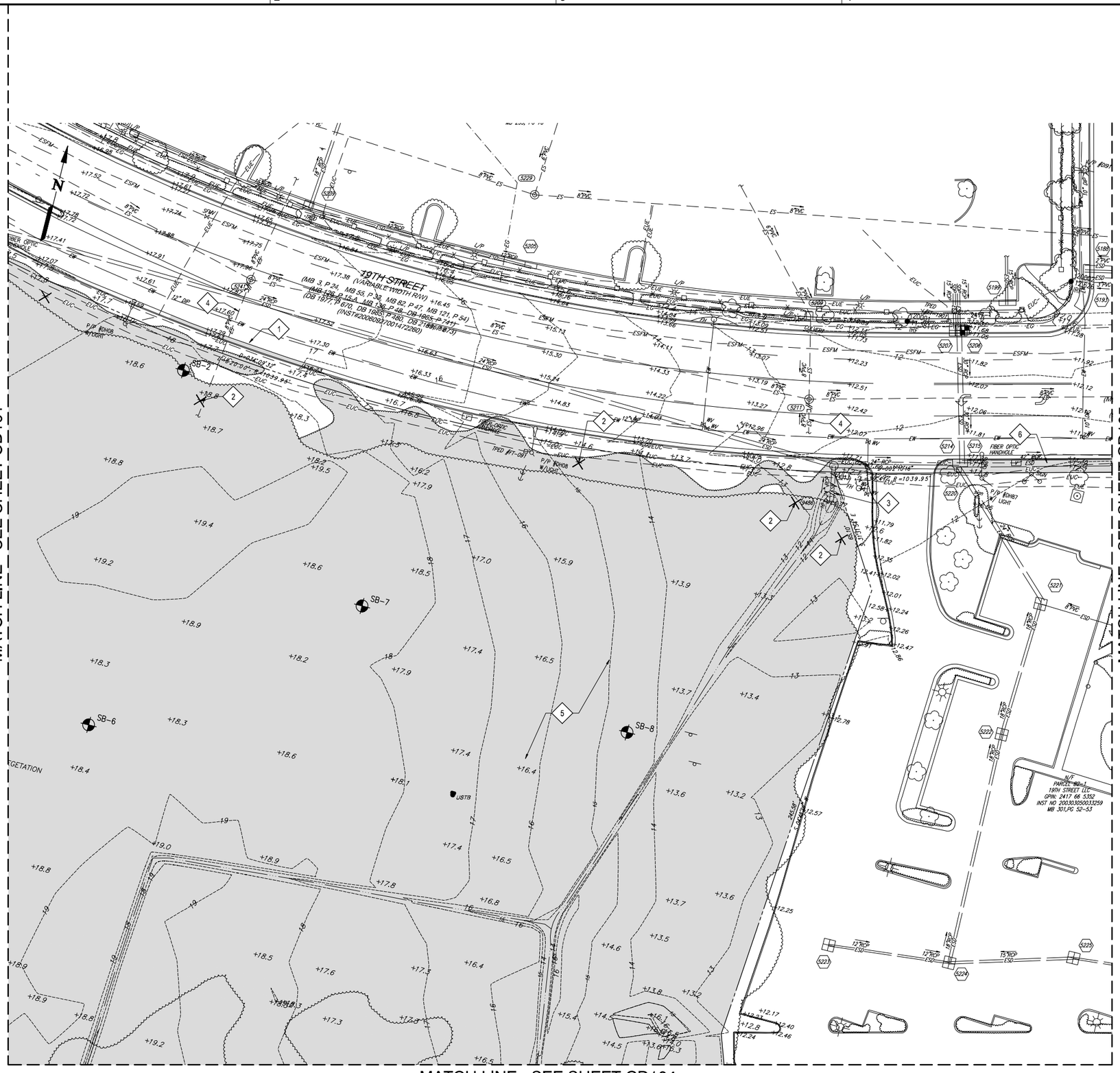
SHEET - OF XX -

DESIGN RMS
DRAWN TAW
REVIEW -

CN 7142

I:\Projects\7000\7142-HR Regional Sports Pavilion\CAD\Sheets\C\CD102.dwg Fri, 18 May 2018 - 3:56pm baliver

Spell checked by TWEAVER on 05/14/2018 12:24pm



DEMOLITION NOTES

1. REMOVE CURB AND GUTTER
2. REMOVE SIGN AND POST
3. REMOVE STORM DRAIN PIPE
4. CAP AND FILL WITH FLOWABLE FILL
5. CLEAR AND GRUB
6. REMOVE LANDSCAPING WITHIN RIGHT OF WAY

GRAPHIC SCALE(S)

1"=25' 0 25' 50' 100'

City of Virginia Beach

35 MEB General Contractors

VIRGINIA BEACH SPORTS CENTER

1045 19th Street
Virginia Beach, Virginia

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CONSULTANT

SEALS

SUBMITTAL

05/18/18

PROGRESS PRINT

REVISIONS

KEY PLAN

101		105	107
102	104	106	108

SHEET

DEMOLITON PLAN

CD103

SHEET - OF XX -

DESIGN RMS
DRAWN TAW
REVIEW -

CN 7142

Z:\Projects\7000\7142-HR Regional Sports Pavilion\CAD\Sheets\C\CD103.dwg Fri, 18 May 2018 - 3:56pm bsilver

Spell checked by TWEAVER on 05/14/2018 12:26pm

DEMOLITION NOTES

1. REMOVE TREE
2. REMOVE SHRUB
3. REMOVE SIGN AND POST
4. REMOVE STORM DRAIN PIPE
5. REMOVE POWER POLE, GUY WIRE AND ASSOCIATED POWER LINES
6. REMOVE UNDERGROUND ELECTRICAL LINE
7. REMOVE ELECTRICAL BOX
8. REMOVE LIGHT POLE AND FOUNDATION
9. CLEAR AND GRUB
10. REMOVE FENCE
11. REMOVE UTILITY CONTROL PANEL
12. REMOVE WATER METER
13. RELOCATE REGULATORY SIGN AND POST
14. ERADICATE PAVEMENT STRIPING
15. ERADICATE PAVEMENT MARKING
16. REMOVE SIDEWALK
17. REMOVE CURB AND GUTTER
18. SAWCUT AND REMOVE ASPHALT PAVEMENT

GRAPHIC SCALE(S)

1"=25' 0 25' 50' 100'

City of Virginia Beach

MEB General Contractors

VIRGINIA BEACH SPORTS CENTER

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Virginia Beach, Virginia

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CONSULTANT

SEALS

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05/18/18
PROGRESS PRINT

REVISIONS

KEY PLAN

101	103	105	107
102		106	108

SHEET
DEMOLITON PLAN

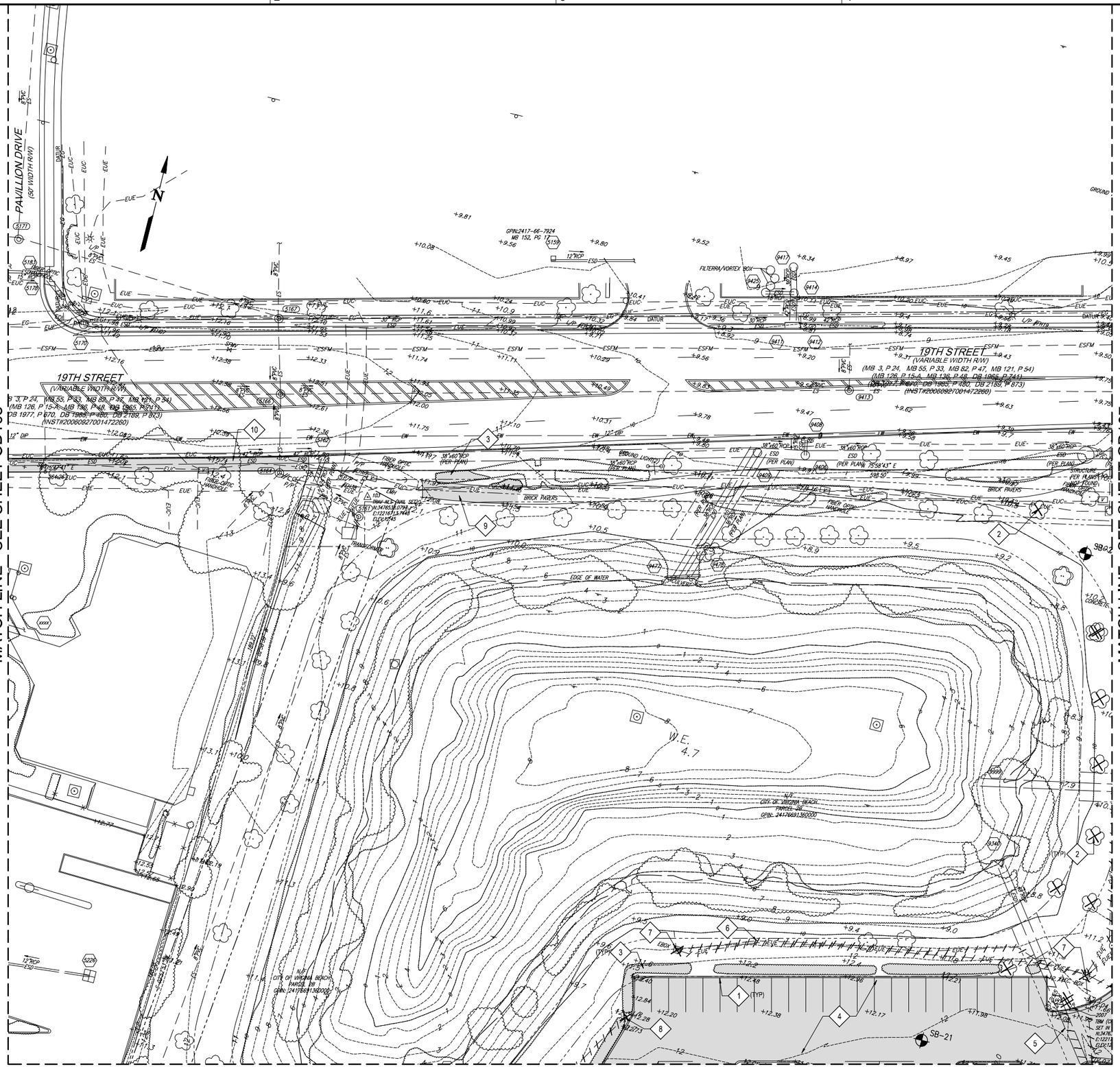
CD104

SHEET - OF XX -

DESIGN RMS
DRAWN TAW
REVIEW -

CN 7142

I:\Projects\7000\7142-HR Regional Sports Pavilion\CAD\Sheets\C\CD104.dwg Fri, 18 May 2018 - 3:57pm bsilver



DEMOLITION NOTES

1. REMOVE CURB
2. REMOVE TREE
3. REMOVE SHRUB
4. REMOVE ASPHALT PAVEMENT
5. REMOVE STORM DRAIN PIPE
6. REMOVE UNDERGROUND ELECTRICAL LINE
7. REMOVE ELECTRICAL BOX
8. REMOVE LIGHT POLE AND FOUNDATION
9. REMOVE BRICK PAVER WALK
10. REMOVE LANDSCAPING IN RIGHT OF WAY

GRAPHIC SCALE(S)

1"=25' 0 25' 50' 100'

City of Virginia Beach

35 MEB General Contractors

VIRGINIA BEACH SPORTS CENTER

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CONSULTANT

SEALS

SUBMITTAL

05/18/18

PROGRESS PRINT

REVISIONS

KEY PLAN

101	103		107
102	104	106	108

SHEET

DEMOLITON PLAN

CD105

SHEET - OF XX -

DESIGN: RMS
DRAWN: TAW
REVIEW: -

CN 7142

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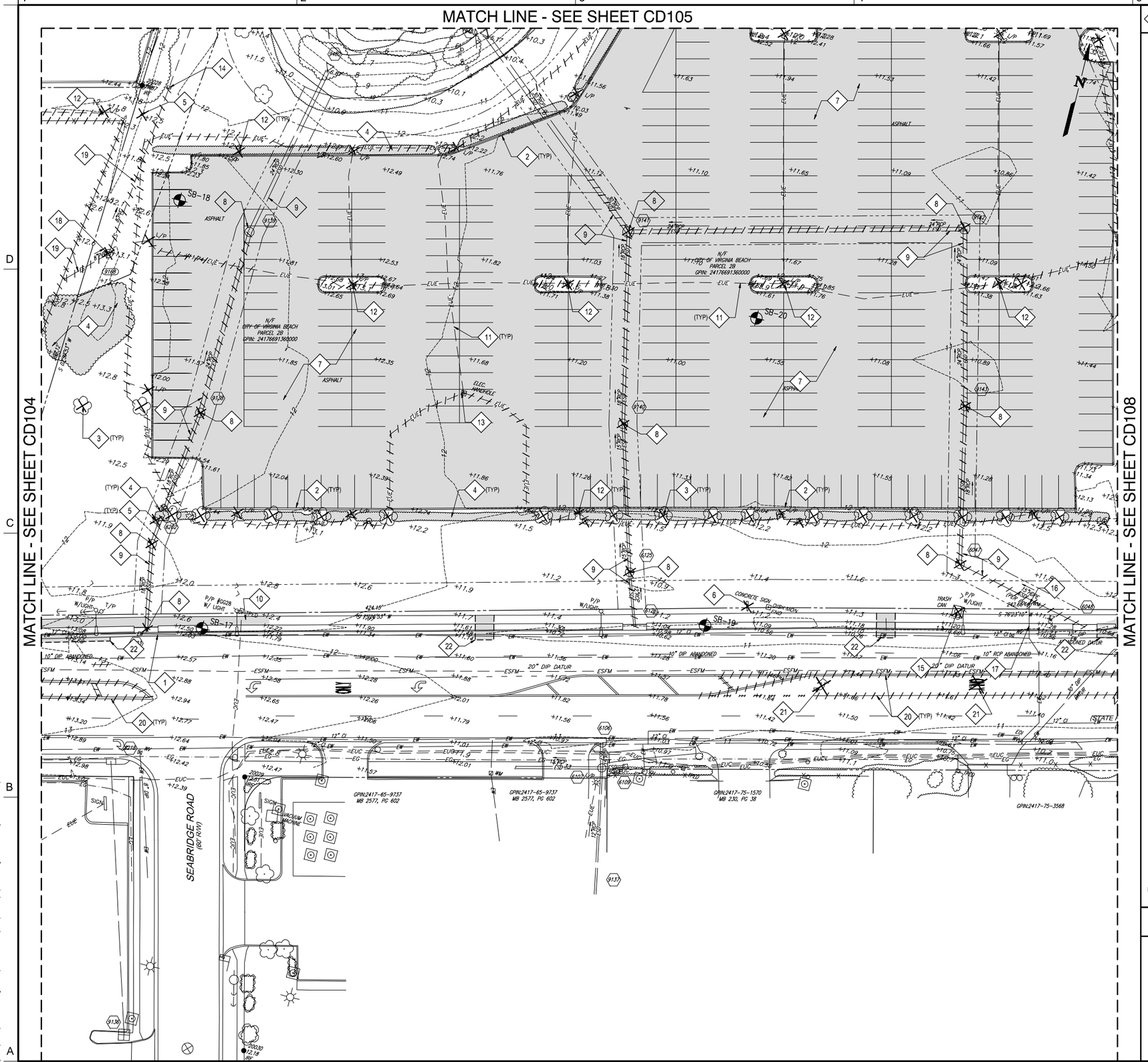
I:\Projects\7000\7142-HR Regional Sports Pavilion\CAD\Sheets\C\CD105.dwg Fri, 18 May 2018 - 3:57pm baliver

Spell checked by TWEAVER on 05/14/2018 12:28pm



DEMOLITION NOTES

1. REMOVE CURB AND GUTTER
2. REMOVE CURB
3. REMOVE TREE
4. REMOVE SHRUB
5. REMOVE SIGN AND POST
6. REMOVE SIGN AND CONCRETE FOUNDATION
7. REMOVE ASPHALT PAVEMENT
8. REMOVE STORM DRAIN STRUCTURE
9. REMOVE STORM DRAIN PIPE
10. REMOVE SIDEWALK
11. REMOVE UNDERGROUND ELECTRICAL LINE
12. REMOVE LIGHT POLE AND FOUNDATION
13. REMOVE UTILITY HANDHOLE
14. CAP AND FILL WITH FLOWABLE FILL
15. REMOVE TRASH CAN
16. REMOVE WATER METER
17. ABANDON WATER SERVICE LINE TO WATER MAIN
18. REMOVE SANITARY SEWER MANHOLE
19. REMOVE SANITARY SEWER
20. ERADICATE PAVEMENT STRIPING
21. ERADICATE PAVEMENT MARKING
22. SAWCUT AND REMOVE ASPHALT PAVEMENT

NOTE: CONTRACTOR SHALL BE RESPONSIBLE FOR REPAIRS TO ELECTRICAL SERVICE IF DAMAGED DURING CONSTRUCTION.

GRAPHIC SCALE(S)

1"=25' 0 25' 50' 100'

City of Virginia Beach

MEB General Contractors

VIRGINIA BEACH SPORTS CENTER

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Virginia Beach, Virginia

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CONSULTANT

SEALS

SUBMITTAL

05/18/18

PROGRESS PRINT

REVISIONS

KEY PLAN

101	103	105	107
102	104		108

SHEET

DEMOLITON PLAN

CD106

SHEET - OF XX -

DESIGN: RMS
DRAWN: TAW
REVIEW: -

CN 7142

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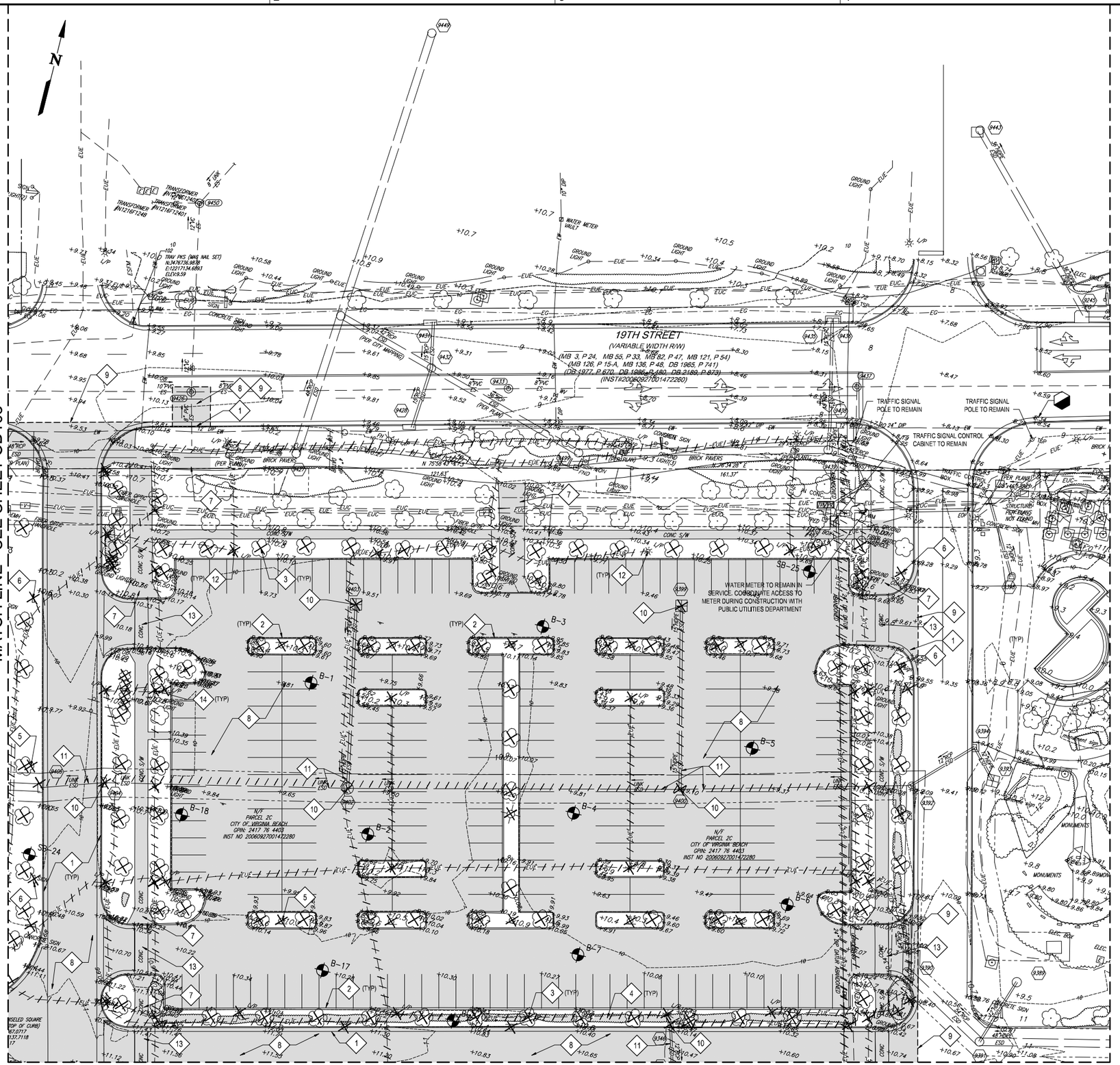

DEMOLITION NOTES

1. REMOVE CURB AND GUTTER
2. REMOVE CURB
3. REMOVE TREE
4. REMOVE SHRUB
5. REMOVE SIGN AND POST
6. REMOVE SIGN AND CONCRETE FOUNDATION
7. REMOVE CONCRETE SIDEWALK
8. REMOVE ASPHALT PAVEMENT
9. SAWCUT ASPHALT PAVEMENT
10. REMOVE STORM DRAIN STRUCTURE
11. REMOVE STORM DRAIN PIPE
12. REMOVE LIGHT POLE AND FOUNDATION
13. REMOVE CONCRETE PAVEMENT
14. REMOVE GROUND LIGHT

GRAPHIC SCALE(S)

1"=25' 0 25' 50' 100'

Virginia Beach

35 MEB General Contractors

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CONSULTANT

SEALS

SUBMITTAL

05/18/18

PROGRESS PRINT

REVISIONS

KEY PLAN

101	103	105	
102	104	106	108

SHEET

DEMOLITON PLAN

CD107

SHEET - OF XX -

DESIGN RMS
DRAWN TAW
REVIEW -

CN 7142

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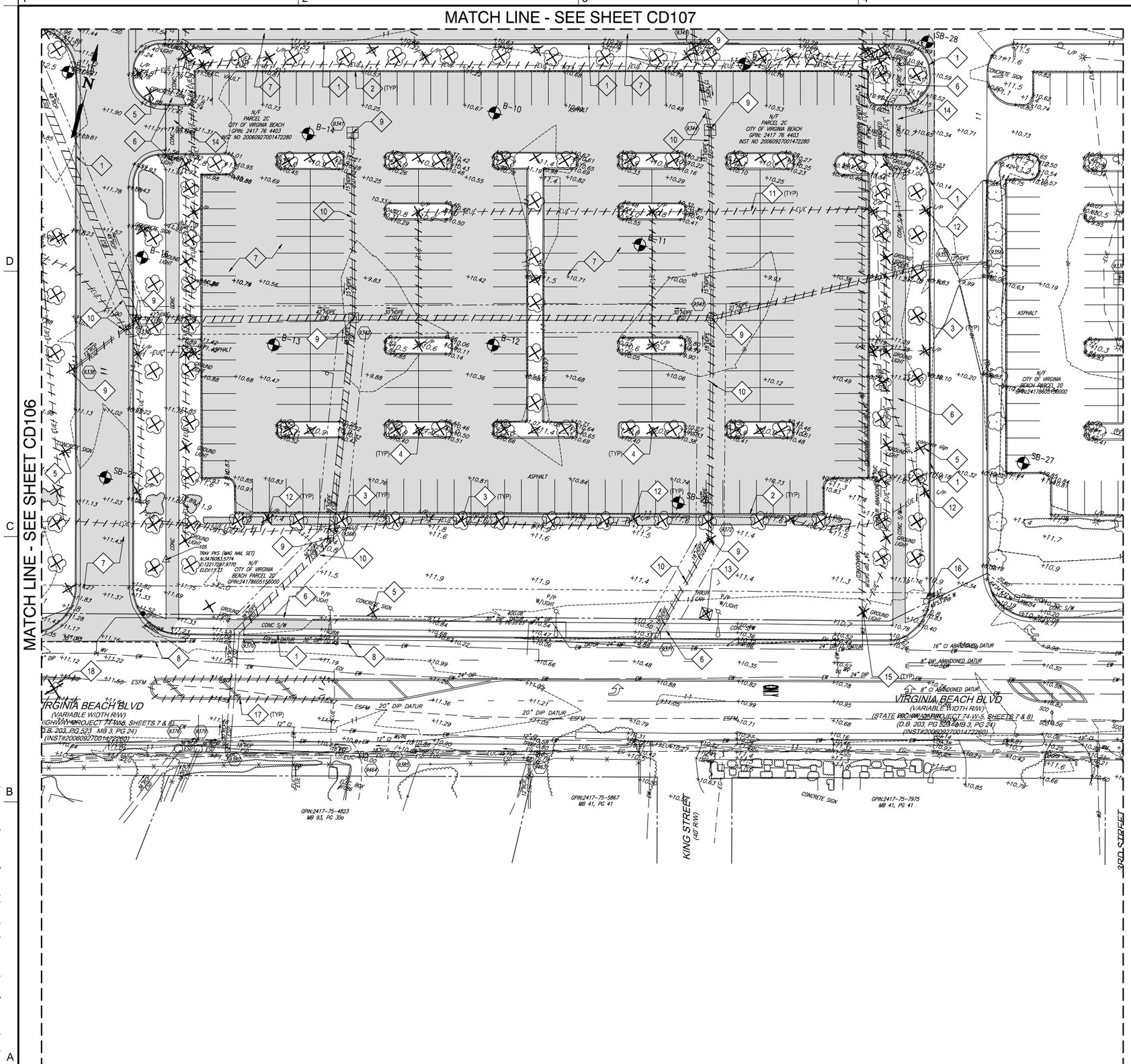
Spell checked by TWEAVER on 05/14/2018 12:29pm



DEMOLITION NOTES

1. REMOVE CURB AND GUTTER
2. REMOVE CURB
3. REMOVE TREE
4. REMOVE SIGN AND POST
5. REMOVE SIGN AND CONCRETE FOUNDATION
6. REMOVE CONCRETE SIDEWALK
7. REMOVE ASPHALT PAVEMENT
8. SAWCUT AND REMOVE ASPHALT PAVEMENT
9. REMOVE STORM DRAIN STRUCTURE
10. REMOVE STORM DRAIN PIPE
11. REMOVE UNDERGROUND ELECTRICAL LINE
12. REMOVE LIGHT POLE AND FOUNDATION
13. REMOVE TRASH CAN
14. REMOVE CONCRETE PAVEMENT
15. REMOVE GROUND LIGHT
16. RELOCATE REGULATORY SIGN AND POST
17. ERADICATE PAVEMENT STRIPING
18. ERADICATE PAVEMENT MARKING

GRAPHIC SCALE(S)

1"=25' 0 25' 50' 100'

City of Virginia Beach
MEB General Contractors

VIRGINIA BEACH SPORTS CENTER

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CONSULTANT

SEALS

SUBMITTAL

05/18/18

PROGRESS PRINT

REVISIONS

KEY PLAN

101	103	105	107
102	104	106	

SHEET

DEMOLITON PLAN

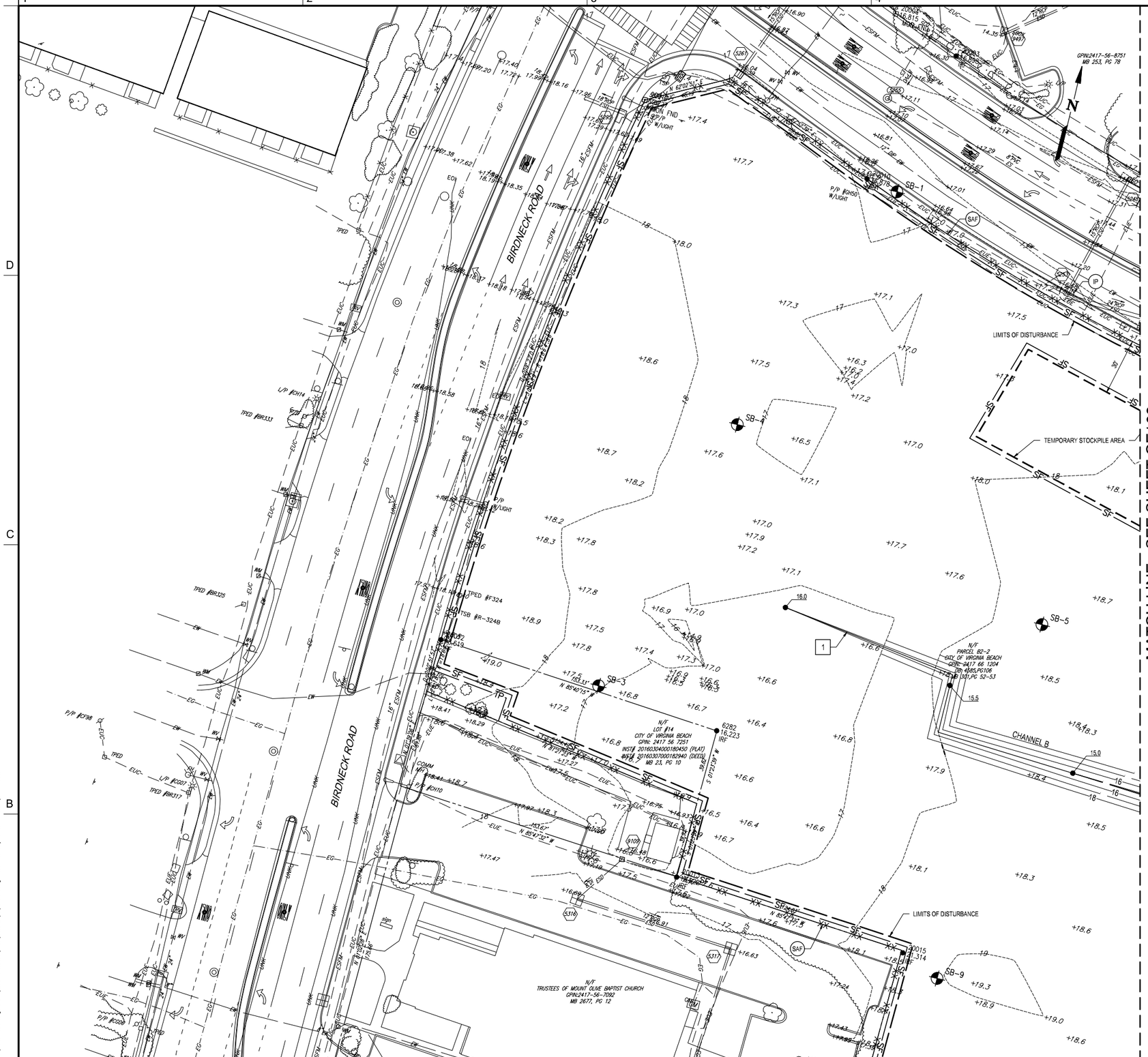
CD108

SHEET - OF XX -

DESIGN RMS
DRAWN TAW
REVIEW -

CN 7142

E:\Projects\7000\7142-HR Regional Sports Pavilion\CAD\Sheets\C\CD108.dwg Fri, 18 May 2018 - 3:58pm bsilver



MATCH LINE - SEE SHEET CE102

MATCH LINE - SEE SHEET CE103

CONSTRUCTION NOTES

1. NEW VEE DITCH WITH 3:1 SIDE SLOPES, STABILIZE WITH SEEDING.

SHEET NOTES

1. FINAL GRADING TO BE SHOWN ON THE SITE DEVELOPMENT PLANS. PRIOR TO FINAL DEVELOPMENT, ALL INTERIM GRADING MUST BE DIRECTED TO E&S CONTROLS SHOWN.

GRAPHIC SCALE(S)

1"=25' 0 25' 50' 100'

City of Virginia Beach

35 MEB General Contractors

VIRGINIA BEACH SPORTS CENTER

1045 19th Street
Virginia Beach, Virginia

DESIGNER

CLARKNEXSEN

4525 Main Street, Suite 1400
Virginia Beach, VA 23462
757.455.5800

CONSULTANT

SEALS

SUBMITTAL

05/18/18

PROGRESS PRINT

REVISIONS

KEY PLAN

	103	105	107
102	104	106	108

SHEET

EROSION AND SEDIMENT CONTROL PLAN

CE101

SHEET - OF XX -

DESIGN RMS
DRAWN TAW
REVIEW -

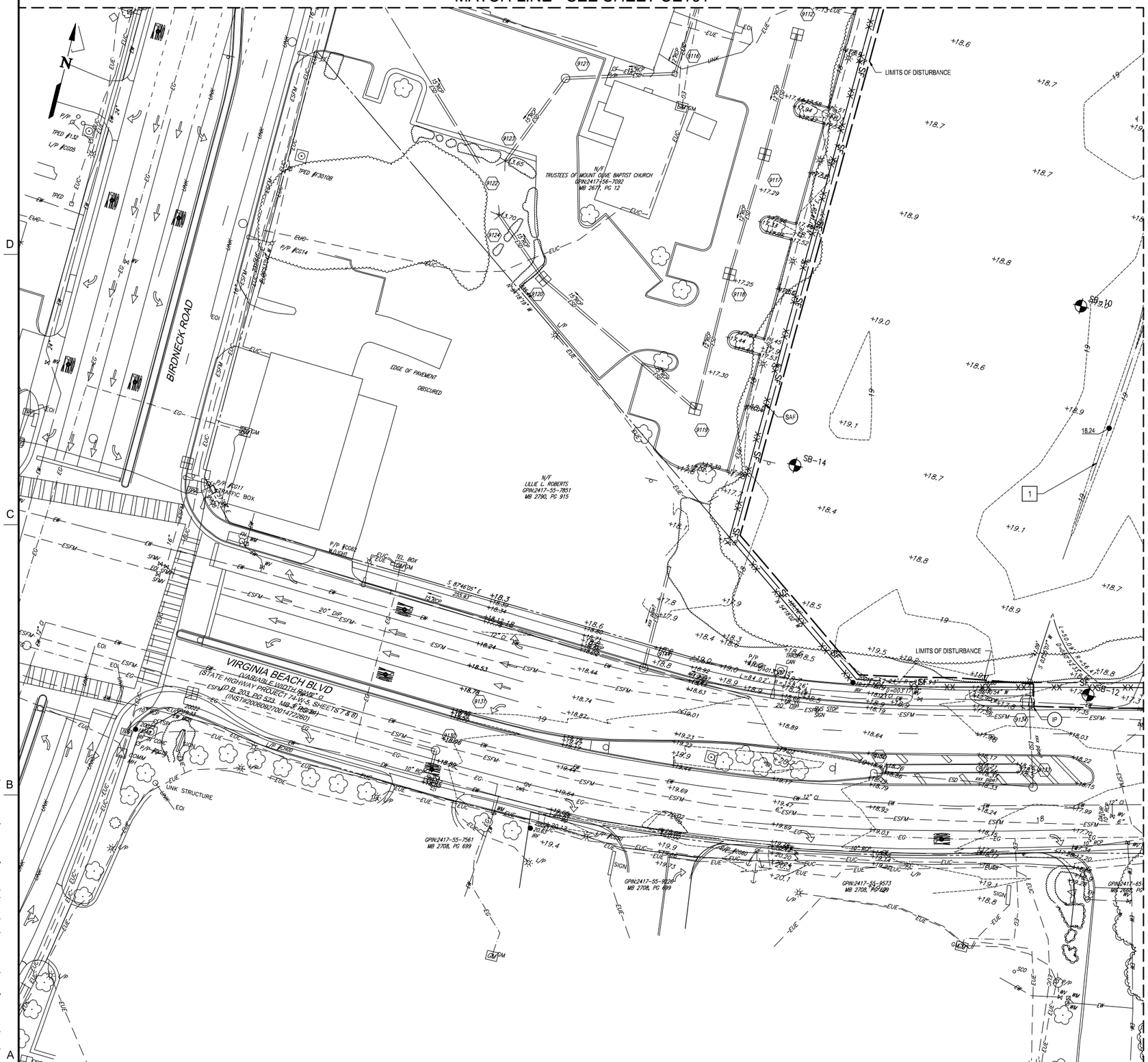
CN 7142

Spell checked by TWEAVER on 05/14/2018 12:36pm

I:\Projects\7000\7142-HR Regional Sports Pavilion\CAD\Sheets\C\CE101.dwg Fri, 18 May 2018 - 3:59pm bsilver

Spell checked by TWEAVER on 05/14/2018 12:37pm

MATCH LINE - SEE SHEET CE101



CONSTRUCTION NOTES

1. RE-GRADE EXISTING VEE DITCH TO PROVIDE 3:1 SIDE SLOPES, STABILIZE WITH SEEDING.

SHEET NOTES

1. FINAL GRADING TO BE SHOWN ON THE SITE DEVELOPMENT PLANS. PRIOR TO FINAL DEVELOPMENT, ALL INTERIM GRADING MUST BE DIRECTED TO E&S CONTROLS SHOWN.

GRAPHIC SCALE(S)

1"=25' 0 25' 50' 100'

City of Virginia Beach

35 MEB General Contractors

VIRGINIA BEACH SPORTS CENTER

1045 19th Street
Virginia Beach, Virginia

DESIGNER

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4525 Main Street, Suite 1400
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CONSULTANT

SEALS

SUBMITTAL

05/18/18

PROGRESS PRINT

REVISIONS

KEY PLAN

101	103	105	107
	104	106	108

SHEET

EROSION AND SEDIMENT CONTROL PLAN

CE102

SHEET - OF XX -

DESIGN RMS
DRAWN TAW
REVIEW -

CN 7142

I:\Projects\7000\7142-HR Regional Sports Pavilion\CAD\Sheets\C\CE102.dwg Fri, 18 May 2018 - 3:59pm baliver

CONSTRUCTION NOTES

1. 18" DIAMETER RISER WITH TRASH RACK
2. TEMPORARY 24" HDPE
3. RE-GRADE EXISTING VEE DITCH TO PROVIDE 3:1 SIDE SLOPES, STABILIZE WITH SEEDING.
4. REMOVE CULVERT INLET PROTECTION AFTER SEDIMENT BASIN PIPE IS INSTALLED AND INSTALL OUTLET PROTECTION BETWEEN SEDIMENT BASIN OUTFALL AND EXISTING 24" OUTFALL.
5. RE-GRADE EXISTING DITCH TO HAVE 1.5 FOOT BOTTOM WIDTH TRAPEZOIDAL DITCH WITH 2:1 SIDE SLOPES, STABILIZE WITH SEEDING.

SHEET NOTES

1. FINAL GRADING TO BE SHOWN ON THE SITE DEVELOPMENT PLANS. PRIOR TO FINAL DEVELOPMENT, ALL INTERIM GRADING MUST BE DIRECTED TO E&S CONTROLS SHOWN.

GRAPHIC SCALE(S)

1"=25' 0 25' 50' 100'

City of Virginia Beach

35 MEB General Contractors

VIRGINIA BEACH SPORTS CENTER

1045 19th Street
Virginia Beach, Virginia

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CONSULTANT

SEALS

SUBMITTAL

05/18/18

PROGRESS PRINT

REVISIONS

KEY PLAN

101		105	107
102	104	106	108

SHEET

EROSION AND SEDIMENT CONTROL PLAN

CE103

SHEET - OF XX -

DESIGN: RMS
DRAWN: TAW
REVIEW: -

CN 7142

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I:\Projects\7000\7142-HR Regional Sports Pavilion\CAD\Sheets\C\CE103.dwg Fri, 18 May 2018 - 3:59pm bsilver

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CONSTRUCTION NOTES

1. RE-GRADE EXISTING VEE DITCH TO PROVIDE 3:1 SIDE SLOPES, STABILIZE WITH TEMPORARY SEEDING.
2. NEW VEE DITCH WITH 3:1 SIDE SLOPES, STABILIZE WITH TEMPORARY SEEDING.
3. EXTEND BERM TO TIE TO EXISTING GRADE AT ELEVATION 16.25.

SHEET NOTES

1. FINAL GRADING TO BE SHOWN ON THE SITE DEVELOPMENT PLANS. PRIOR TO FINAL DEVELOPMENT, ALL INTERIM GRADING MUST BE DIRECTED TO E&S CONTROLS SHOWN.

GRAPHIC SCALE(S)

1"=25' 0 25' 50' 100'

City of Virginia Beach

35 MEB General Contractors

VIRGINIA BEACH SPORTS CENTER

1045 19th Street
Virginia Beach, Virginia

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CLARKNEXSEN

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CONSULTANT

SEALS

SUBMITTAL

05/18/18

PROGRESS PRINT

REVISIONS

KEY PLAN

101	103	105	107
102		106	108

SHEET

EROSION AND SEDIMENT CONTROL PLAN

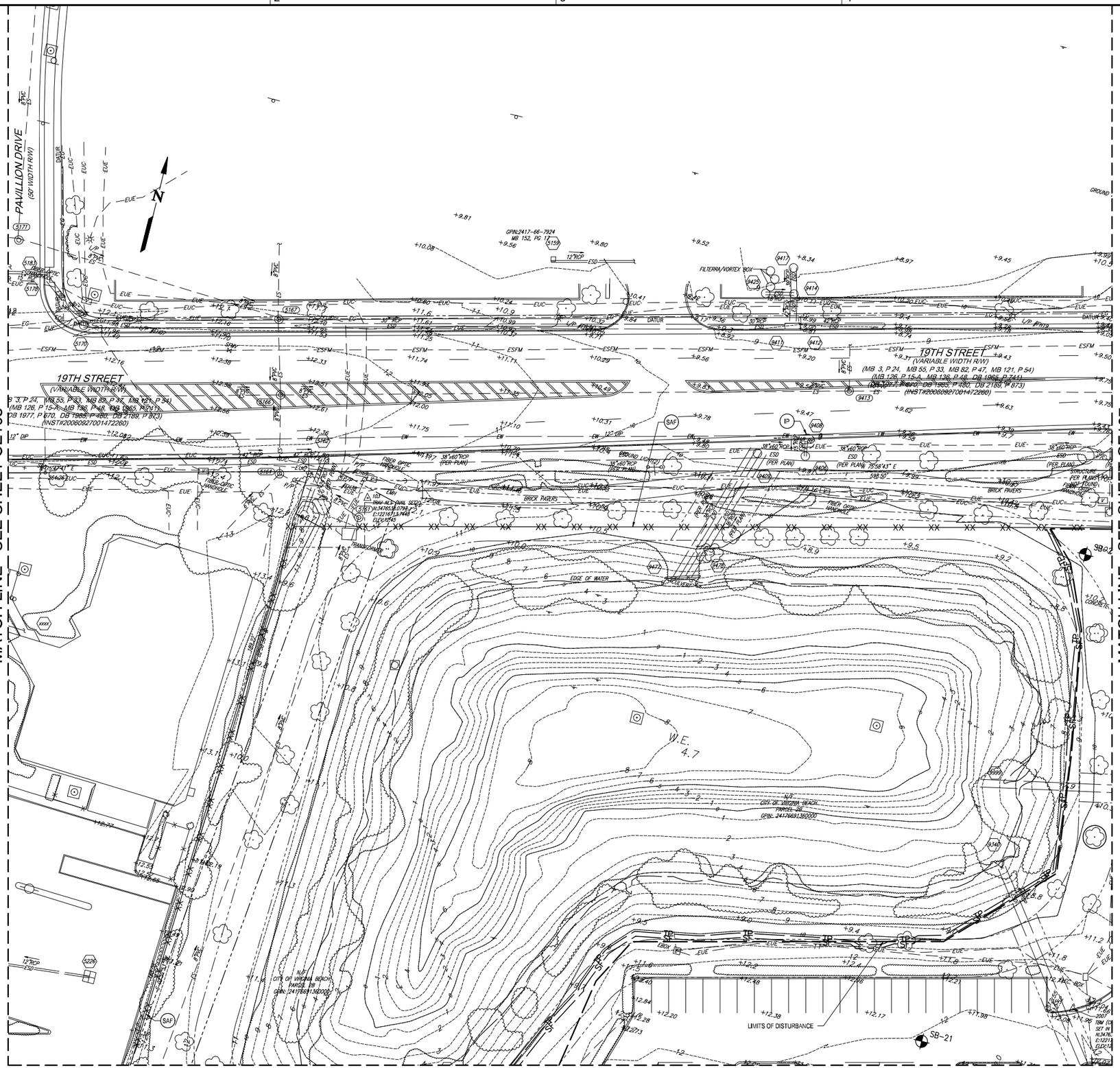
CE104

SHEET - OF XX -

DESIGN RMS
DRAWN TAW
REVIEW -

CN 7142

E:\Projects\7000\7142-HR Regional Sports Pavilion\CAD\Sheets\C\CE104.dwg Fri, 18 May 2018 - 4:00pm bsilver



SHEET NOTES

1. FINAL GRADING TO BE SHOWN ON THE SITE DEVELOPMENT PLANS. PRIOR TO FINAL DEVELOPMENT, ALL INTERIM GRADING MUST BE DIRECTED TO E&S CONTROLS SHOWN.

GRAPHIC SCALE(S)

1"=25' 0 25' 50' 100'

City of Virginia Beach
35 MEB General Contractors

VIRGINIA BEACH SPORTS CENTER

1045 19th Street
Virginia Beach, Virginia

DESIGNER

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CONSULTANT

SEALS

SUBMITTAL

05/18/18

PROGRESS PRINT

REVISIONS

KEY PLAN

101	103		107
102	104	106	108

SHEET

EROSION AND SEDIMENT CONTROL PLAN

CE105

SHEET - OF XX -

DESIGN: RMS
DRAWN: TAW
REVIEW: -

CN 7142

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h:\Projects\7000\7142-HR Regional Sports Pavilion\CAD\Sheets\C\CE105.dwg Fri, 18 May 2018 - 4:00pm bsilver

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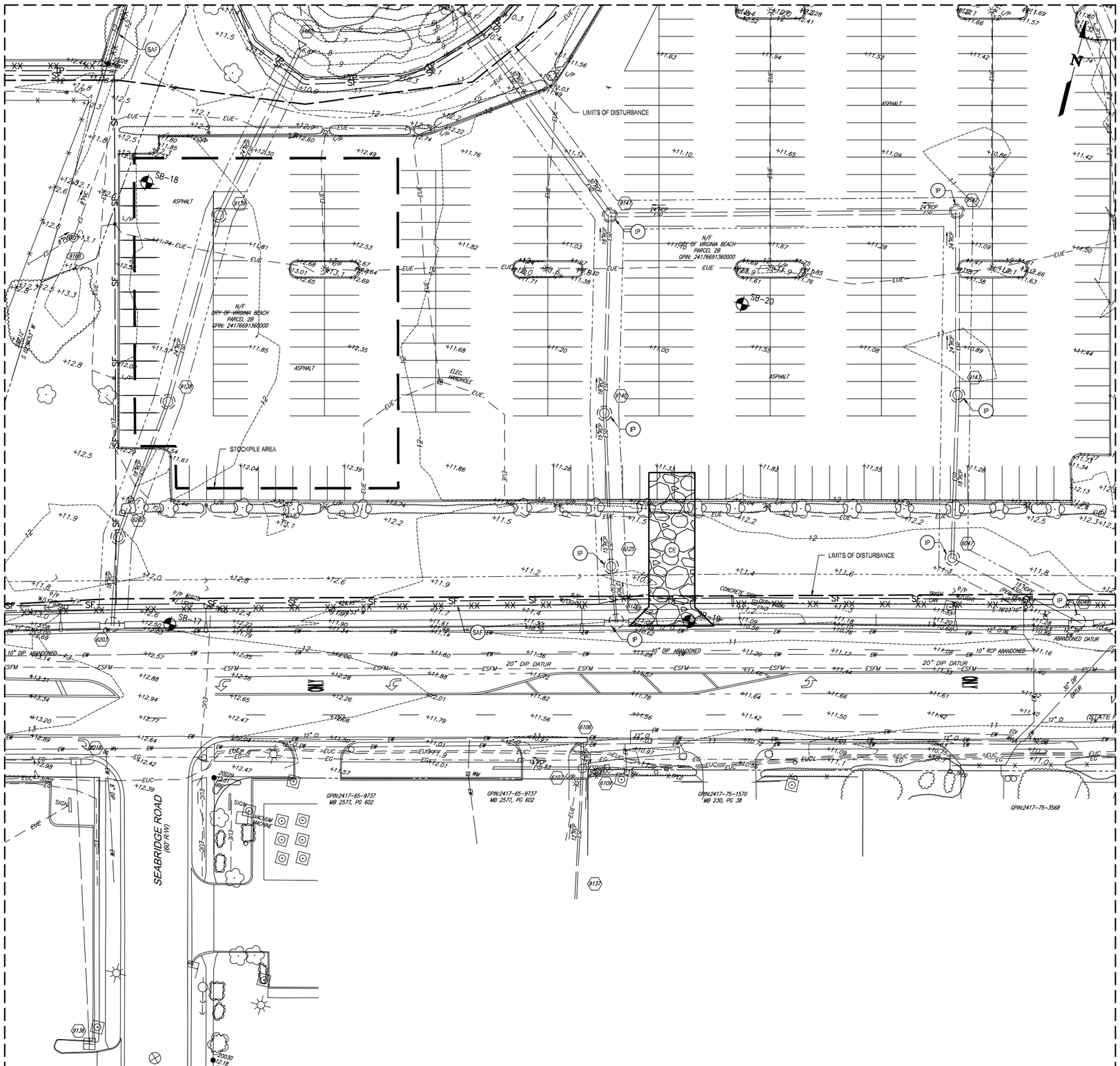

SHEET NOTES

1. FINAL GRADING TO BE SHOWN ON THE SITE DEVELOPMENT PLANS. PRIOR TO FINAL DEVELOPMENT, ALL INTERIM GRADING MUST BE DIRECTED TO E&S CONTROLS SHOWN.

GRAPHIC SCALE(S)

1"=25' 0 25' 50' 100'

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VIRGINIA BEACH SPORTS CENTER

1045 19th Street
Virginia Beach, Virginia

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CONSULTANT

SEALS

SUBMITTAL

05/18/18

PROGRESS PRINT

REVISIONS

KEY PLAN

101	103	105	107
102	104		108

SHEET

EROSION AND SEDIMENT CONTROL PLAN

CE106

SHEET - OF XX -

DESIGN RMS
DRAWN TAW
REVIEW -

CN 7142

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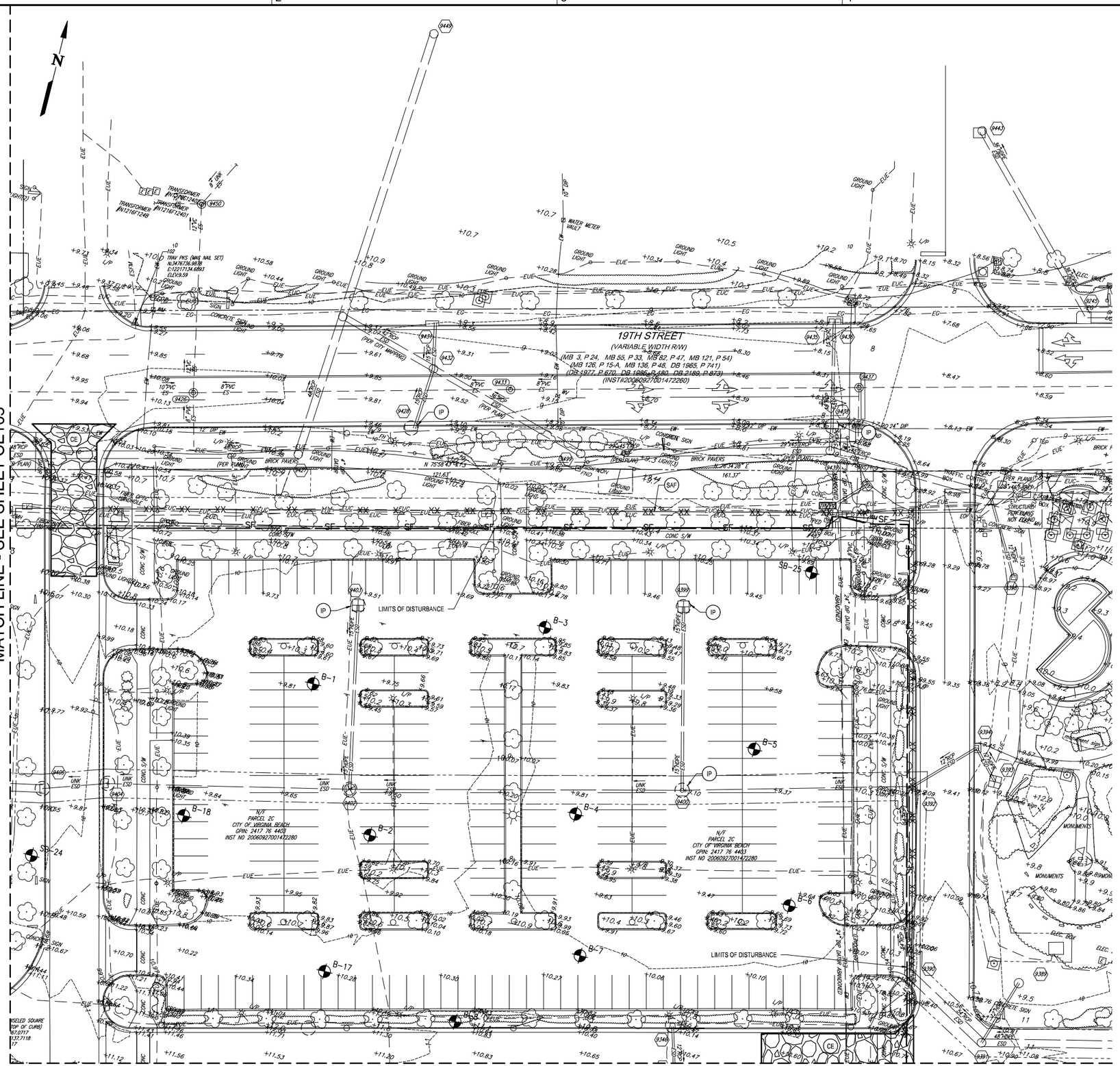

SHEET NOTES

1. FINAL GRADING TO BE SHOWN ON THE SITE DEVELOPMENT PLANS. PRIOR TO FINAL DEVELOPMENT, ALL INTERIM GRADING MUST BE DIRECTED TO E&S CONTROLS SHOWN.

GRAPHIC SCALE(S)

1"=25' 0 25' 50' 100'

101	103	105	
102	104	106	108

Virginia Beach

35 MEB General Contractors

VIRGINIA BEACH SPORTS CENTER

1045 19th Street
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DESIGNER

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CONSULTANT

SEALS

SUBMITTAL

05/18/18

PROGRESS PRINT

REVISIONS

KEY PLAN

SHEET

EROSION AND SEDIMENT CONTROL PLAN

CE107

SHEET - OF XX -

DESIGN RMS
DRAWN TAW
REVIEW -

CN 7142

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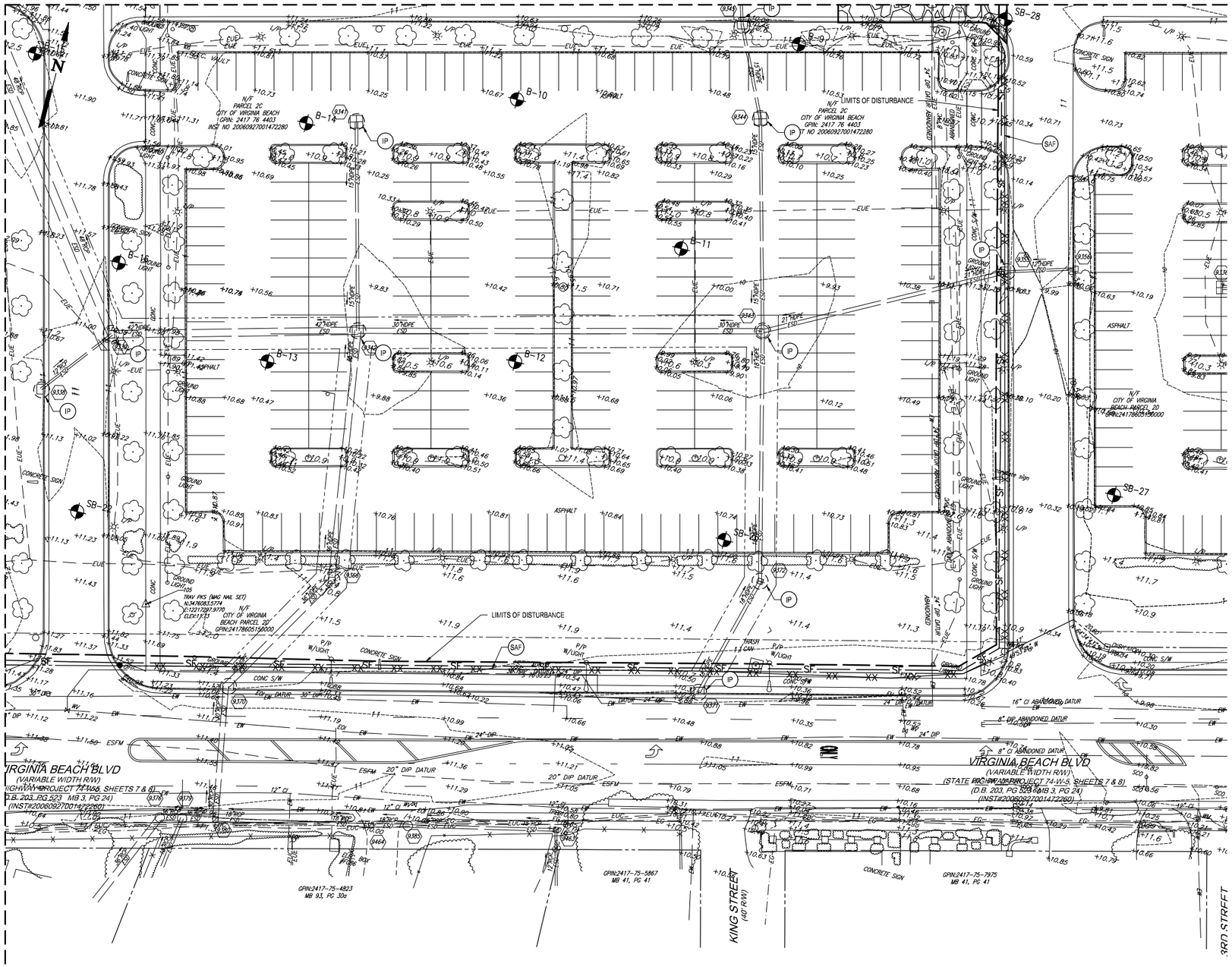
Spell checked by TWEAVER on 05/14/2018 12:48pm

e:\Projects\7000\7142-HR Regional Sports Pavilion\CAD\Sheets\C\CE108.dwg Fri, 18 May 2018 - 4:01pm bsilver

MATCH LINE - SEE SHEET CE107

MATCH LINE - SEE SHEET CE106



CONSTRUCTION NOTES

SHEET NOTES

1. FINAL GRADING TO BE SHOWN ON THE SITE DEVELOPMENT PLANS. PRIOR TO FINAL DEVELOPMENT, ALL INTERIM GRADING MUST BE DIRECTED TO E&S CONTROLS SHOWN.

GRAPHIC SCALE(S)

1"=25' 0 25' 50' 100'

City of Virginia Beach

35 MEB General Contractors

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CONSULTANT

SEALS

SUBMITTAL

05/18/18

PROGRESS PRINT

REVISIONS

KEY PLAN

101	103	105	107
102	104	106	

SHEET

EROSION AND SEDIMENT CONTROL PLAN

CE108

SHEET - OF XX -

DESIGN RMS
DRAWN TAW
REVIEW -

CN 7142

GENERAL NOTES

1. SEE LAYOUT CONTROL SHEET C-004 FOR NORTHING AND EASTING COORDINATES ALONG CONSTRUCTION BASELINE.

CONSTRUCTION NOTES

1. CONCRETE SIDEWALK
2. CONCRETE CURB AND GUTTER (VDOT STD CG-6)
3. CONCRETE CURB (VDOT STD CG-2)
4. PAVEMENT STRIPING
5. LIGHT DUTY ASPHALT PAVEMENT
6. HEAVY DUTY ASPHALT PAVEMENT
7. HANDICAP RAMP

GRAPHIC SCALE(S)

1"=25' 0 25' 50' 100'

Virginia Beach
35 MEB General Contractors

VIRGINIA BEACH SPORTS CENTER

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Virginia Beach, Virginia

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Virginia Beach, VA 23462
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CONSULTANT

SEALS

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05/18/18
PROGRESS PRINT

REVISIONS

KEY PLAN

	103	105	107
102	104	106	108

SHEET

SITE LAYOUT PLAN

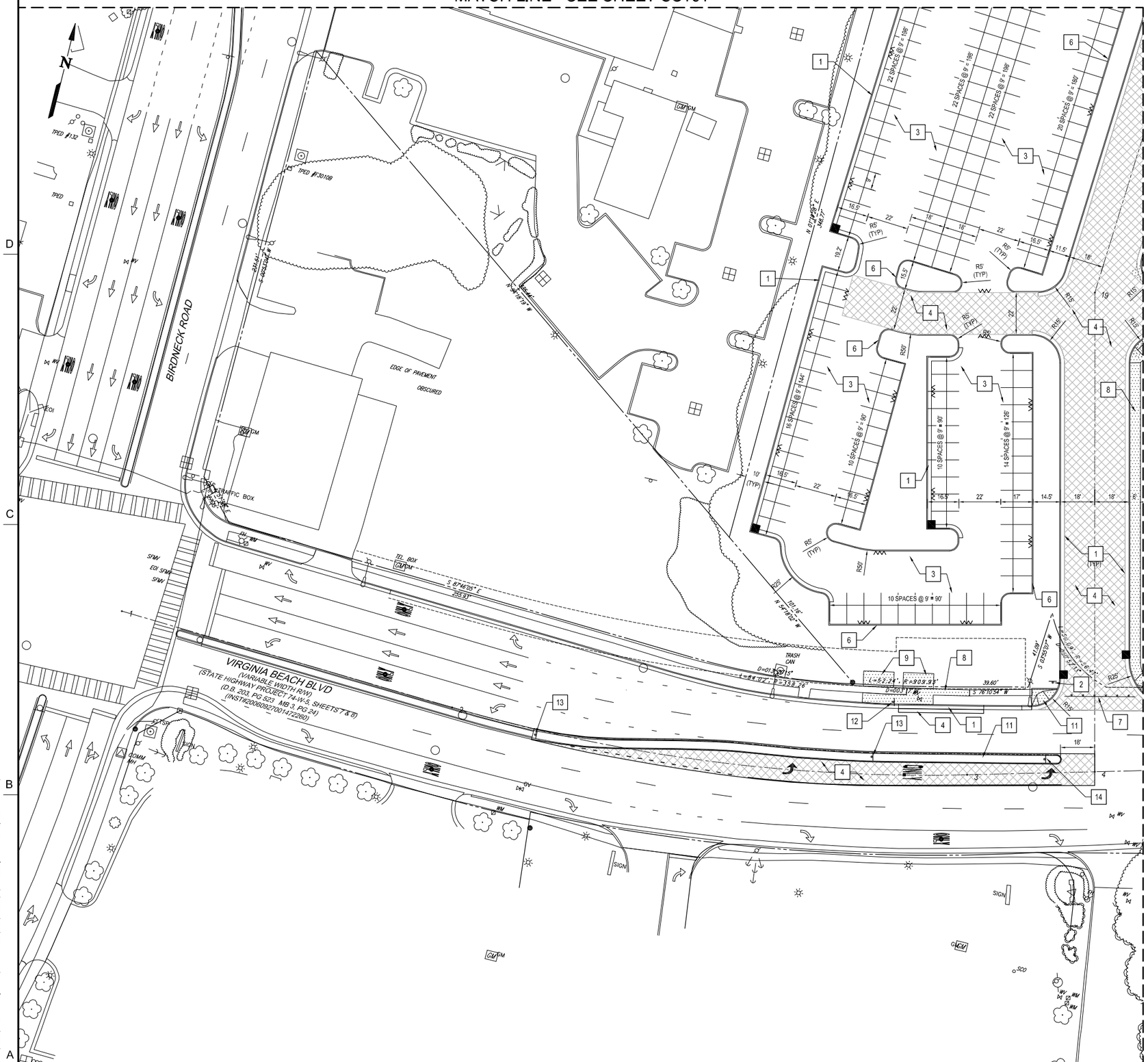
CS101

SHEET - OF XX -

DESIGN RMS
DRAWN TAW
REVIEW -

CN 7142

I:\Projects\7000\7142-HR Regional Sports Pavilion\040\Sheets\C\CS101.dwg Fri, 18 May 2018 - 3:53pm Rhonda.Portill



GENERAL NOTES

1. SEE LAYOUT CONTROL SHEET C-004 FOR NORTHING AND EASTING COORDINATES ALONG CONSTRUCTION BASELINE.

CONSTRUCTION NOTES

1. CONCRETE CURB AND GUTTER (VDOT STD CG-6)
2. SIGN AND POST
3. LIGHT DUTY ASPHALT PAVEMENT
4. HEAVY DUTY ASPHALT PAVEMENT
5. HANDICAP RAMP
6. CONCRETE CURB
7. TEMPORARY TYPE III BARRICADE WITH ROAD CLOSURE
8. CONCRETE SIDEWALK
9. CONCRETE BUS SHELTER PAD (BUS SHELTER PROVIDED BY OTHERS)
10. HANDICAP RAMP
11. STANDARD SOLID CONCRETE RAISED MEDIAN (VDOT STD MS-1A, W = 4')
12. RELOCATED BUS STOP SIGN
13. RELOCATED INFORMATIONAL SIGN
14. RELOCATED REGULATORY SIGN

GRAPHIC SCALE(S)

1"=25' 0 25' 50' 100'

Virginia Beach

MEB General Contractors

VIRGINIA BEACH SPORTS CENTER

1045 19th Street
Virginia Beach, Virginia

DESIGNER

CLARKNEXSEN

4525 Main Street, Suite 1400
Virginia Beach, VA 23462
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CONSULTANT

SEALS

SUBMITTAL

05/18/18

PROGRESS PRINT

REVISIONS

KEY PLAN

101	103	105	107
	104	106	108

SHEET

SITE LAYOUT PLAN

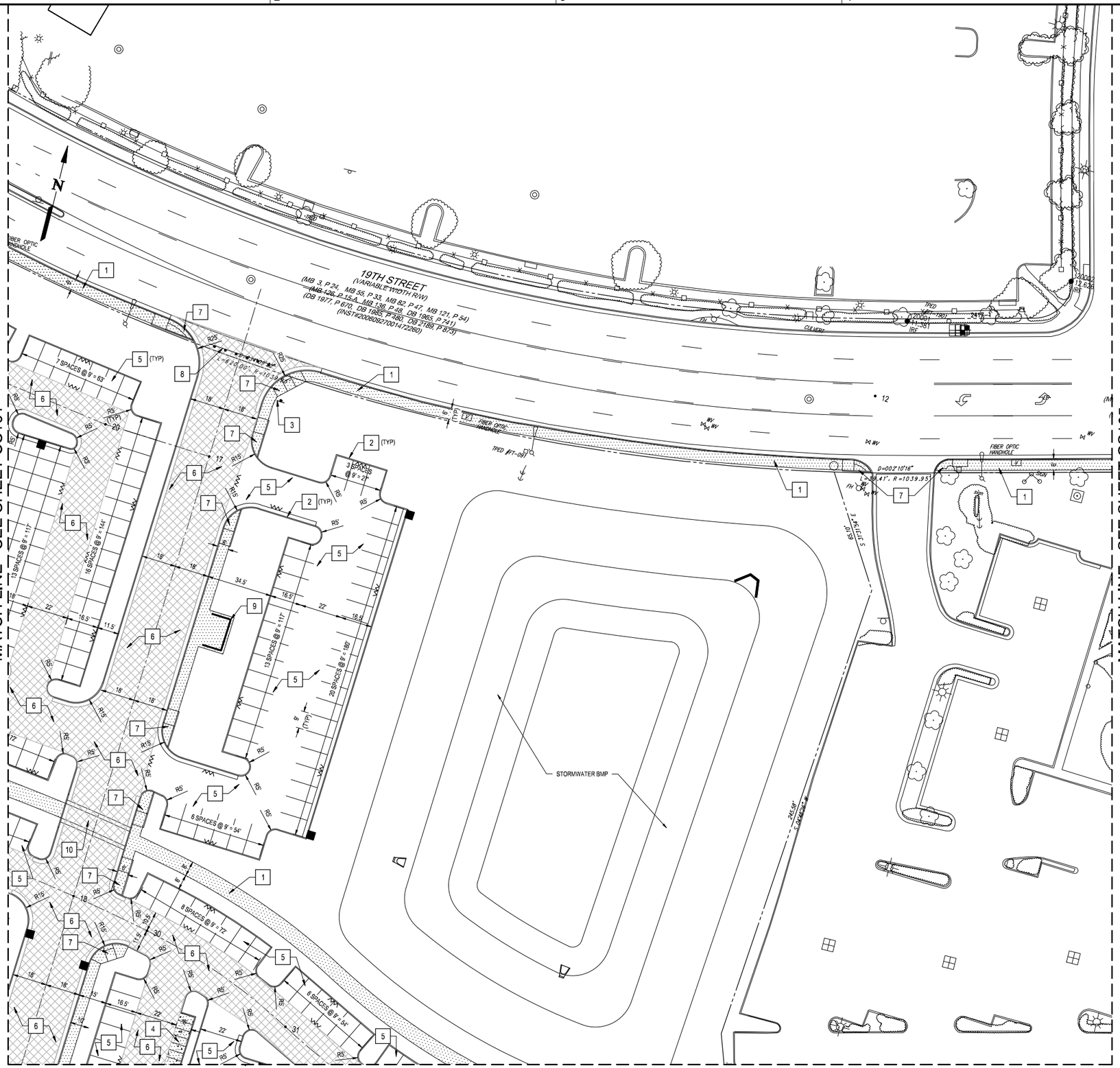
CS102

SHEET - OF XX -

DESIGN RMS
DRAWN TAW
REVIEW -

CN 7142

I:\Projects\7000\7142-HR Regional Sports Pavilion\CAD\Sheets\C\CS102.dwg Fri, 18 May 2018 - 4:27pm bsilver



GENERAL NOTES

1. SEE LAYOUT CONTROL SHEET C-004 FOR NORTHING AND EASTING COORDINATES ALONG CONSTRUCTION BASELINE.

CONSTRUCTION NOTES

1. CONCRETE SIDEWALK
2. CONCRETE CURB (VDOT STD CG-2)
3. SIGN AND POST
4. LIGHT DUTY CONCRETE PAVEMENT
5. LIGHT DUTY ASPHALT PAVEMENT
6. HEAVY DUTY ASPHALT PAVEMENT
7. HANDICAP RAMP
8. TEMPORARY TYPE III BARRICADE WITH ROAD CLOSURE
9. BUS SHELTER PAD
10. SPEED BUMP

GRAPHIC SCALE(S)

1"=25' 0 25' 50' 100'

City of Virginia Beach

35 MEB General Contractors

VIRGINIA BEACH SPORTS CENTER

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DESIGNER

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CONSULTANT

SEALS

SUBMITTAL

05/18/18

PROGRESS PRINT

REVISIONS

KEY PLAN

101		105	107
102	104	106	108

SHEET

SITE LAYOUT PLAN

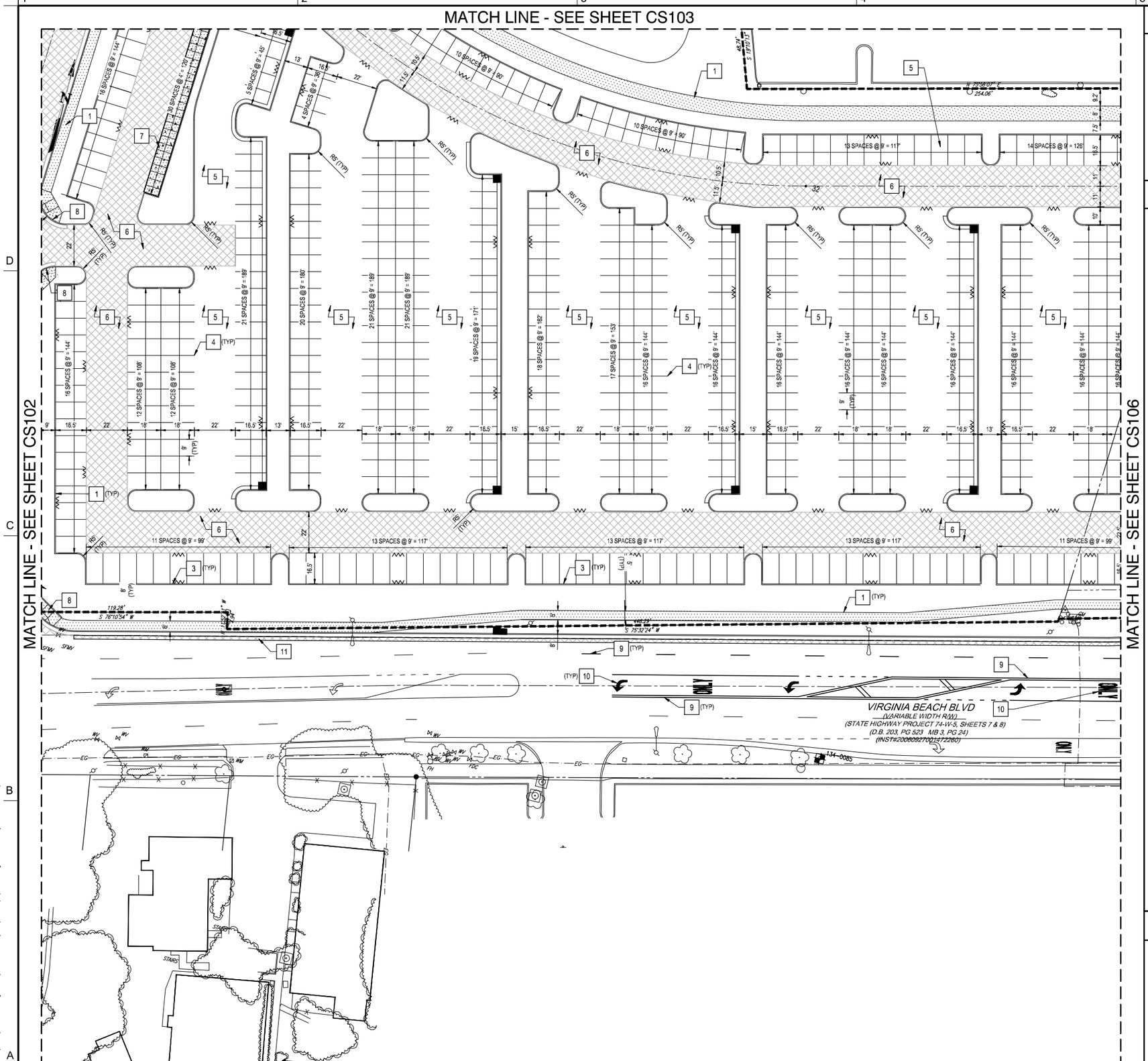
CS103

SHEET - OF XX -

DESIGN RMS
DRAWN TAW
REVIEW -

CN 7142

I:\Projects\7000\7142-HR Regional Sports Pavilion\CAD\Sheets\C\CS103.dwg Fri, 18 May 2018 - 3:55pm Rhonda.Pantli



GENERAL NOTES

1. SEE LAYOUT CONTROL SHEET C-004 FOR NORTHING AND EASTING COORDINATES ALONG CONSTRUCTION BASELINE.

CONSTRUCTION NOTES

1. CONCRETE SIDEWALK
2. CONCRETE CURB AND GUTTER (VDOT STD CG-6)
3. CONCRETE CURB (VDOT STD CG-2)
4. PAVEMENT STRIPING
5. LIGHT DUTY ASPHALT PAVEMENT
6. PAVEMENT MARKING
7. LIGHT DUTY CONCRETE PAVEMENT
8. HANDICAP RAMP
9. PAVEMENT STRIPING
10. PAVEMENT MARKING
11. HEAVY DUTY ASPHALT PAVEMENT

GRAPHIC SCALE(S)

1"=25' 0 25' 50' 100'

Virginia Beach

35 MEB General Contractors

VIRGINIA BEACH SPORTS CENTER

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Virginia Beach, Virginia

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CLARKNEXSEN

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757.455.5800

CONSULTANT

SEALS

SUBMITTAL

05/18/18

PROGRESS PRINT

REVISIONS

KEY PLAN

101	103	105	107
102		106	108

SHEET

SITE LAYOUT PLAN

CS104

SHEET - OF XX -

DESIGN: RMS
DRAWN: TAW
REVIEW: -

CN 7142

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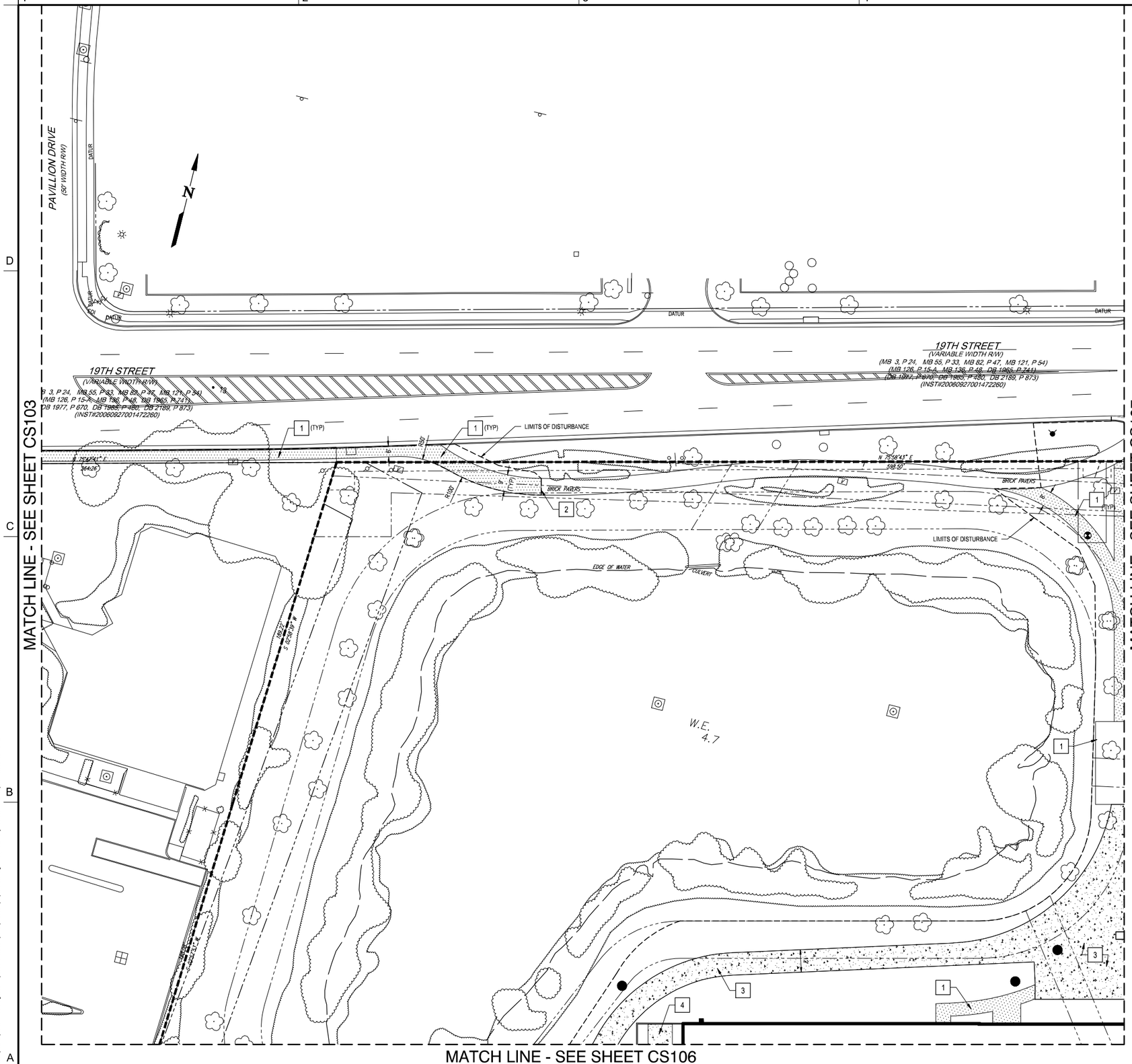
E:\Projects\7000\7142-HR Regional Sports Pavilion\CAD\Sheets\C\CS104.dwg Fri, 18 May 2018 - 3:55pm Rhonda.Parrill



GENERAL NOTES

1. SEE LAYOUT CONTROL SHEET C-004 FOR NORTHING AND EASTING COORDINATES ALONG CONSTRUCTION BASELINE.

CONSTRUCTION NOTES

1. CONCRETE SIDEWALK
2. MATCH WIDTH OF EXISTING WALK
3. HEAVY DUTY CONCRETE PAVEMENT
4. CONCRETE EQUIPMENT PAD

GRAPHIC SCALE(S)

1"=25' 0 25' 50' 100'

City of Virginia Beach

35 MEB General Contractors

VIRGINIA BEACH SPORTS CENTER

1045 19th Street
Virginia Beach, Virginia

DESIGNER

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4525 Main Street, Suite 1400
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757.455.5800

CONSULTANT

SEALS

SUBMITTAL

05/18/18

PROGRESS PRINT

REVISIONS

KEY PLAN

101	103		107
102	104	106	108

SHEET

SITE LAYOUT PLAN

CS105

SHEET - OF XX -

DESIGN RMS
DRAWN TAW
REVIEW -

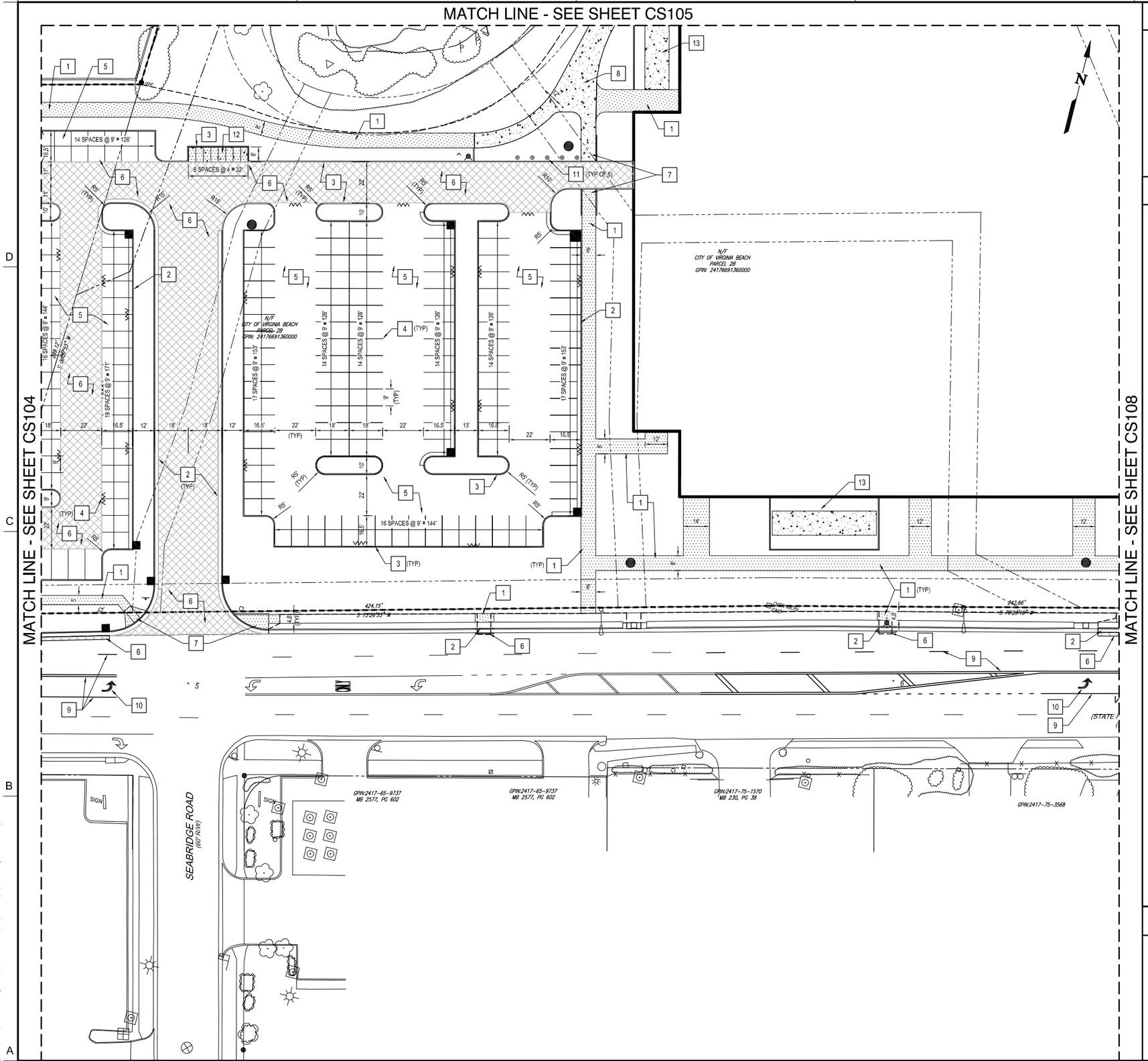
CN 7142

Spell checked by TWEAVER on 05/07/2018 9:53am

Rhonda.Parfil

Fri, 18 May 2018 - 3:56pm

\Projects\7000\7142-HR Regional Sports Pavilion\CAD\Sheets\C\CS105.dwg



GENERAL NOTES

1. RE-STRIPE PAVEMENT ON VIRGINIA BEACH BOULEVARD BETWEEN BIRCH LAKE ROAD AND WASHINGTON AVE WITH PAVEMENT STRIPING, PAVEMENT MESSAGE AND PAVEMENT ARROWS.
2. SEE LAYOUT CONTROL SHEET C-004 FOR NORTHING AND EASTING COORDINATES ALONG CONSTRUCTION BASELINE.

CONSTRUCTION NOTES

1. CONCRETE SIDEWALK
2. CONCRETE CURB AND GUTTER (VDOT STD CG-6)
3. CONCRETE CURB (VDOT STD CG-2)
4. PAVEMENT STRIPING
5. LIGHT DUTY ASPHALT PAVEMENT
6. HEAVY DUTY ASPHALT PAVEMENT
7. HANDICAP RAMP
8. HEAVY DUTY CONCRETE PAVEMENT
9. PAVEMENT STRIPING
10. PAVEMENT MARKING
11. REMOVABLE BOLLARD
12. LIGHT DUTY CONCRETE PAVEMENT (MOTORCYCLE PARKING)
13. CONCRETE EQUIPMENT PAD

GRAPHIC SCALE(S)

1"=25' 0 25' 50' 100'

City of Virginia Beach

MEB General Contractors

VIRGINIA BEACH SPORTS CENTER

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Virginia Beach, Virginia

DESIGNER

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SEALS

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05/18/18

PROGRESS PRINT

REVISIONS

KEY PLAN

101	103	105	107
102	104		108

SHEET

SITE LAYOUT PLAN

CS106

SHEET - OF XX -

DESIGN RMS
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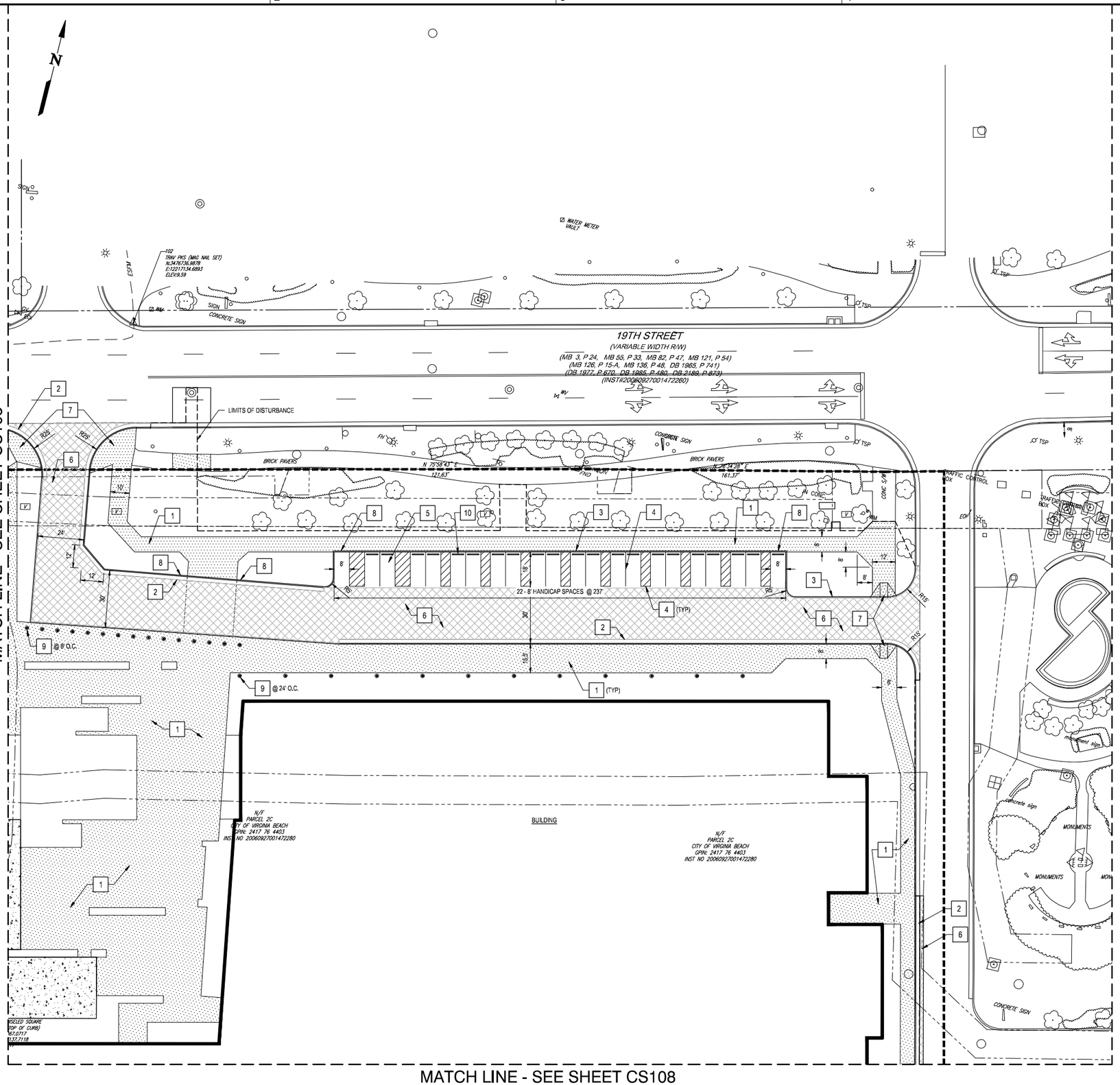
REVIEW -

CN 7142

Spell checked by TWEAVER on 05/07/2018 10:19am

I:\Projects\7000\7142-HR Regional Sports Pavilion\CAD\Sheets\C\CS106.dwg Fri, 18 May 2018 - 4:30pm baliver



GENERAL NOTES

1. RE-STRIPE PAVEMENT ON VIRGINIA BEACH BOULEVARD BETWEEN BIRCH LAKE ROAD AND WASHINGTON AVE WITH PAVEMENT STRIPING, PAVEMENT MESSAGE AND PAVEMENT ARROWS.
2. SEE LAYOUT CONTROL SHEET C-004 FOR NORTHING AND EASTING COORDINATES ALONG CONSTRUCTION BASELINE.

CONSTRUCTION NOTES

1. CONCRETE SIDEWALK
2. CONCRETE CURB & GUTTER
3. CONCRETE CURB
4. PAVEMENT STRIPING
5. LIGHT DUTY ASPHALT PAVEMENT
6. HEAVY DUTY ASPHALT PAVEMENT
7. HANDICAP RAMP
8. CURB WIPEDOWN
9. LIGHTED BOLLARD
10. PARKING BUMPER

GRAPHIC SCALE(S)

1"=25' 0 25' 50' 100'

Virginia Beach

35 MEB General Contractors

VIRGINIA BEACH SPORTS CENTER

1045 19th Street
Virginia Beach, Virginia

DESIGNER

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CONSULTANT

SEALS

SUBMITTAL

05/18/18

PROGRESS PRINT

REVISIONS

KEY PLAN

101	103	105	
102	104	106	108

SHEET

SITE LAYOUT PLAN

CS107

SHEET - OF XX -

DESIGN RMS
DRAWN TAW
REVIEW -

CN 7142

Spell checked by TWEAVER on 05/14/2018 11:32am

Q:\Projects\7000\7142-HR Regional Sports Pavilion\CAD\Sheets\C\CS107.dwg Fri, 18 May 2018 - 3:56pm Rhonda.Parfil

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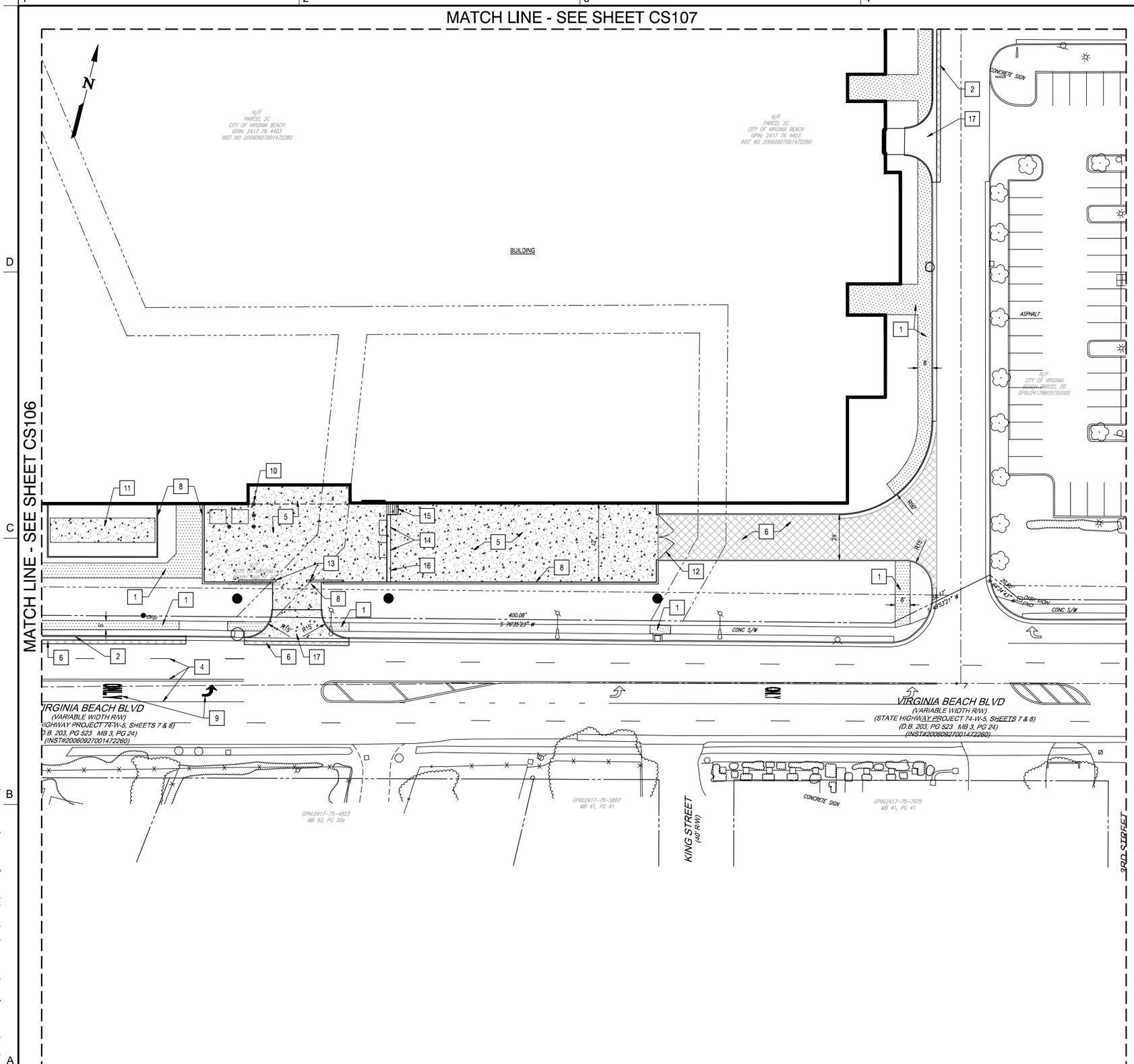

GENERAL NOTES

1. RE-STRIPE PAVEMENT ON VIRGINIA BEACH BOULEVARD BETWEEN BIRCH LAKE ROAD AND WASHINGTON AVE WITH PAVEMENT STRIPING, PAVEMENT MESSAGE AND PAVEMENT ARROWS.
2. SEE LAYOUT CONTROL SHEET C-004 FOR NORTHING AND EASTING COORDINATES ALONG CONSTRUCTION BASELINE.

CONSTRUCTION NOTES

1. CONCRETE SIDEWALK
2. CONCRETE CURB AND GUTTER (VDOT STD CG-6)
3. CONCRETE CURB
4. PAVEMENT STRIPING
5. HEAVY DUTY CONCRETE PAVEMENT
6. HEAVY DUTY ASPHALT PAVEMENT
7. HANDICAP RAMP
8. SCREEN WALL
9. PAVEMENT MARKING
10. UTILITY BOLLARD
11. CONCRETE EQUIPMENT PAD
12. SWING GATE (24' OPENING)
13. SLIDING GATE (26' OPENING)
14. DOCK LEVELER
15. CONCRETE STAIRS
16. TRENCH DRAIN
17. CONCRETE ENTRANCE (VDOT STD. CG-9D)

GRAPHIC SCALE(S)

1"=25' 0 25' 50' 100'

City of Virginia Beach

MEB General Contractors

VIRGINIA BEACH SPORTS CENTER

1045 19th Street
Virginia Beach, Virginia

DESIGNER

CLARKNEXSEN

4525 Main Street, Suite 1400
Virginia Beach, VA 23462
757.455.5800

CONSULTANT

SEALS

SUBMITTAL

05/18/18

PROGRESS PRINT

REVISIONS

KEY PLAN

101	103	105	107
102	104	106	

SHEET

SITE LAYOUT PLAN

CS108

SHEET - OF XX -

DESIGN RMS
DRAWN TAW
REVIEW -

CN 7142

I:\Projects\7000\7142-HR Regional Sports Pavilion\CAD\Sheets\C\CS108.dwg Fri, 18 May 2018 - 3:57pm Rhonda.Pastil

GENERAL NOTES

1. REFER TO STORM STRUCTURE SCHEDULE ON SHEET CG601 FOR ADDITIONAL INFORMATION.

GRAPHIC SCALE(S)

1"=25' 0 25' 50' 100'

City of Virginia Beach

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REVISIONS

KEY PLAN

103	105	107
102	104	106	108

SHEET

GRADING AND DRAINAGE PLAN

CG101

SHEET - OF XX -

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REVIEW -

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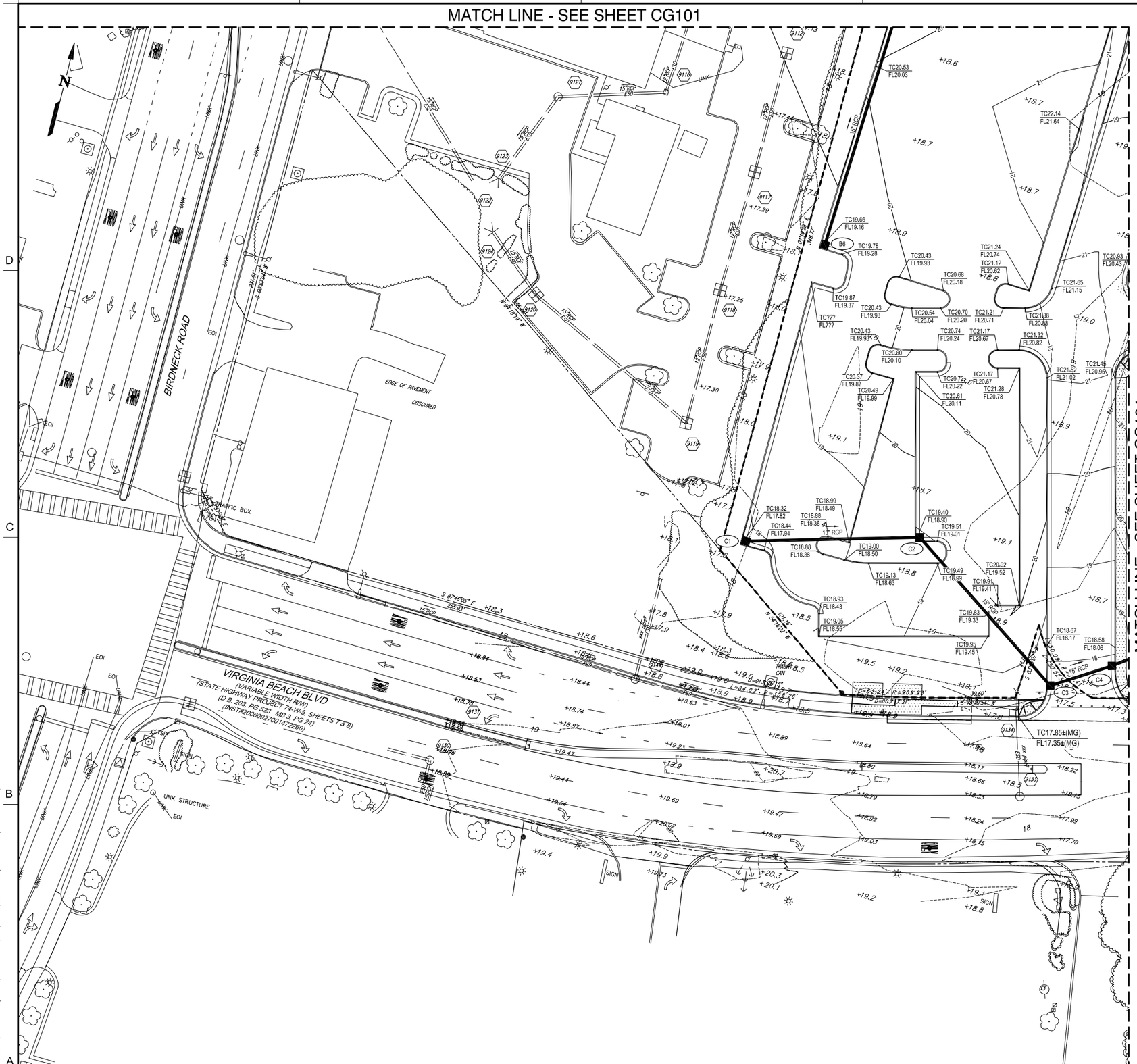

GENERAL NOTES

1. REFER TO STORM STRUCTURE SCHEDULE ON SHEET CG601 FOR ADDITIONAL INFORMATION.

GRAPHIC SCALE(S)

1"=25' 0 25' 50' 100'

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PROGRESS PRINT

REVISIONS

KEY PLAN

101	103	105	107
	104	106	108

SHEET

GRADING AND DRAINAGE PLAN

CG102

SHEET - OF XX -

DESIGN RMS
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REVIEW -

CN 7142

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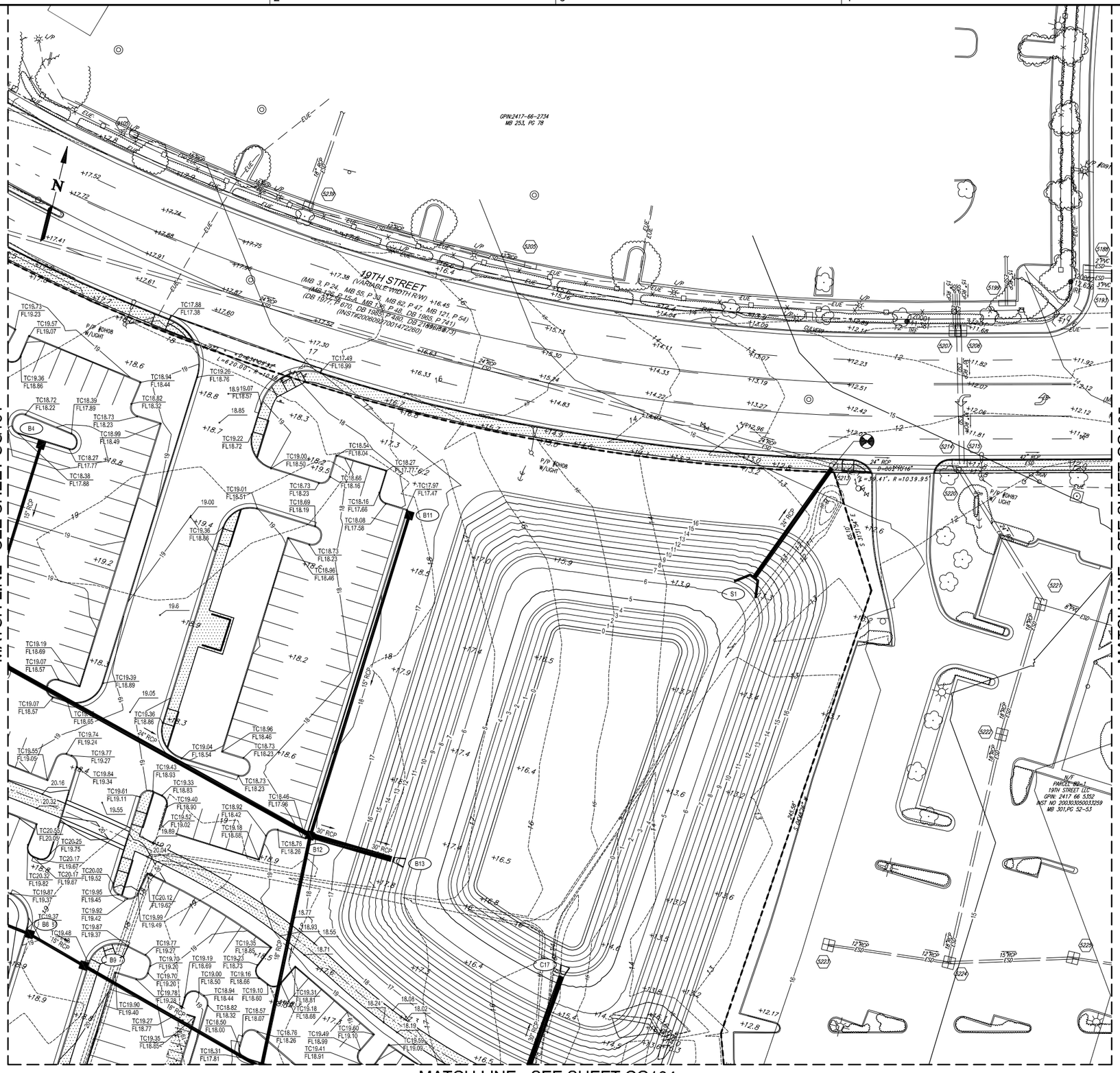

GENERAL NOTES

1. REFER TO STORM STRUCTURE SCHEDULE ON SHEET CG601 FOR ADDITIONAL INFORMATION.

GRAPHIC SCALE(S)

1"=25' 0 25' 50' 100'

City of Virginia Beach

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SEALS

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PROGRESS PRINT

REVISIONS

KEY PLAN

101		105	107
102	104	106	108

SHEET

GRADING AND DRAINAGE PLAN

CG103

SHEET - OF XX -

DESIGN RMS
DRAWN TAW
REVIEW -

CN 7142

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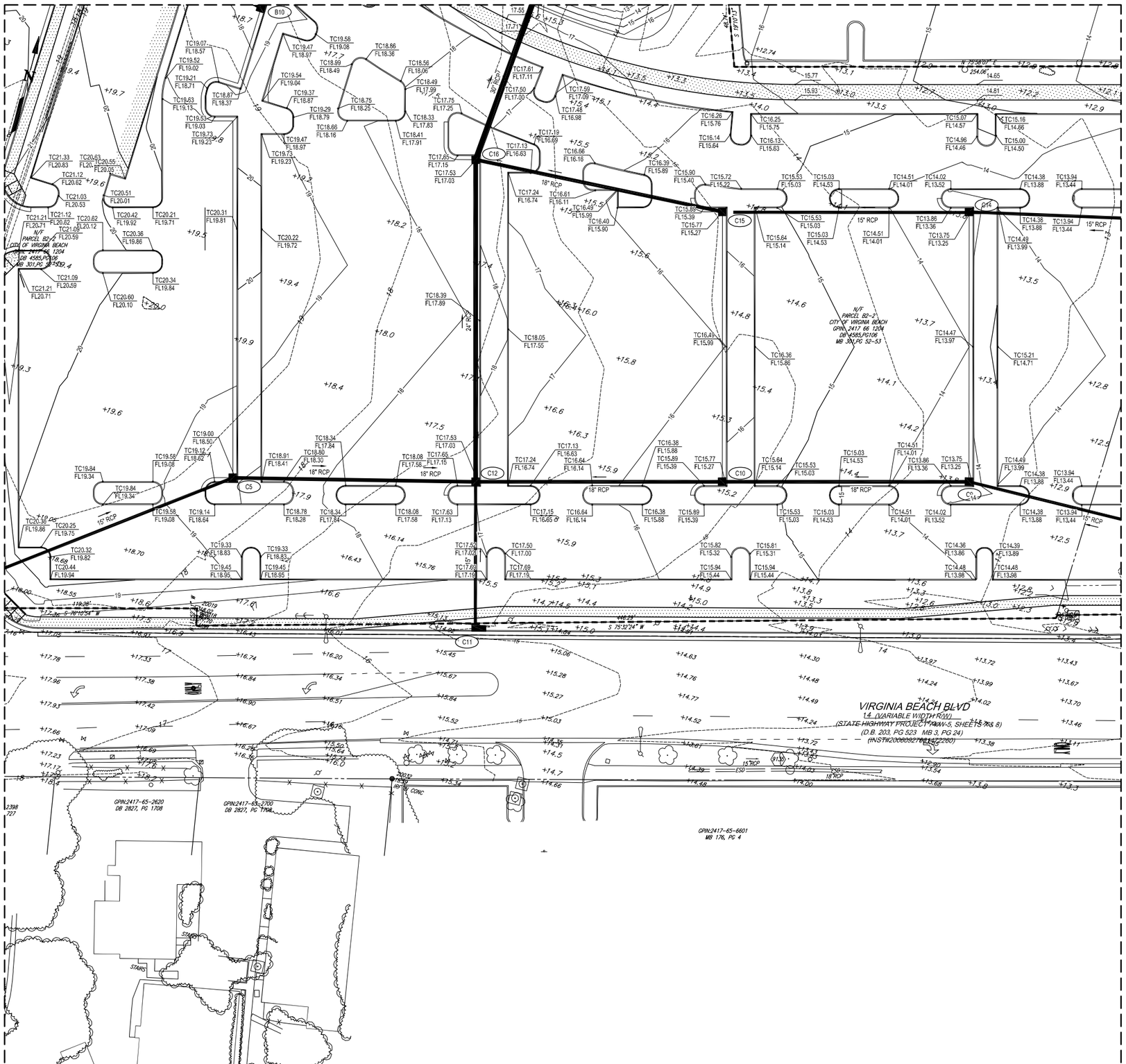

GENERAL NOTES

1. REFER TO STORM STRUCTURE SCHEDULE ON SHEET CG601 FOR ADDITIONAL INFORMATION.

GRAPHIC SCALE(S)

1"=25' 0 25' 50' 100'

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PROGRESS PRINT

REVISIONS

KEY PLAN

101	103	105	107
102		106	108

SHEET

GRADING AND DRAINAGE PLAN

CG104

SHEET - OF XX -

DESIGN RMS
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REVIEW -

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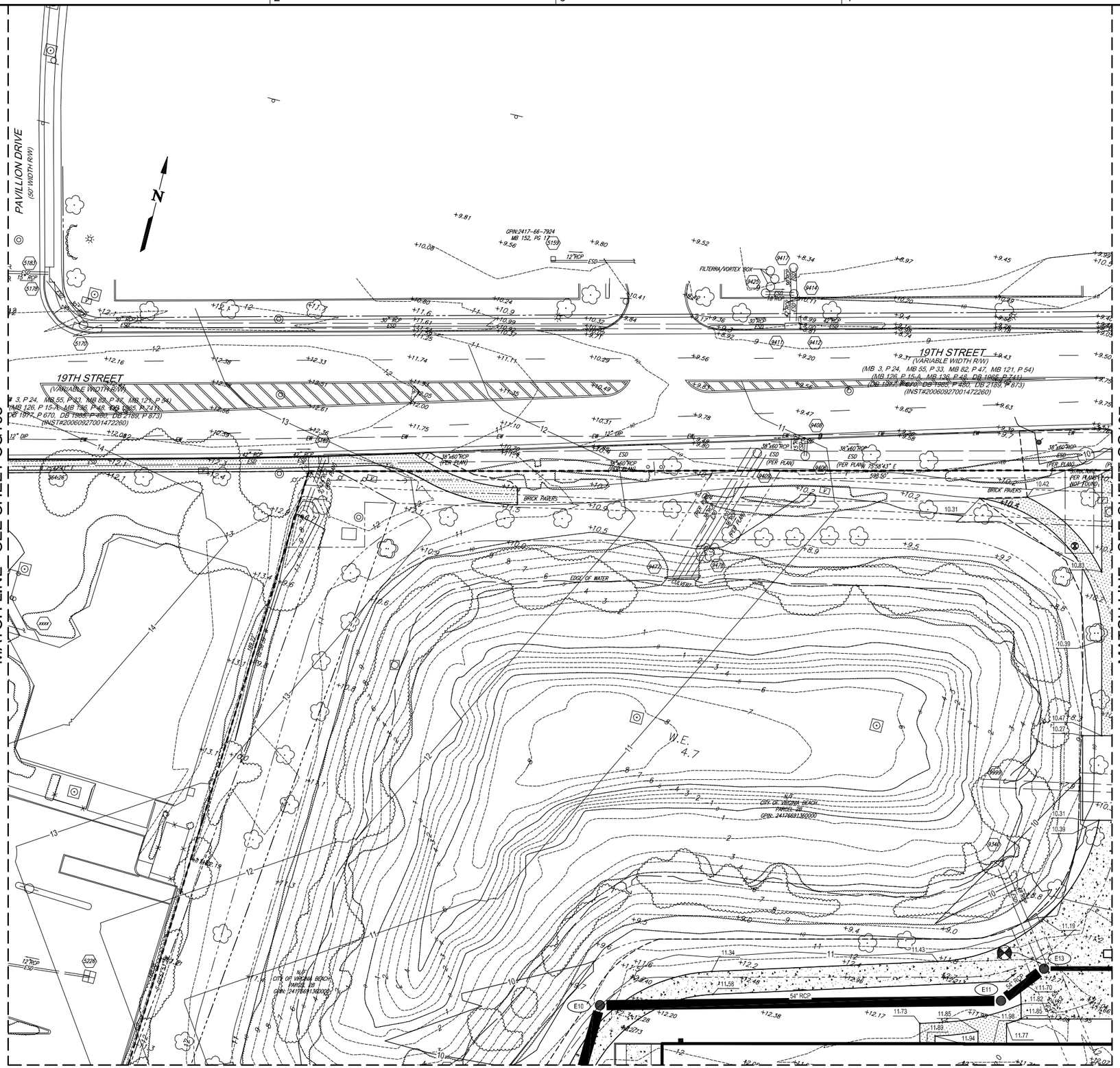
E:\Projects\7000\7142-HR Regional Sports Pavilion\CAD\Sheets\C\CG104.dwg Fri, 18 May 2018 - 4:27pm twesver

Spell checked by TWEAVER on 05/03/2018 4:07pm



GENERAL NOTES

1. REFER TO STORM STRUCTURE SCHEDULE ON SHEET CG601 FOR ADDITIONAL INFORMATION.

GRAPHIC SCALE(S)

1"=25'

0 25' 50' 100'

City of Virginia Beach

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REVISIONS

KEY PLAN

101	103		107
102	104	106	108

SHEET

GRADING AND DRAINAGE PLAN

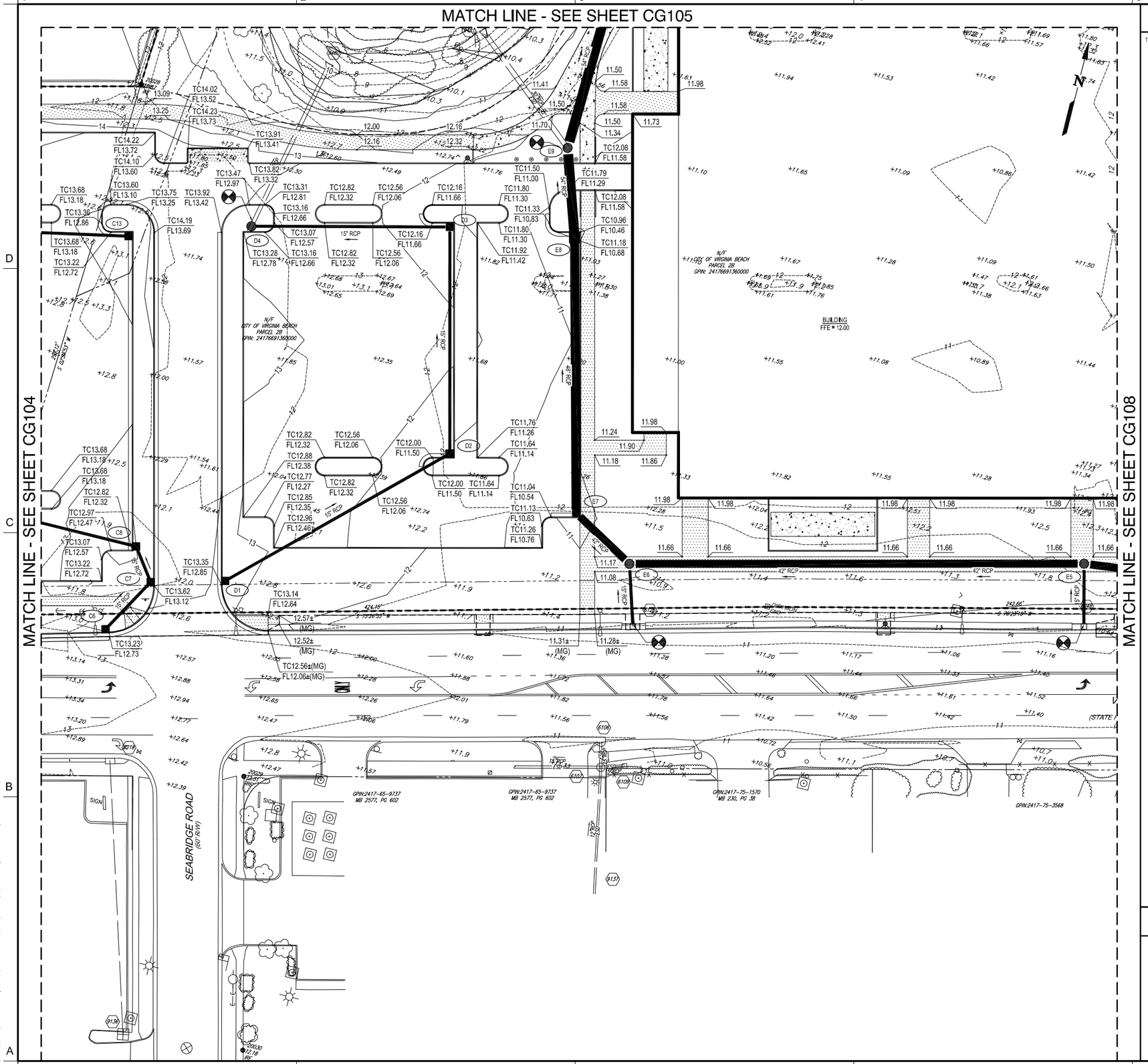
CG105

SHEET - OF XX -

DESIGN: RMS
DRAWN: TAW
REVIEW: -

CN 7142

\\Projects\7000\7142-HR Regional Sports Pavilion\CAD\Sheets\C\CG105.dwg Fri, 18 May 2018 - 4:27pm twesner



GENERAL NOTES

1. REFER TO STORM STRUCTURE SCHEDULE ON SHEET CG601 FOR ADDITIONAL INFORMATION.

GRAPHIC SCALE(S)

1"=25' 0 25' 50' 100'

City of Virginia Beach

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PROGRESS PRINT

REVISIONS

KEY PLAN

101	103	105	107
102	104		108

SHEET

GRADING AND DRAINAGE PLAN

CG106

SHEET - OF XX -

DESIGN: RMS
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REVIEW: -

CN 7142

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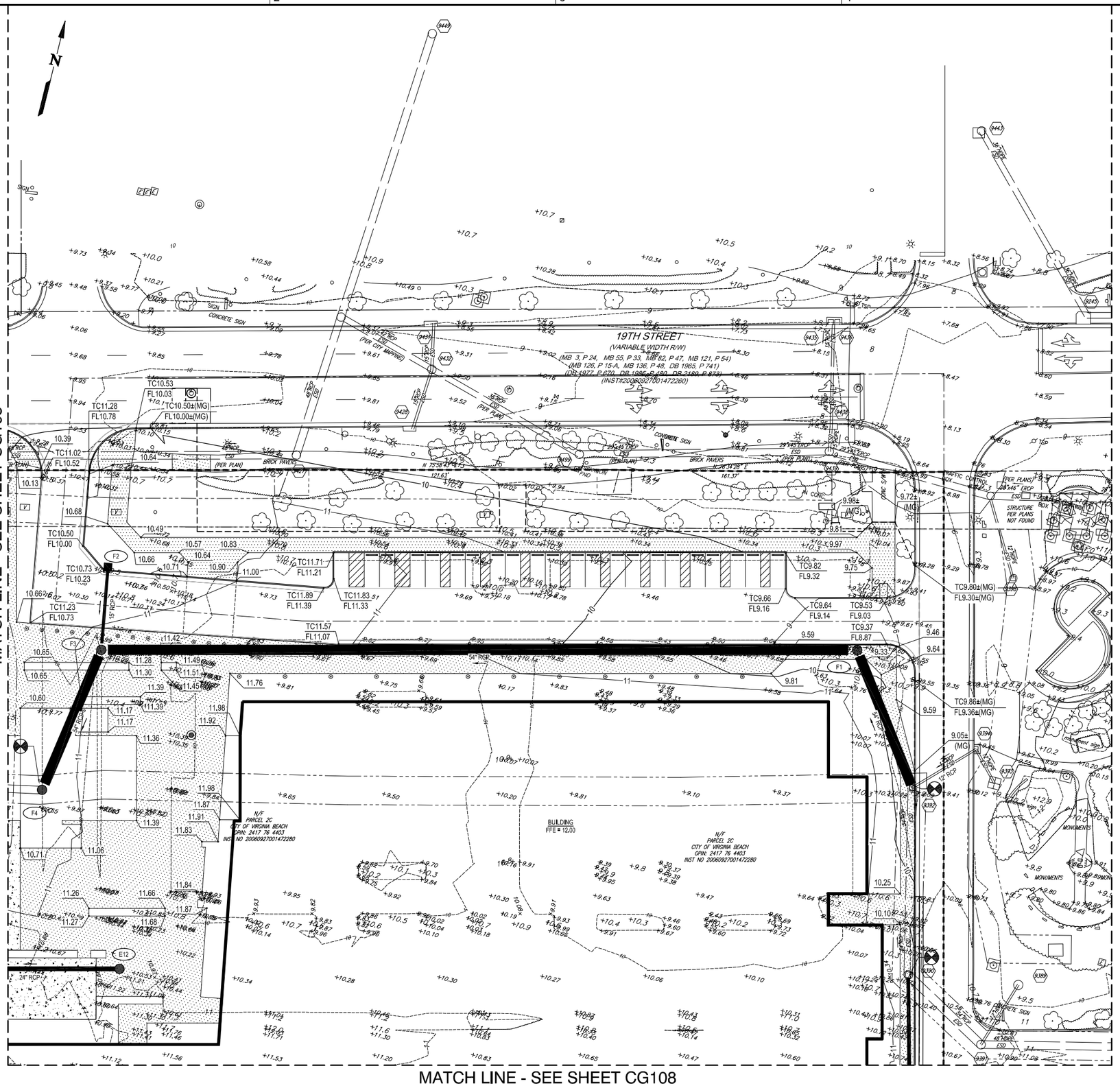
\\Projects\7000\7142-HR Regional Sports Pavilion\CAD\Sheets\C\CG106.dwg Fri, 18 May 2018 - 4:28pm twever



GENERAL NOTES

1. REFER TO STORM STRUCTURE SCHEDULE ON SHEET CG601 FOR ADDITIONAL INFORMATION.

GRAPHIC SCALE(S)

1"=25' 0 25' 50' 100'

Virginia Beach

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CONSULTANT

SEALS

SUBMITTAL

05/18/18

PROGRESS PRINT

REVISIONS

KEY PLAN

101	103	105	
102	104	106	108

SHEET

GRADING AND DRAINAGE PLAN

CG107

SHEET - OF XX -

DESIGN: RMS
DRAWN: TAW
REVIEW: -

CN 7142

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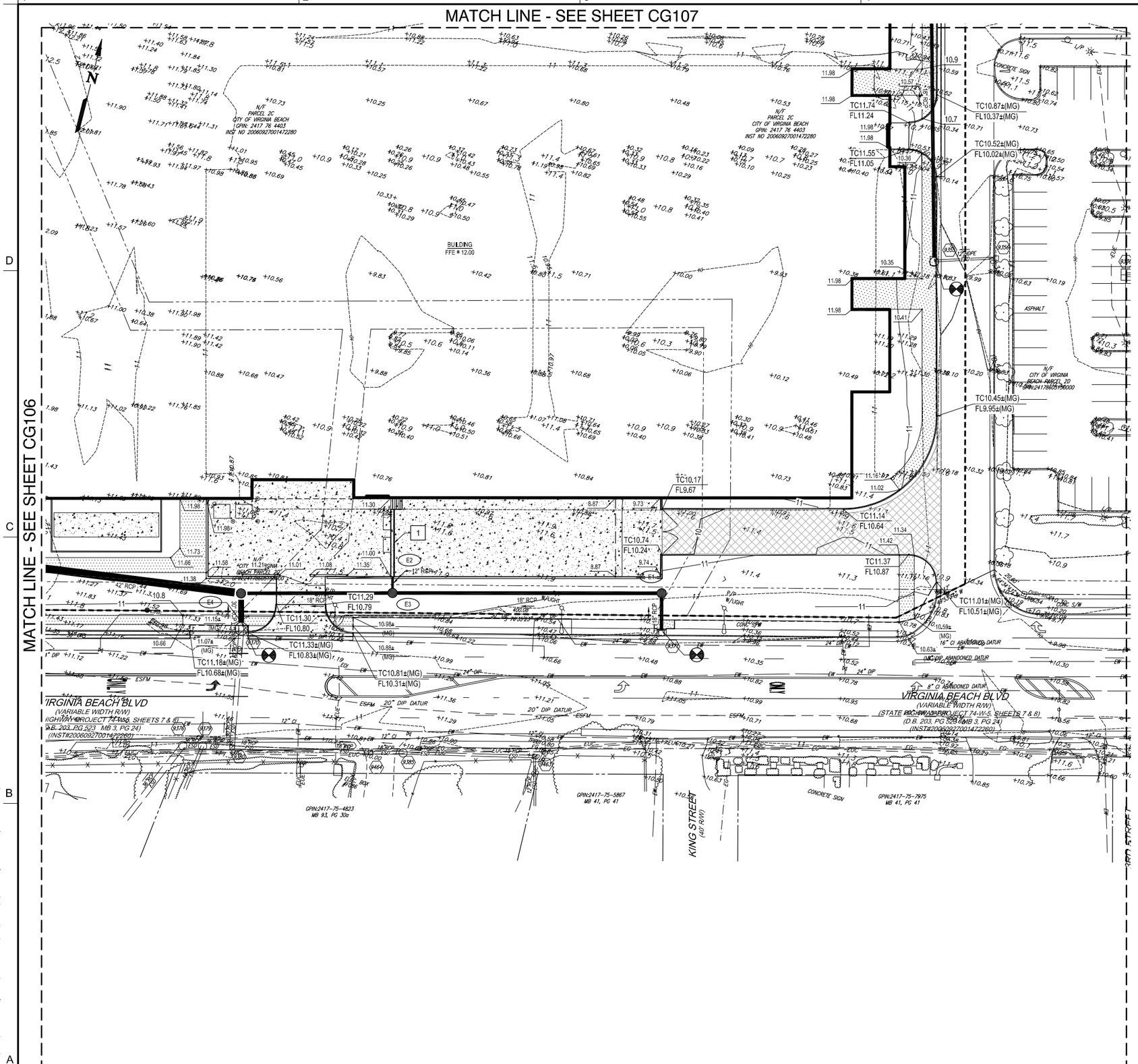
\\Projects\7000\7142-HR Regional Sports Pavilion\CAD\Sheets\C\CG107.dwg Fri, 18 May 2018 - 4:26pm tweaver



GENERAL NOTES

1. REFER TO STORM STRUCTURE SCHEDULE ON SHEET CG601 FOR ADDITIONAL INFORMATION.

CONSTRUCTION NOTES

1. TRENCH DRAIN

GRAPHIC SCALE(S)

1"=25' 0 25' 50' 100'

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PROGRESS PRINT

REVISIONS

KEY PLAN

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102	104	106	

SHEET

GRADING AND DRAINAGE PLAN

CG108

SHEET - OF XX -

DESIGN: RMS
DRAWN: TAW
REVIEW: -

CN 7142

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STORM STRUCTURE SCHEDULE

ID:	DETAILS:
5295 EX. CURB INLET	N:3476525.90 E:12215644.70 RIM=15.13 INV IN=13.61(E-15")
A1 VDOT STD DI-2A	N:3476458.18 E:12215724.31 RIM=17.48 INV OUT=14.15(NW-15")
A2 VDOT STD MH-1	N:3476516.31 E:12215671.73 RIM=18.03 INV IN=13.76(SE-15") INV OUT=13.76(W-15")

STORM PIPING SCHEDULE

ID	DETAILS:
A1-A2	78 LF - 15" RCP @ 0.50%
A2-5295	29 LF - 15" RCP @ 0.50%

STORM STRUCTURE SCHEDULE

ID:	DETAILS:
B1 VDOT STD DI-2A	N:3476255.49 E:12215714.89 RIM=17.47 INV OUT=14.10(E-15")
B2 VDOT STD DI-2A	N:3476409.12 E:12215851.80 RIM=18.06 INV OUT=14.75(S-15")
B3 VDOT STD DI-2A	N:3476278.40 E:12215844.29 RIM=17.59 INV IN=14.10(N-15") INV IN=13.44(W-15") INV OUT=13.44(E-18")
B4 VDOT STD DI-2A	N:3476383.99 E:12215978.59 RIM=17.69 INV OUT=14.35(S-15")
B5 VDOT STD DI-2A	N:3476271.23 E:12215972.28 RIM=17.89 INV IN=12.80(W-18") INV IN=13.79(N-15") INV OUT=12.80(E-24")
B6 VDOT STD DI-2A	N:3475955.82 E:12215900.07 RIM=19.20 INV OUT=15.40(N-15")
B7 VDOT STD DI-2A	N:3476149.42 E:12215910.92 RIM=18.60 INV IN=14.43(S-15") INV OUT=14.43(E-15")
B8 VDOT STD DI-2A	N:3476133.30 E:12216034.66 RIM=18.93 INV IN=13.81(W-15") INV OUT=13.81(E-15")
B9 VDOT STD DI-2A	N:3476124.11 E:12216066.19 RIM=19.02 INV IN=13.64(W-15") INV OUT=13.64(E-18")
B10 VDOT STD DI-2A	N:3476094.56 E:12216169.65 RIM=17.64 INV IN=13.10(W-18") INV OUT=13.10(N-18")
B11 VDOT STD DI-3A	N:3476394.75 E:12216175.06 RIM=17.87 INV OUT=14.15(S-15")
B12 VDOT STD DI-3A	N:3476219.09 E:12216165.22 RIM=18.27 INV IN=11.80(W-24") INV IN=13.27(N-15") INV IN=12.48(S-18") INV OUT=8.22(E-30")
B13 VDOT STD ES-1; 30"	N:3476217.28 E:12216210.99 RIM=10.88 INV IN=8.00(W-30")

STORM PIPING SCHEDULE

ID	DETAILS:
B1-B3	131 LF - 15" RCP @ 0.50%
B2-B3	131 LF - 15" RCP @ 0.50%
B3-B5	128 LF - 18" RCP @ 0.50%
B4-B5	113 LF - 15" RCP @ 0.50%
B5-B12	200 LF - 24" RCP @ 0.50%
B6-B7	194 LF - 15" RCP @ 0.50%
B7-B8	125 LF - 15" RCP @ 0.50%
B8-B9	33 LF - 15" RCP @ 0.50%
B9-B10	108 LF - 18" RCP @ 0.50%
B10-B12	125 LF - 18" RCP @ 0.50%
B11-B12	176 LF - 15" RCP @ 0.50%
B12-B13	46 LF - 30" RCP @ 0.48%

STORM STRUCTURE SCHEDULE

ID:	DETAILS:
C1 VDOT STD DI-2A	N:3475792.48 E:12215897.37 RIM=17.86 INV OUT=14.56(E-15")
C2 VDOT STD DI-2A	N:3475816.82 E:12215986.69 RIM=18.95 INV IN=14.10(W-15") INV OUT=14.10(SE-15")
C3 VDOT STD DI-2A	N:3475756.90 E:12216073.20 RIM=17.71 INV IN=13.57(NW-15") INV OUT=13.57(NE-15")
C4 VDOT STD DI-2A	N:3475774.99 E:12216102.59 RIM=17.88 INV IN=13.40(SW-15") INV OUT=13.40(NE-15")
C5 VDOT STD DI-2A	N:3475854.58 E:12216214.18 RIM=18.54 INV IN=12.71(SW-15") INV OUT=12.71(E-18")
C6 VDOT STD DI-3A	N:3475897.70 E:12216714.21 RIM=13.25 INV OUT=9.00(NE-15")
C7 VDOT STD DI-3A	N:3475928.15 E:12216731.66 RIM=13.52 INV IN=8.82(SW-15") INV OUT=8.82(NW-15")
C8 VDOT STD DI-2A	N:3475944.89 E:12216719.35 RIM=12.99 INV IN=8.72(SE-15") INV OUT=8.72(W-15")
C9 VDOT STD DI-2A	N:3475944.70 E:12216585.42 RIM=13.29 INV IN=8.05(E-15") INV OUT=8.05(W-18")
C10 VDOT STD DI-2A	N:3475913.85 E:12216461.15 RIM=15.31 INV IN=7.41(E-18") INV OUT=7.41(W-18")
C11 VDOT STD DI-3B	N:3475809.66 E:12216355.10 RIM=13.53 INV OUT=11.51(N-15")
C12 VDOT STD DI-2A	N:3475882.93 E:12216337.00 RIM=17.07 INV IN=12.08(W-18") INV IN=6.77(E-18") INV IN=11.13(S-15") INV OUT=6.77(N-24")
C13 VDOT STD DI-2A	N:3476105.95 E:12216675.18 RIM=12.56 INV OUT=8.75(W-15")
C14 VDOT STD DI-2A	N:3476080.46 E:12216551.67 RIM=13.29 INV IN=8.12(E-15")
C15 VDOT STD DI-2A	N:3476049.69 E:12216427.46 RIM=15.31 INV OUT=7.48(W-18")
C16 VDOT STD DI-4A	N:3476045.06 E:12216296.76 RIM=17.07 INV IN=5.94(S-24") INV IN=6.83(E-18") INV OUT=5.94(N-30")
C17 VDOT STD ES-1; 30"	N:3476179.01 E:12216310.88 RIM=7.60 INV IN=5.26(S-30")

STORM PIPING SCHEDULE

ID	DETAILS:
C1-C2	93 LF - 15" RCP @ 0.50%
C2-C3	105 LF - 15" RCP @ 0.50%
C3-C4	35 LF - 15" RCP @ 0.50%
C4-C5	137 LF - 15" RCP @ 0.50%
C5-C12	126 LF - 18" RCP @ 0.50%
C6-C7	35 LF - 15" RCP @ 0.50%
C7-C8	21 LF - 15" RCP @ 0.50%
C8-C9	134 LF - 15" RCP @ 0.50%
C9-C10	128 LF - 18" RCP @ 0.50%
C10-C12	128 LF - 18" RCP @ 0.50%
C11-C12	75 LF - 15" RCP @ 0.50%
C12-C16	167 LF - 24" RCP @ 0.50%
C13-C14	126 LF - 15" RCP @ 0.50%
C14-C15	128 LF - 15" RCP @ 0.50%
C15-C16	131 LF - 18" RCP @ 0.50%
C16-C17	135 LF - 30" RCP @ 0.50%

STORM STRUCTURE SCHEDULE

ID:	DETAILS:
D1 VDOT STD DI-3A	N:3475938.43 E:12216770.41 RIM=13.32 INV OUT=9.55(NE-15")
D2 VDOT STD DI-2A	N:3476034.12 E:12216871.33 RIM=11.43 INV IN=8.85(SW-15") INV OUT=8.86(N-15")
D3 VDOT STD DI-2A	N:3476152.44 E:12216841.90 RIM=11.59 INV IN=8.25(S-15") INV OUT=8.24(W-15")
D4 VDOT STD MH-1	N:3476127.04 E:12216738.13 RIM=13.26 INV IN=7.71(E-15") INV OUT=6.26(N-24")

STORM PIPING SCHEDULE

ID	DETAILS:
D1-D2	139 LF - 15" RCP @ 0.50%
D2-D3	122 LF - 15" RCP @ 0.50%
D3-D4	107 LF - 15" RCP @ 0.50%

STORM STRUCTURE SCHEDULE

ID:	DETAILS:
E1 VDOT STD MH-1	N:3476127.52 E:12217557.30 RIM=10.08 INV IN=5.54(S-18") INV OUT=5.53(W-18")
E2 TRENCH DRAIN	N:3476102.37 E:12217415.52 RIM=8.85 INV OUT=7.62(S-12")
E3 VDOT STD MH-1	N:3476093.03 E:12217417.81 RIM=11.24 INV IN=5.22(E-18") INV IN=7.57(N-12") INV OUT=5.22(W-18")
E4 VDOT STD MH-1	N:3476073.35 E:12217339.36 RIM=11.33 INV IN=6.02(S-30") INV IN=5.05(E-18") INV OUT=5.05(W-42")
E5 VDOT STD MH-1	N:3476058.87 E:12217216.99 RIM=11.63 INV IN=4.78(E-42") INV IN=6.97(S-15") INV OUT=4.78(W-42")
E6 VDOT STD JB-1	N:3475999.77 E:12216979.48 RIM=11.33 INV IN=4.25(E-42") INV IN=6.83(S-15") INV OUT=4.25(NW-42")
E7 VDOT STD DI-4A	N:3476019.43 E:12216945.00 RIM=10.39 INV IN=4.17(SE-42") INV OUT=4.17(N-48")
E8 VDOT STD DI-4A	N:3476162.98 E:12216908.50 RIM=10.54 INV IN=3.85(S-48") INV OUT=3.85(N-54")
E9 VDOT STD JB-1	N:3476209.02 E:12216893.19 RIM=11.37 INV IN=3.74(S-54") INV OUT=3.74(N-54") INV OUT=5.60(NW-30")
E10 VDOT STD JB-1	N:3476309.10 E:12216896.31 RIM=10.98 INV IN=3.53(S-54") INV OUT=3.53(E-54")
E11 VDOT STD JB-1	N:3476362.10 E:12217100.00 RIM=11.75 INV IN=3.07(W-54") INV OUT=3.07(NE-54")
E12 VDOT STD MH-1	N:3476406.60 E:12217209.39 RIM=11.55 INV OUT=5.50(W-24")
E13 VDOT STD JB-1	N:3476383.90 E:12217117.86 RIM=11.56 INV IN=3.01(SW-54") INV IN=5.30(E-24") INV OUT=3.01(NW-48")

STORM PIPING SCHEDULE

ID	DETAILS:
6048-E5	34 LF - 15" RCP @ 0.50%
6126-E6	34 LF - 15" RCP @ 0.50%
9370-E4	19 LF - 30" RCP @ 0.50%
9371-E1	21 LF - 18" RCP @ 0.21%
E1-E3	144 LF - 18" RCP @ 0.22%
E2-E3	10 LF - 12" RCP @ 0.50%
E3-E4	81 LF - 18" RCP @ 0.22%
E4-E5	123 LF - 42" RCP @ 0.22%
E5-E6	245 LF - 42" RCP @ 0.22%
E6-E7	40 LF - 42" RCP @ 0.22%
E7-E8	148 LF - 48" RCP @ 0.22%
E8-E9	49 LF - 54" RCP @ 0.22%
E9-E10	100 LF - 54" RCP @ 0.22%
E10-E11	210 LF - 54" RCP @ 0.22%
E11-E13	28 LF - 54" RCP @ 0.22%
E12-E13	94 LF - 24" RCP @ 0.22%

STORM STRUCTURE SCHEDULE

ID:	DETAILS:
9355 EX. CURB INLET	N:3476334.30 E:12217655.87 RIM=10.22 INV IN=5.20(E-12") INV OUT=5.18(N-18")
9390 EX. STORM MANHOLE	N:3476503.35 E:12217611.91 RIM=10.22 INV IN=4.60(S-18") INV IN=2.09(SE-54") INV OUT=1.85(N-54")
9392 EX. CURB INLET	N:3476599.13 E:12217590.33 RIM=9.39 INV IN=1.92(S-54") INV IN=5.42(NE-12") INV OUT=1.92(NW-54")
F1 VDOT MODIFIED JB-1	N:3476662.21 E:12217544.82 RIM=9.15 INV IN=1.74(SE-54") INV OUT=1.74(W-54")
F2 VDOT STD DI-3A	N:3476609.67 E:12217152.69 RIM=10.72 INV OUT=6.75(S-15")
F3 VDOT STD JB-1	N:3476566.73 E:12217159.78 RIM=11.12 INV IN=0.81(E-54") INV IN=6.65(N-15") INV OUT=0.81(S-54")
F4 VDOT STD JB-1	N:3476487.96 E:12217147.29 RIM=10.75 INV IN=0.62(N-54") INV OUT=0.62(W-54")

STORM PIPING SCHEDULE

ID	DETAILS:
9355-9390	175 LF - 18" RCP @ 0.33%
9392-F1	78 LF - 54" RCP @ 0.23%
F1-F3	397 LF - 54" RCP @ 0.23%
F2-F3	44 LF - 15" RCP @ 0.23%
F3-F4	80 LF - 54" RCP @ 0.23%

STORM STRUCTURE SCHEDULE

ID:	DETAILS:
5213 EX. CATCH BASIN	N:3476473.53 E:12216384.89 RIM=9.04 INV IN=6.65(S-24") INV IN=6.66(W-24") INV OUT=6.65(E-24")
S1 VDOT MODIFIED EW-2	N:3476406.50 E:12216358.61 RIM=N/A INV OUT=7.30(N-24")

STORM PIPING SCHEDULE

ID	DETAILS:
S1 - 5213	72 LF - 24" RCP @ 0.90%

City of Virginia Beach
35 MEB General Contractors

VIRGINIA BEACH SPORTS CENTER

1045 19th Street
Virginia Beach, Virginia

DESIGNER

CLARKNEXSEN

4525 Main Street, Suite 1400
Virginia Beach, VA 23462
757.455.5800

CONSULTANT

SEALS

SUBMITTAL

05/18/18

PROGRESS PRINT

REVISIONS

KEY PLAN

SHEET

STORM
STRUCTURE
SCHEDULE

CG601

SHEET - OF XX -

DESIGN: RMS
DRAWN: TAW
REVIEW: -

CN 7142

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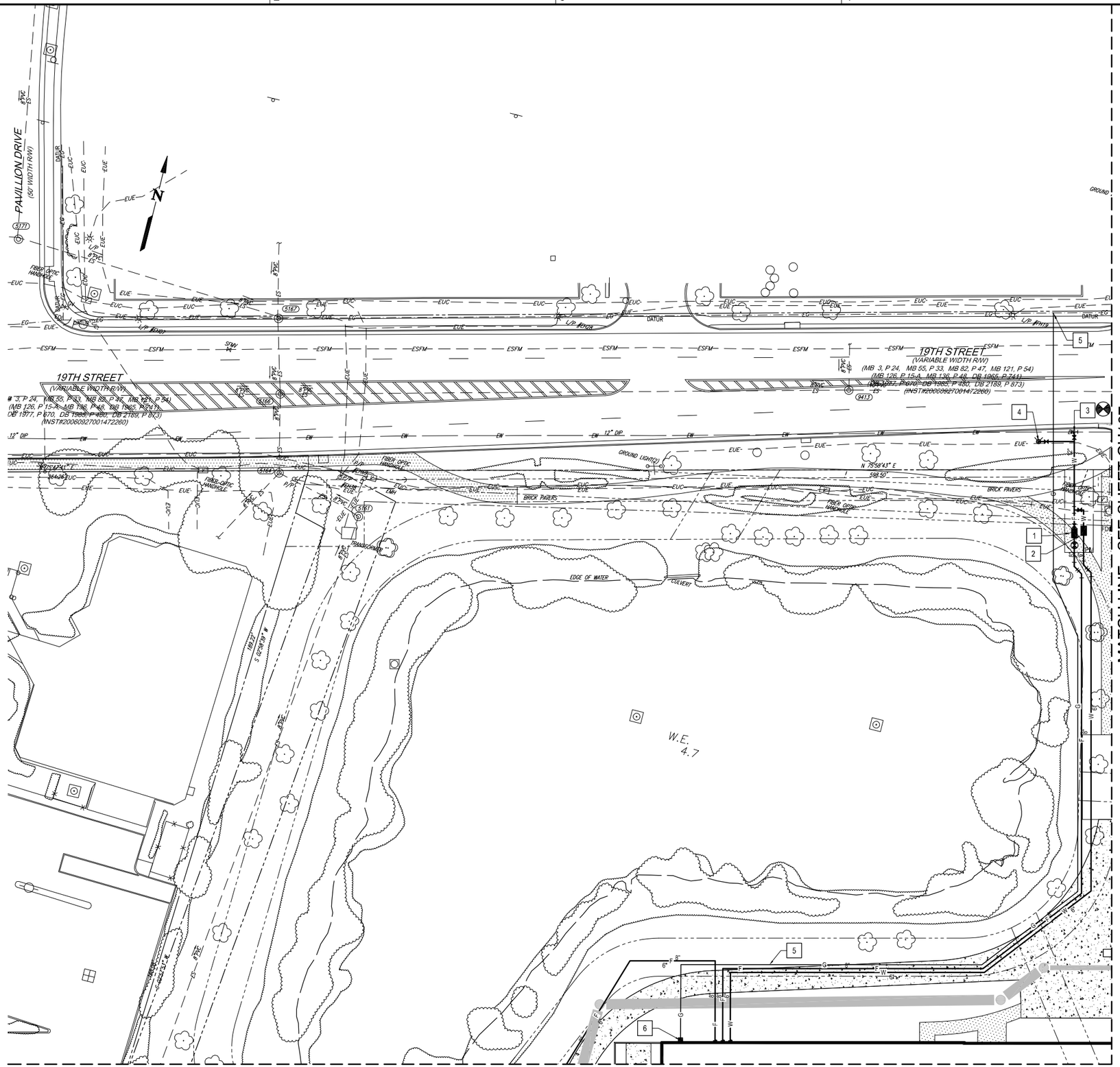

GENERAL NOTES

CONSTRUCTION NOTES

1. 6" DETECTOR CHECK AND VAULT
2. 4" WATER METER AND VAULT
3. CONNECT TO 12" WATER WITH TAPPING SLEEVE AND VALVE
4. FIRE HYDRANT ASSEMBLY
5. GAS SERVICE (BY OTHERS)
6. GAS METER (BY OTHERS)

GRAPHIC SCALE(S)

1"=25' 0 25' 50' 100'

City of Virginia Beach

MEB General Contractors

VIRGINIA BEACH SPORTS CENTER

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Virginia Beach, Virginia

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SEALS

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REVISIONS

KEY PLAN

101	103		107
102	104	106	108

SHEET

SITE UTILITY PLAN

CU105

SHEET - OF XX -

DESIGN -
DRAWN -
REVIEW -

CN 7142

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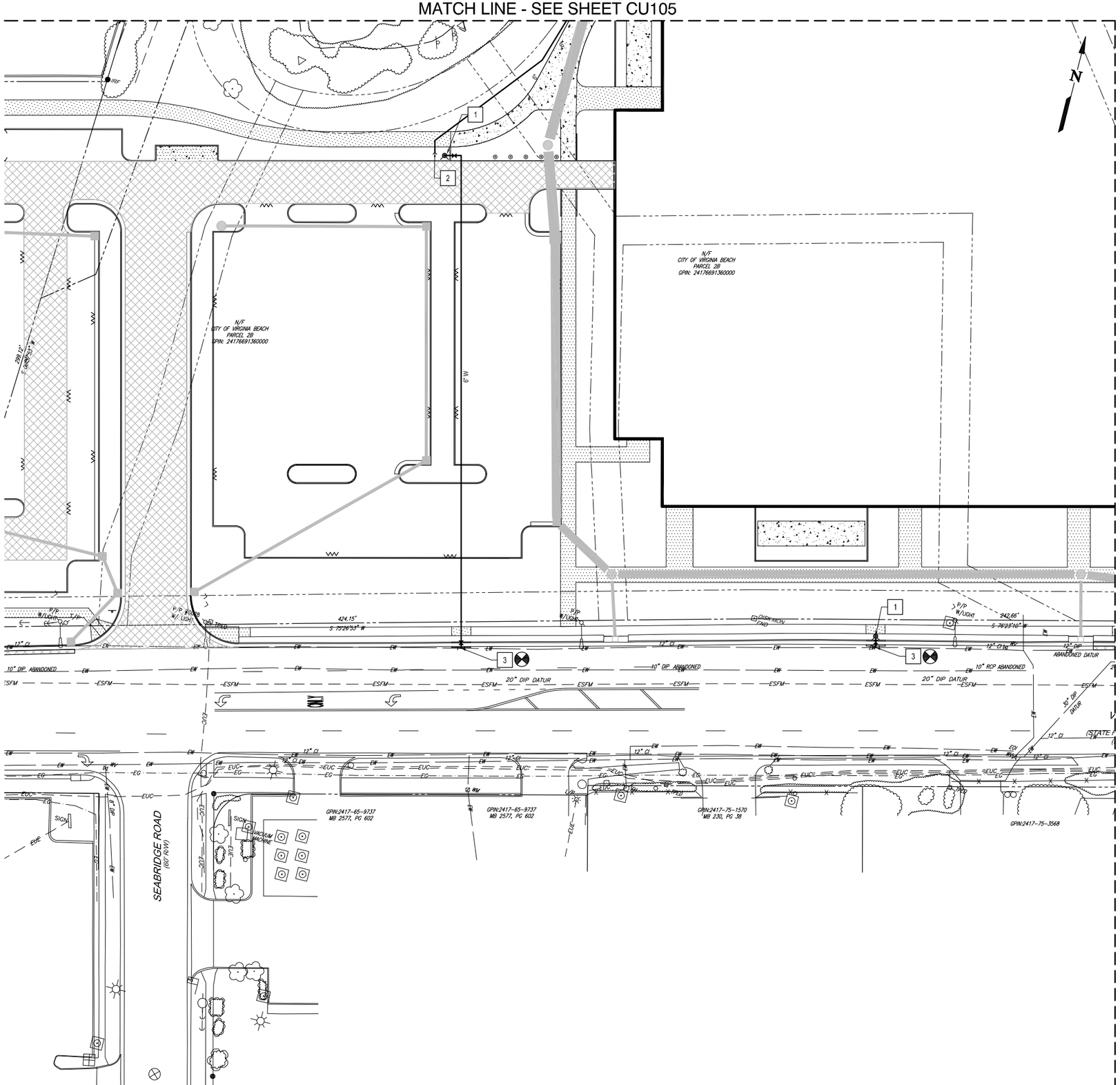

GENERAL NOTES

CONSTRUCTION NOTES

1. FIRE HYDRANT ASSEMBLY
2. FIRE DEPARTMENT CONNECTION
3. CONNECT TO EXISTING 12" WATER WITH TAPPING SLEEVE & VALVE

GRAPHIC SCALE(S)

1"=25' 0 25' 50' 100'

City of Virginia Beach

MEB General Contractors

VIRGINIA BEACH SPORTS CENTER

1045 19th Street
Virginia Beach, Virginia

DESIGNER

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Virginia Beach, VA 23462
757.455.5800

CONSULTANT

SEALS

SUBMITTAL

05/18/18

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REVISIONS

KEY PLAN

101	103	105	107
102	104		108

SHEET

SITE UTILITY PLAN

CU106

SHEET - OF XX -

DESIGN: RMS
DRAWN: TAW
REVIEW: -

CN 7142

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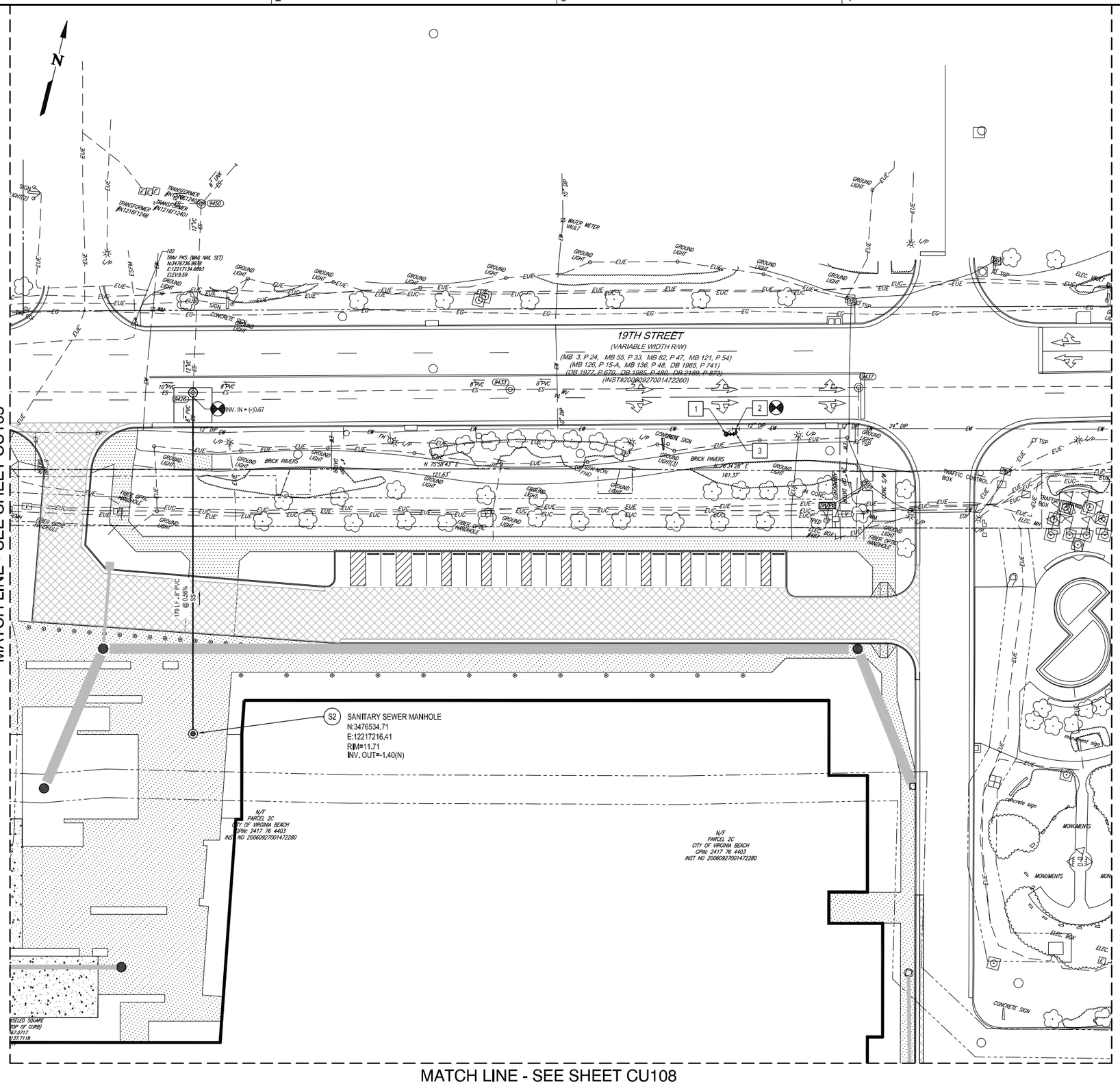

GENERAL NOTES

CONSTRUCTION NOTES

1. FIRE HYDRANT ASSEMBLY
2. CONNECT TO EXISTING 12" WATER WITH TAPPING SLEEVE & VALVE
3. 6" - 90° BEND

GRAPHIC SCALE(S)

1"=25' 0 25' 50' 100'

City of Virginia Beach

35 MEB General Contractors

VIRGINIA BEACH SPORTS CENTER

1045 19th Street
Virginia Beach, Virginia

DESIGNER

CLARKNEXSEN

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Virginia Beach, VA 23462
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CONSULTANT

SEALS

SUBMITTAL

05/18/18

PROGRESS PRINT

REVISIONS

KEY PLAN

101	103	105	
102	104	106	108

SHEET

SITE UTILITY PLAN

CU107

SHEET - OF XX -

DESIGN: RMS
DRAWN: TAW
REVIEW: -

CN 7142

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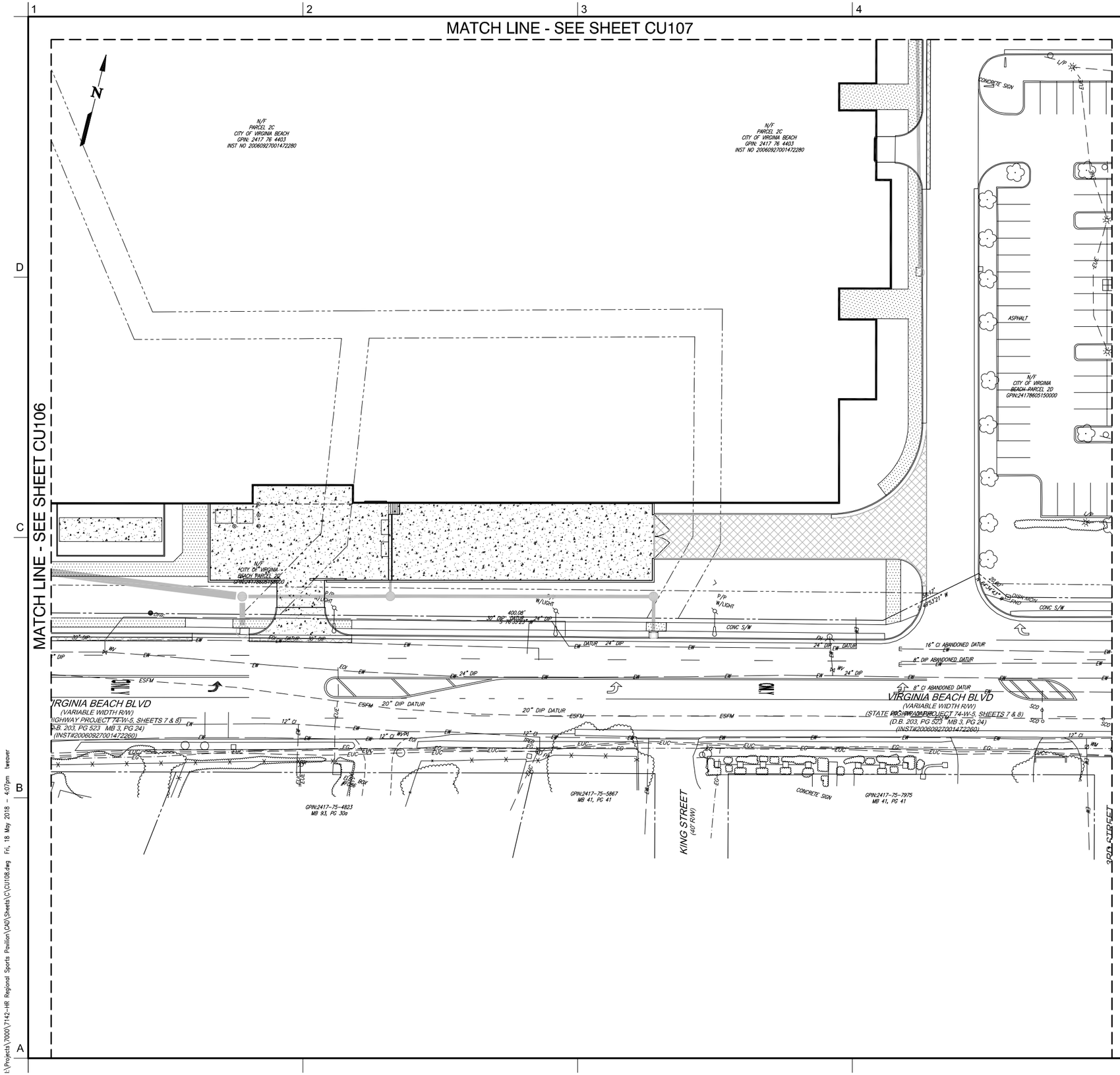

GENERAL NOTES

CONSTRUCTION NOTES

GRAPHIC SCALE(S)

1"=25' 0 25' 50' 100'

City of Virginia Beach
35 MEB General Contractors

VIRGINIA BEACH SPORTS CENTER

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PROGRESS PRINT

REVISIONS

KEY PLAN

101	103	105	107
102	104	106	

SHEET

SITE UTILITY PLAN

CU108

SHEET - OF XX -

DESIGN RMS
DRAWN TAW
REVIEW -

CN 7142

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EROSION & SEDIMENT CONTROL (ESC) AND TREE PROTECTION NOTES

1. UNLESS OTHERWISE INDICATED, ALL VEGETATIVE AND STRUCTURAL EROSION AND SEDIMENT CONTROL AND TREE PROTECTION PRACTICES SHALL BE CONSTRUCTED AND MAINTAINED ACCORDING TO MINIMUM STANDARDS AND SPECIFICATIONS OF THE VIRGINIA EROSION AND SEDIMENT CONTROL HANDBOOK (VESCH) AND THE VIRGINIA EROSION AND SEDIMENT CONTROL REGULATIONS (4VAC50-30 ET SEQ), CHAPTER 30 AND APPENDIX E (TREE PLANTING, PRESERVATION AND REPLACEMENT) AND ANY OTHER APPLICABLE SECTIONS OF THE CODE OF THE CITY OF VIRGINIA BEACH AND THE PLANNING DEPARTMENT'S LANDSCAPING GUIDE.

2. THE CONTRACTOR SHALL EXERCISE EVERY REASONABLE PRECAUTION, INCLUDING THE APPLICATION OF TEMPORARY AND/OR PERMANENT MEASURES DEEMED NECESSARY BEFORE, DURING, AND AFTER CONSTRUCTION TO CONTROL EROSION AND PREVENT OR MINIMIZE SEDIMENT RUNOFF AND PROTECT TREES AND VEGETATION. THE OWNER'S INSPECTOR RESERVES THE RIGHT TO REQUIRE OTHER MEASURES NOT SPECIFICALLY DESCRIBED HEREIN TO CORRECT ANY EROSION, SILTATION OR TREE PROTECTION CONDITION.

3. NON-COMPLIANCE WITH ANY ESC REGULATION OR POLICY MAY RESULT IN A NOTICE TO COMPLY, STOP WORK ORDER (SWO) OR OTHER LEGAL ACTION.

4. A COPY OF THE EROSION AND SEDIMENT CONTROL PLAN APPROVED BY PLANNING DEPARTMENT/DEVELOPMENT SERVICES CENTER (DSC) SHALL BE KEPT AT THE SITE AT ALL TIMES.

5. AFTER OBTAINING THE LAND DISTURBING PERMIT AND AT LEAST 48-HOURS PRIOR TO ANY LAND DISTURBING ACTIVITY, THE CONTRACTOR SHALL CONTACT THE OWNER TO SCHEDULE A PRE-CONSTRUCTION MEETING.

6. THE CONTRACTOR SHALL CONTACT THE OWNER'S INSPECTOR AT LEAST THREE (3) DAYS PRIOR TO DAMAGING, TRIMMING, PRUNING OR REMOVING TREES OR OTHER VEGETATION IN THE CITY RIGHT OF WAY OR IN CITY EASEMENTS OR ON CITY OWNED PROPERTY AND AGAIN IMMEDIATELY AFTER COMPLETION OF THE WORK.

7. ALL EROSION AND SEDIMENT CONTROL AND TREE PROTECTION MEASURES SHALL BE INSTALLED WITH THE FIRST STAGE OF CONSTRUCTION AND WILL REMAIN IN PLACE UNTIL ALL DISTURBED AREAS ARE STABILIZED AND THEIR REMOVAL IS DIRECTED BY THE OWNER. ALL DISTURBED AREAS ARE TO DRAIN TO APPROVED SEDIMENT CONTROL MEASURES AT ALL TIMES DURING LAND DISTURBING ACTIVITIES AND DURING SITE DEVELOPMENT UNTIL FINAL STABILIZATION IS ACHIEVED. THE MEASURES SHOWN ON THE PLAN ARE THE MINIMUM NECESSARY. THE ADDITION, DELETION OR MODIFICATION OF EROSION AND SEDIMENT CONTROL AND TREE PROTECTION MEASURES WILL BE AT THE DIRECTION OF THE OWNER'S INSPECTOR.

8. TRAPPED SEDIMENT AND THE DISTURBED SOIL AREAS RESULTING FROM THE REMOVAL OF EROSION AND SEDIMENT CONTROL AND TREE PROTECTION MEASURES AT THE END OF CONSTRUCTION SHALL BE PERMANENTLY STABILIZED TO PREVENT FURTHER EROSION AND SEDIMENTATION. THE ORIGINAL SOIL GRADE WITHIN ANY PROTECTED TREE'S DRIP LINE SHALL BE PRESERVED AND MAINTAINED AND SHALL NOT BE DISTURBED BY REGRADING.

9. THE CONTRACTOR / RLD SHALL INSPECT:
   a. DURING OR IMMEDIATELY FOLLOWING INITIAL INSTALLATION OF EROSION AND SEDIMENT CONTROLS,
   b. AT LEAST ONCE IN EVERY TWO-WEEK PERIOD,
   c. WITHIN 48 HOURS FOLLOWING ANY RUNOFF PRODUCING STORM EVENT, AND
   d. AT THE COMPLETION OF THE PROJECT.
   IN ADDITION, THE CONTRACTOR/RLD SHALL MAINTAIN WRITTEN MONITORING REPORTS ON-SITE AND PROVIDE TO THE OWNER'S INSPECTOR UPON REQUEST.

10. STABILIZATION MEASURES SHALL BE APPLIED TO EARTHEN STRUCTURES DAMS, DIKES, DIVERSIONS, SIDE SLOPES OF SEDIMENT TRAPS AND BASINS IMMEDIATELY AFTER INSTALLATION.

11. BEFORE NEWLY CONSTRUCTED STORMWATER CONVEYANCE CHANNELS OR PIPES ARE MADE OPERATIONAL, ADEQUATE OUTLET PROTECTION AND ANY REQUIRED TEMPORARY OR PERMANENT CHANNEL LINING SHALL BE INSTALLED IN BOTH THE CONVEYANCE CHANNEL AND RECEIVING CHANNEL.

12. SEDIMENT BASINS SHALL BE MAINTAINED AS SPECIFIED AND NOT CONVERTED TO PERMANENT STORMWATER MANAGEMENT FACILITIES DURING LAND DISTURBANCE. CONVERSION TO A PERMANENT STORMWATER MANAGEMENT FACILITY SHOULD ONLY OCCUR AFTER PERMANENT STABILIZATION OF DISTURBED AREAS DRAINING TO THE BASIN HAS OCCURRED.

13. ALL BORROW MATERIAL SHALL BE EXCAVATED FROM A LAWFULLY PERMITTED SITE AND ALL EXCAVATED MATERIAL SHALL BE DISPOSED OF AT A LAWFULLY PERMITTED SITE. PRIOR TO COMMENCING LAND DISTURBING ACTIVITIES IN AREAS OTHER THAN INDICATED ON THESE PLANS A SEPARATE EROSION AND SEDIMENT CONTROL PLAN APPROVAL AND PERMIT WILL BE REQUIRED FOR THESE OFF-SITE AREAS, IF NOT ALREADY APPROVED AND PERMITTED.

14. DEWATERING AND WELL POINT DISCHARGE SHALL BE PUMPED INTO AN APPROVED FILTERING DEVICE THAT PROVIDES APPROPRIATE EROSION AND SEDIMENT CONTROL MEASURES. THE MEASURES MUST BE APPROVED BY THE OWNER'S INSPECTOR PRIOR TO THE COMMENCEMENT OF DISCHARGE OPERATIONS. FAILURE TO COMPLY MAY RESULT IN A NOTICE TO COMPLY, STOP WORK ORDER OR OTHER LEGAL ACTION.

15. THE CONTRACTOR SHALL CONSTRUCT AND MAINTAIN A TEMPORARY CONSTRUCTION ENTRANCE AT EACH POINT OF INGRESS/EGRESS PER VESCH STD & SPEC 3.02. SITES WITH SIGNIFICANT CONSTRUCTION TRAFFIC MAY BE REQUIRED TO INSTALL A LARGER WIDTH AND/OR LONGER LENGTH CONSTRUCTION ENTRANCE AS DEEMED NECESSARY BY THE OWNER OR THE OWNER'S INSPECTOR.

16. THE CONTRACTOR SHALL CONSTRUCT, INSTALL, AND MAINTAIN SUFFICIENT EROSION AND SEDIMENT CONTROL DEVICES TO PREVENT SOIL FROM BEING ERODED AND PLACED ON STREETS, IN DRAINAGE SYSTEMS AND WATERCOURSES. DEVICES WILL BE CLEAR OF MUD, DEBRIS, AND ERODED MATERIAL DURING ALL STAGES OF CONSTRUCTION. DEVICES ARE SUBJECT TO INSPECTIONS AFTER A STORM EVENT AND AS REQUIRED BY THE OWNER'S INSPECTOR.

17. ANY AND ALL MATERIAL OR DEBRIS TRACKED ONTO A PUBLIC OR PRIVATE ROAD SURFACE SHALL BE REMOVED THOROUGHLY AT THE END OF EACH DAY OR AS DIRECTED BY THE OWNER'S INSPECTOR. SEDIMENT SHALL BE REMOVED FROM ROADS BY SHOVELING OR SWEEPING AND BE TRANSPORTED TO A LEGALLY PERMITTED DISPOSAL FACILITY.

18. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PREVENTING SURFACE AND AIR MOVEMENT OF DUST FROM EXPOSED SOILS WHICH MAY PRESENT HEALTH HAZARDS, TRAFFIC SAFETY PROBLEMS, OR HARM ANIMAL OR PLANT LIFE. THE CONTRACTOR SHALL MONITOR AND TAKE PRECAUTIONS TO CONTROL DUST, BY, INCLUDING BUT NOT LIMITED TO, THE USE OF WATER OR CHEMICAL DUST PALLIATIVE, BY LIMITING THE NUMBER OF VEHICLES ALLOWED ON-SITE, AND MINIMIZING THE OPERATING SPEED OF ALL VEHICLES.

19. SILT FENCE FABRIC SHALL BE CONSTRUCTED OF STANDARD 36" FILTER FABRIC, STAKED WITH 2" X 2" HARDWOOD STAKES PLACED A MAXIMUM OF 6-FOOT ON CENTER AND ENTRENCHED IN ACCORDANCE WITH THE VESCH STD & SPEC 3.05.

20. THE USE OF STRAW BALES IS PROHIBITED FOR EROSION AND SEDIMENT CONTROL IN VIRGINIA BEACH UNLESS OTHERWISE APPROVED BY THE OWNER.

21. DUE TO LOCAL EXPERIENCE, SOME COMMERCIALLY AVAILABLE MANUFACTURED ESC DEVICES HAVE BEEN DEEMED NOT APPROPRIATE OR APPROVED IN VIRGINIA BEACH. CHECK WITH THE OWNER FOR APPROVAL PRIOR TO INSTALLING MANUFACTURED DEVICES.

22. PRIOR TO ANY CLEARING, GRADING, OR CONSTRUCTION, TREE PROTECTION SHALL BE PLACED AROUND ALL TREES TO BE RETAINED. THE TREE PROTECTION SHALL BE IN ACCORDANCE WITH THE VESCH STD & SPEC 3.38 AND THE PLANNING DEPARTMENT LANDSCAPING GUIDE. TREE PROTECTION SHALL BE INSTALLED IN THE LOCATIONS SHOWN ON THE APPROVED PLAN.

23. NO ITEMS, INCLUDING BUT NOT LIMITED TO, BOARDS, WIRES, OR SIGNAGE, SHALL BE NAILED OR ATTACHED TO TREES TO BE RETAINED.

24. NO STOCKPILING, PLACEMENT OF MATERIALS OR EQUIPMENT, OR PARKING OF VEHICLES SHALL OCCUR WITHIN THE TREE PROTECTION AREA.

25. THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE OWNER'S INSPECTOR OF DAMAGE TO TREES LOCATED IN CITY RIGHTS OF WAY AND PUBLIC EASEMENTS. DAMAGED TREE LIMBS SHALL BE CUT BACK TO THE NEXT LATERAL BRANCH OR PARENT STEM AT THE BRANCH COLLAR. CARE FOR SERIOUS INJURY SHOULD BE PRESCRIBED BY THE CITY ARBORIST.

26. TREES LOCATED IN CITY RIGHTS OF WAY AND PUBLIC EASEMENTS THAT ARE TO BE RETAINED BUT ARE DESTROYED DURING CONSTRUCTION SHALL BE REPLACED WITH SPECIES, SIZES AND QUANTITIES TO BE DETERMINED UPON TREE VALUE ASSESSMENT BY THE CITY ARBORIST. REPLACEMENT TREES SHALL CONFORM TO THE LATEST EDITION OF THE AMERICAN STANDARD FOR NURSERY STOCK AND PLANNING DEPARTMENT'S LANDSCAPING GUIDE.

27. TREES ON PRIVATE PROPERTY THAT ARE TO BE RETAINED BUT ARE DESTROYED DURING CONSTRUCTION SHALL BE REPLACED WITH SPECIES, SIZES AND QUANTITIES TO BE DETERMINED BY THE OWNER.

EROSION & SEDIMENT CONTROL NARRATIVE

PROJECT DESCRIPTION

THIS EROSION AND SEDIMENT CONTROL PLAN WILL ADDRESS LAND DISTURBANCE FOR PHASE 1 AND 2 OF THE VIRGINIA BEACH ARENA INFRASTRUCTURE, LOCATED IN VIRGINIA BEACH, VIRGINIA.

PHASE 1 INVOLVES THE CLEARING AND GRUBBING OF THE WOODED WESTERN PORTION OF THE PROJECT SITE AND INSTALLING A NEW PARKING LOT AND NEW STORMWATER MANAGEMENT FACILITY. THE EXISTING GRAVEL STAGING AREA IN PHASE 1 WILL REMAIN DURING THE INITIAL STAGE OF CONSTRUCTION AND ACT AS A STAGING AREA FOR THE CLEARING AND GRUBBING OPERATIONS. PHASE 2 IS LOCATED TO THE EAST OF PHASE 1, AND HAS EXISTING PARKING LOTS AND AN EXISTING STORMWATER MANAGEMENT FACILITY. PHASE 2 INVOLVES THE DEMOLITION OF A PORTION OF THE EXISTING PARKING LOT, WHERE THE ARENA BUILDING FOOTPRINT IS LOCATED TO DRIVE PILES FOR THE ARENA FOUNDATION. THE REST OF THE PARKING LOTS WITHIN PHASE 2 WILL REMAIN UNTIL LATER IN CONSTRUCTION. THE EXISTING STORM STRUCTURES AND PIPES IN PHASE 2 WILL ALSO REMAIN UNTIL LATER IN CONSTRUCTION. PHASE 1 AND 2 WILL BE INITIATED CONCURRENTLY. PHASE 1 WILL BE COMPLETED AND THE PARKING LOT OPENED FOR PUBLIC USE. PHASE 2 WILL CONTINUE FOR THE DURATION OF CONSTRUCTION OF THE ARENA BUILDING (APPROXIMATELY 30 MONTHS). PHASE 2 WILL BE THE LAST PHASE TO BE COMPLETED.

THE OVERALL PROJECT WILL PROVIDE THE FOLLOWING IMPROVEMENTS TO SUPPORT A SPORTS ARENA: NEW PARKING LOTS, NEW SIDEWALKS, AND ASSOCIATED LANDSCAPING, STORMWATER MANAGEMENT, AND OTHER IMPROVEMENTS. THE PROJECT WILL BE CONSTRUCTED IN FOUR SEPARATE PHASES. THIS PLAN ADDRESSES PHASES 1 AND 2.

EXISTING SITE CONDITIONS

THE WESTERN PORTION OF THE PROJECT SITE IS HEAVILY WOODED. A FENCED, GRAVEL STAGING AREA EXISTS ALONG VIRGINIA BEACH BOULEVARD, TO THE EAST OF THE WOODED AREA. THERE IS A PRIVATE PROPERTY TO THE NORTH OF THE GRAVEL LAY DOWN AREA. THERE IS A STORMWATER MANAGEMENT FACILITY LOCATED ALONG 19TH STREET, TO THE EAST OF THE PRIVATE PROPERTY. THE TIDEWATER VETERANS MEMORIAL IS LOCATED WITHIN THE PROJECT LIMITS AT JEFFERSON AVENUE AND 19TH STREET. PARKING LOTS, LANDSCAPING, AND SIDEWALKS COVER THE MAJORITY OF THE REMINDER OF THE SITE. THE TOPOGRAPHY OF THE SITE IS FAIRLY FLAT, WITH HIGHER GROUND ON THE WESTERN PORTION OF THE SITE. PHASE 1 CURRENTLY DRAINS EAST TO AN EXISTING CULVERT INLET. PHASE 2 DRAINS TO EXISTING DROP INLETS IN THE PARKING LOTS WHICH CONVEY RUNOFF TO THE EXISTING STORMWATER MANAGEMENT FACILITY.

ADJACENT PROPERTY

THE VIRGINIA BEACH ARENA PROJECT SITE IS NEAR THE VIRGINIA BEACH CONVENTION CENTER. IT IS GENERALLY BOUNDED BY 19TH STREET, VIRGINIA BEACH BOULEVARD, AN EXISTING PROPERTY TO THE EAST, AND BIRDNECK ROAD TO THE WEST. THERE ARE PRIVATE PROPERTIES LOCATED AT THE SOUTH WESTERN CORNER, ALONG BIRDNECK ROAD, AS WELL AS A PRIVATE PROPERTY ALONG 19TH STREET, TO THE WEST OF THE EXISTING STORMWATER MANAGEMENT FACILITY.

OFF-SITE AREAS

THERE ARE NO OFF-SITE AREAS ASSOCIATED WITH THIS PROJECT.

SOILS

FORTY-EIGHT STANDARD PENETRATION TEST (SPT) BORINGS WERE DRILLED THROUGHOUT THE PROJECT SITE. FOR THE BORING SAMPLES TAKEN IN THE WESTERNMOST PORTION OF THE PROJECT SITE, THE INITIAL SOIL LAYER EXTENDED FROM BENEATH THE SURFICIAL AND FILL MATERIALS TO APPROXIMATE DEPTHS OF 2 TO 6 FEET BELOW EXISTING GRADES. TOPSOIL DEPTHS ON SITE RANGE FROM 1.5 TO 3.5 INCHES AND THE PAVEMENT SECTIONS CONSISTED OF 2 TO 8 INCHES OF ASPHALT UNDERLAIN BY 0 TO 12.5 INCHES OF AGGREGATE BASE MATERIAL. FILL GENERALLY CONSISTED OF SAND WITH VARYING AMOUNTS OF SILT, CLAY AND GRAVEL, AND OCCASIONALLY CONTAINED LEAN CLAY LENSES, FIBROUS ORGANICS, BRICK FRAGMENTS, AND GEOSYNTHETICS. THIS LAYER EXTENDED BELOW THE SURFICIAL MATERIALS TO DEPTHS OF 2 TO 8 FEET BELOW EXISTING GRADE AT HALF OF THE BORINGS (MOSTLY AT EXISTING PAVEMENT AREAS). A COMPLETE GEOTECHNICAL REPORT IS INCLUDED IN APPENDIX B OF THE EROSION CONTROL CALCULATIONS.

CRITICAL EROSION AREAS

THERE ARE NO CRITICAL EROSION AREAS WITHIN THE PROJECT LIMITS. EROSION AND SEDIMENT CONTROLS WILL BE USED TO PROVIDE PROTECTION FROM SEDIMENTATION FOR THE EXISTING LAKE AND THE EXISTING DRAINAGE SWALES ALONG THE SOUTHERN END OF THE PROJECT.

WETLANDS

THERE ARE NO WETLANDS LOCATED WITHIN PHASE 1 OR 2 OF THE PROJECT SITE AS CONFIRMED BY THE U.S. ARMY CORPS OF ENGINEERS (SEE APPENDIX C FOR THE PRELIMINARY JURISDICTIONAL DETERMINATION, DATED JANUARY 10, 2013).

EROSION AND SEDIMENT CONTROL MEASURES

UNLESS OTHERWISE INDICATED, VEGETATIVE AND STRUCTURAL SEDIMENT CONTROL PRACTICES SHALL BE CONSTRUCTED AND MAINTAINED ACCORDING TO THE MINIMUM STANDARDS AND SPECIFICATIONS OF THE CURRENT EDITION OF THE VIRGINIA EROSION AND SEDIMENT CONTROL HANDBOOK (VESCH) AND THE CITY OF VIRGINIA BEACH EROSION AND SEDIMENT CONTROL STANDARDS AND SPECIFICATIONS.

MEASURES INCLUDE CONSTRUCTION ENTRANCES, SILT FENCE, STORM DRAIN AND CULVERT INLET PROTECTION, SEDIMENT BASIN, DEWATERING STRUCTURE, TOPSOILING, TEMPORARY SEEDING, PERMANENT SEEDING, TREE PRESERVATION AND PROTECTION, AND DUST CONTROL.

EROSION AND SEDIMENT CONTROL MEASURES SHALL BE INSTALLED PRIOR TO DEMOLITION AND EARTH-MOVING ACTIVITIES.

CONTACT THE CITY OF VIRGINIA BEACH STORMWATER ENGINEERING DIVISION AT (757) 385-4131 / PROJECT MANAGEMENT DIVISION AT (757) 385-4131 / PUBLIC WORKS DEPARTMENT AT (757) 385-4167 AT LEAST 48 HOURS PRIOR TO ANY LAND DISTURBING ACTIVITIES (INCLUDING DEMOLITION) TO SCHEDULE A PRECONSTRUCTION CONFERENCE.

MAINTENANCE

THE CONTRACTOR IS RESPONSIBLE FOR THE INSTALLATION AND MAINTENANCE OF ALL EROSION AND SEDIMENT CONTROL PRACTICES.

SILT FENCE SHALL BE CHECKED REGULARLY FOR UNDERMINING AND DETERIORATION OF THE FABRIC. SEDIMENT SHALL BE REMOVED WHEN THE LEVEL OF SEDIMENT DEPOSITION REACHES HALFWAY TO THE TOP OF THE BARRIER. SEDIMENTS AND EXCESS SPOILS SHALL BE DISPOSED BY THE CONTRACTOR AT A FACILITY APPROVED BY LOCAL AND STATE REGULATIONS.

THE TEMPORARY SEDIMENT BASIN EMBANKMENT SHALL BE CHECKED REGULARLY TO ENSURE THAT IS IT STRUCTURALLY SOUND AND HAS NOT BEEN DAMAGED BY EROSION OR CONSTRUCTION EQUIPMENT. THE BASIN SHOULD BE CHECKED AFTER EACH RUNOFF-PRODUCING RAINFALL FOR SEDIMENT CLEANOUT. WHEN THE SEDIMENT REACHES THE CLEANOUT LEVEL, IT SHALL BE REMOVED AND PROPERLY DISPOSED OF.

EROSION & SEDIMENT CONTROL CONSTRUCTION SEQUENCING

PHASE 1

1. INSTALL SILT FENCE, STORM DRAINAGE AND CULVERT INLET PROTECTION, TREE PROTECTION, AND CONSTRUCTION ENTRANCES ON THE PROJECT SITE BEFORE ANY SITE DEMOLITION OR EARTH-MOVING ACTIVITY. SITE ACCESS BY CONSTRUCTION VEHICLES SHALL BE IN ACCORDANCE WITH THE VIRGINIA WORK AREA PROTECTION MANUAL, LATEST EDITION.
2. CLEAR AND GRUB ENTIRE WESTERN PORTION OF THE SITE.
3. EXCAVATE SEDIMENT BASIN AND DIVERSION DITCHES AS INDICATED ON DRAWINGS. STABILIZE SIDE SLOPES OF SEDIMENT BASIN AND DIVERSIONS DITCHES, INCLUDING BERMS, WITH TEMPORARY SEEDING IMMEDIATELY AFTER GRADING.
4. AFTER SEDIMENT BASIN OUTLET PIPE IS INSTALLED, REMOVE CULVERT INLET PROTECTION AND INSTALL OUTLET PROTECTION BETWEEN THE SEDIMENT BASIN OUTFALL AND THE EXISTING 24" OUTFALL.
5. THE CONTRACTOR IS RESPONSIBLE FOR TEMPORARY AND PERMANENT STABILIZATION MEASURES FOR STOCKPILES LOCATED WITHIN THE PROJECT SITE OR THOSE TRANSPORTED FROM THE PROJECT SITE. MONITOR AND ALLY DUST USING WATER, MULCH OR CHEMICAL DUST ADHESIVES AND CONTROL OF CONSTRUCTION SITE TRAFFIC OR OTHER MEASURES AS DIRECTED BY THE CITY INSPECTOR.
6. COMPLETE MAJOR GRADING AS SOON AS POSSIBLE AFTER BEGINNING CONSTRUCTION. APPROVED SOIL STABILIZATION MEASURES SHALL BE APPLIED TO ALL DENUDED OR DISTURBED AREAS THAT MAY NOT BE AT FINAL GRADE BUT WILL REMAIN UNDISTURBED LONGER THAN 14 DAYS. THE CONTRACTOR SHALL INSTALL PERMANENT STABILIZATION WITHIN 7 DAYS OR AS DIRECTED BY THE CITY INSPECTOR AFTER FINAL GRADING IS COMPLETED.
7. INSTALL AND MAINTAIN ADDITIONAL EROSION AND SEDIMENT CONTROL MEASURES NECESSARY TO PREVENT EROSION AND SEDIMENTATION AS DETERMINED BY THE CITY INSPECTOR.
8. ONCE THE CITY INSPECTOR DETERMINES CONSTRUCTION IS SUBSTANTIALLY COMPLETE AND THE WORK AREA IS STABILIZED, THE CONTRACTOR SHALL REMOVE TEMPORARY EROSION AND SEDIMENT CONTROL MEASURES AND DISPOSE OF SEDIMENTS WITHIN 30 DAYS.

PHASE 2

1. INSTALL SILT FENCE, INLET PROTECTION, AND TREE PROTECTION ON THE PROJECT SITE BEFORE ANY SITE DEMOLITION OR EARTH-MOVING ACTIVITY. SITE ACCESS BY CONSTRUCTION VEHICLES SHALL BE IN ACCORDANCE WITH THE VIRGINIA WORK AREA PROTECTION MANUAL, LATEST EDITION.
2. CLEAR TREES, DEMOLISH CURBS AND LIGHT POLES. DEMOLISH PAVEMENT WITHIN THE BUILDING FOOTPRINT TO DRIVE PILES. THE EXISTING PAVEMENT OUTSIDE OF THE BUILDING FOOTPRINT WILL REMAIN INITIALLY.
3. THE CONTRACTOR IS RESPONSIBLE FOR TEMPORARY AND PERMANENT STABILIZATION MEASURES FOR STOCKPILES LOCATED WITHIN THE PROJECT SITE OR THOSE TRANSPORTED FROM THE PROJECT SITE. MONITOR AND ALLY DUST USING WATER, MULCH OR CHEMICAL DUST ADHESIVES AND CONTROL OF CONSTRUCTION SITE TRAFFIC OR OTHER MEASURES AS DIRECTED BY THE CITY INSPECTOR.
4. COMPLETE MAJOR GRADING AS SOON AS POSSIBLE AFTER BEGINNING CONSTRUCTION. APPROVED SOIL STABILIZATION MEASURES SHALL BE APPLIED TO ALL DENUDED OR DISTURBED AREAS THAT MAY NOT BE AT FINAL GRADE BUT WILL REMAIN DISTURBED LONGER THAN 14 DAYS. THE CONTRACTOR SHALL INSTALL PERMANENT STABILIZATION WITHIN 7 DAYS OR AS DIRECTED BY THE CITY INSPECTOR AFTER FINAL GRADING IS COMPLETED.
5. INSTALL AND MAINTAIN ADDITIONAL EROSION AND SEDIMENT CONTROL MEASURES NECESSARY TO PREVENT EROSION AND SEDIMENTATION AS DETERMINED BY THE CITY INSPECTOR.
6. ONCE THE CITY INSPECTOR DETERMINES CONSTRUCTION IS SUBSTANTIALLY COMPLETE AND THE WORK AREA IS STABILIZED, THE CONTRACTOR SHALL REMOVE TEMPORARY EROSION AND SEDIMENT CONTROL MEASURES AND DISPOSE OF SEDIMENTS WITHIN 30 DAYS.

TABLE 3.31-B
(Revised June 2003)
TEMPORARY SEEDING SPECIFICATIONS
QUICK REFERENCE FOR ALL REGIONS

SEED		
APPLICATION DATES	SPECIES	APPLICATION RATES
Sept. 1-Feb. 15	50/50 Mix of Annual Ryegrass (lolium multi-florum) & Cereal (Winter) Rye (Secale cereale)	50-100 (lbs/acre)
Feb. 16-Apr. 30	Annual Ryegrass (lolium multi-florum)	60-100 (lbs/acre)
May. 1-Aug. 31	German Millet	50 (lbs/acre)

FERTILIZER & LIME

- Apply 10-10-10 FERTILIZER at a rate 450 lbs./acre (or 10 lbs./1,000sq ft
- Apply PULVERIZED AGRICULTURAL LIMESTONE at a rate of 2 tons/acre (or 90 lbs./1,000 sq ft)

NOTE:

1 - A soil test is necessary to determine the actual amount of lime required to adjust the soil pH of site.

2 - Incorporate the lime and fertilizer into the top 4-6 inches of the soil by disking or by other means.

3 - When applying Slowly Available Nitrogen, use rates available in Erosion & sediment Control Technical Bulletin #4, 2003 Nutrient Management for Development Sties at http://www.dcr.state.va.us/sw/e&s.html#pubs

TEMPORARY SEEDING (TS)

TABLE 3.32-E
(Revised June 2003)
PERMANENT SEEDING SPECIFICATIONS FOR COSTAL PLAIN AREA

SEED		
LAND USE	SPECIES	APPLICATION RATES
Minimum Care Lawn (Commercial or Residential)	Tall Fescue [1] or Bermudagrass [1]	175-200 lbs. 75 lbs.
High-Maintenance Lawn	Tall Fescue [1] or Bermudagrass (seed) [1] or Bermudagrass (by other vegetative establishment method, see Std. & Spec. 3.34)	200-250 lbs. 40 lbs. (unhulled) 30 lbs. (hulled)
General Slope (3:1 or less)	Tall Fescue [1] Red Top Grass or Creeping Red Fescue Seasonal Nurse Crop [2]	128 lbs. 2 lbs. 20 lbs. Total: 150 lbs.
LOW-Maintenance Slope (Steeper Than 3:1)	Tall Fescue [1] Bermudagrass [1] Red Top Grass or Creeping Red Fescue Seasonal Nurse Crop [2] Sericea Lespedeza [3]	93-108 lbs. 0-15 lbs. 2 lbs. 20 lbs. 20 lbs. Total: 150 lbs.

1- When selecting varieties of turfgrass, use the Virginia Crop Improvement Association (VCIA) recommended turfgrass variety list. Quality seed will bear a label indicating that they are approved by VCIA. A current turfgrass variety list is available at the local County Extension office or through VCIA at 804-746-4884 or at http://sudan.cses.vt.edu/html/Turf/turf/publications/publications2/html

2- Use seasonal nurse crop in accordance with seeding dates as listed below:

February, March - April	Annual Rye
May 1st - August	Foxtail Millet
September, October - November 15th	Annual Rye
November 16th - January	Winter Rye

3- May through October, use hulled seed. All other seeding periods, use unhulled seed. If weeping lovegrass is used, including in any slope or low maintenance mixture during warmer seeding periods, increase to 30-40 lbs/acre.

FERTILIZER & LIME

- Apply 10-20-10 fertilizer at a rate of 500 lbs./acre (or 12 lbs./1,000 sq. ft.)
- Apply Pulverized Agricultural Limestone at a rate of 2 tons/acre (or 90 lbs./1,000 sq. ft.)

NOTE:

-A soil test is necessary to determine the actual amount of lime required to adjust the soil pH of the site.
-Incorporate the lime and fertilizer into the top 4-6 inches of the soil by disking or by other means.
-When applying Slowly Available Nitrogen, use rates available in Erosion & Sediment Control Technical Bulletin #4, 2003 Nutrient Management for Development Sites at http://www.dcr.state.va.us/sw/e&s.html#pubs

PERMANENT SEEDING (PS)

Virginia Beach
35MEB General Contractors

VIRGINIA BEACH SPORTS CENTER

1045 19th Street
Virginia Beach, Virginia

DESIGNER

CLARKNEXSEN

4525 Main Street, Suite 1400
Virginia Beach, VA 23462
757.455.5800

CONSULTANT

SEALS

SUBMITTAL

05/18/18

PROGRESS PRINT

REVISIONS

KEY PLAN

SHEET

EROSION AND SEDIMENT CONTROL NOTES

C-500

SHEET - OF XX -

DESIGN: RMS
DRAWN: TAW
REVIEW: -

CN 7142

\\Projects\7000\7142-HR Regional Sports Pavilion\CAD\Sheets\C\C-500.dwg Fri, 18 May 2018 - 4:07pm twesner

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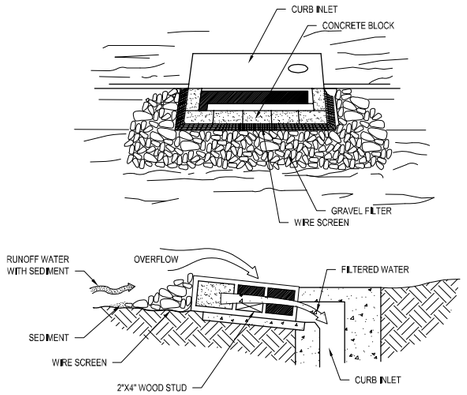


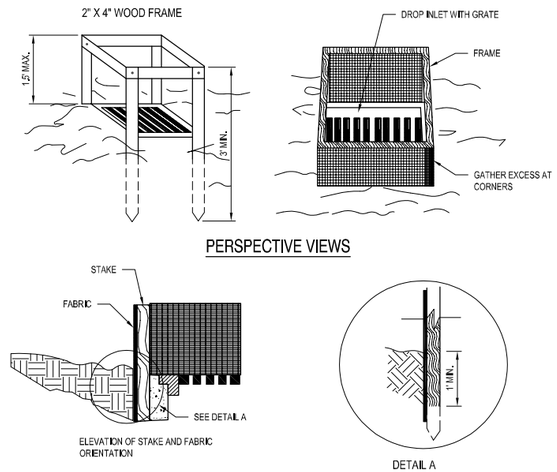
SPECIAL APPLICATION

THIS METHOD OF INLET PROTECTION IS APPLICABLE AT CURB INLETS WHERE AN OVERFLOW CAPABILITY IS NECESSARY TO PREVENT EXCESSIVE PONDING IN FRONT OF THE STRUCTURE.

GRAVEL SHALL BE VDOT #3, #357 OR #5 COARSE AGGREGATE.

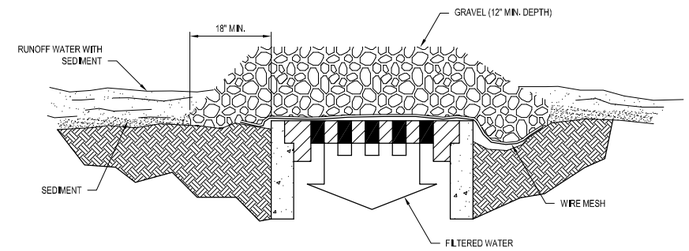
BLOCK AND GRAVEL CURB INLET SEDIMENT FILTER (F)

NO SCALE



SILT FENCE DROP INLET PROTECTION (P)

NO SCALE



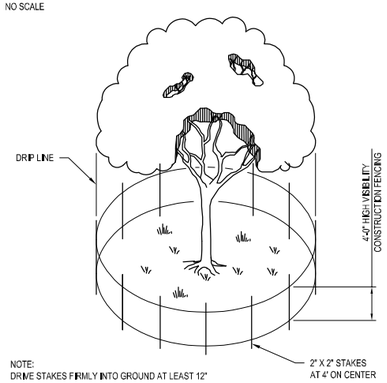
SPECIFIC APPLICATION

THIS METHOD OF INLET PROTECTION IS APPLICABLE WHERE HEAVY CONCENTRATED FLOWS ARE EXPECTED, BUT NOT WHERE PONDING AROUND THE STRUCTURE MIGHT CAUSE EXCESSIVE INCONVENIENCE OR DAMAGE TO ADJACENT STRUCTURES AND UNPROTECTED AREAS.

* GRAVEL SHALL BE VDOT #3, #357 OR #5 COARSE AGGREGATE

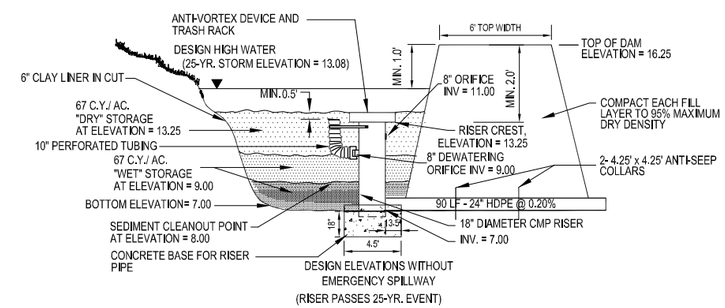
GRAVEL AND WIRE MESH DROP INLET SEDIMENT FILTER (F)

NO SCALE



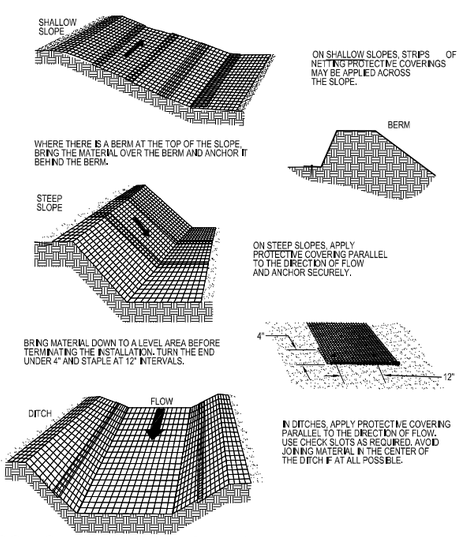
TREE PROTECTION (TP)

NO SCALE



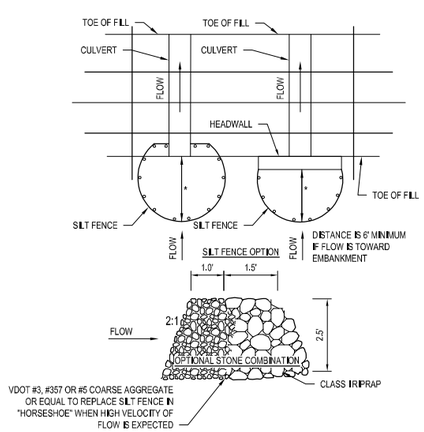
SEDIMENT BASIN (SB)

NO SCALE



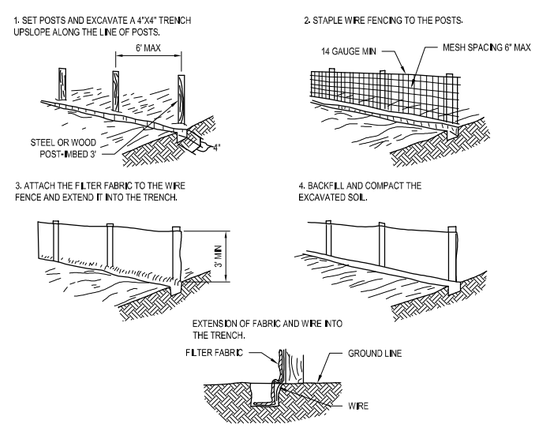
SOIL STABILIZATION BLANKET

NO SCALE



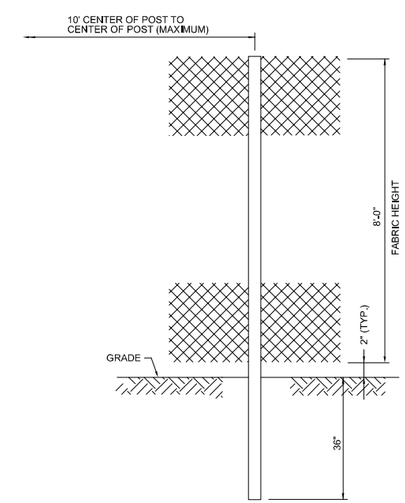
CULVERT INLET PROTECTION (CIP)

NO SCALE



CONSTRUCTION SILT FENCE (SF)

NO SCALE



CONSTRUCTION SAFETY FENCE (SAF)

NO SCALE

City of Virginia Beach
35 MEB General Contractors
VIRGINIA BEACH SPORTS CENTER
1045 19th Street
Virginia Beach, Virginia

DESIGNER
CLARKNEXSEN
4525 Main Street, Suite 1400
Virginia Beach, VA 23462
757.455.5800

CONSULTANT

SEALS

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REVISIONS

KEY PLAN

SHEET
DETAILS

C-501

SHEET - OF XX -

DESIGN: RMS
DRAWN: TAW
REVIEW: -

CN 7142

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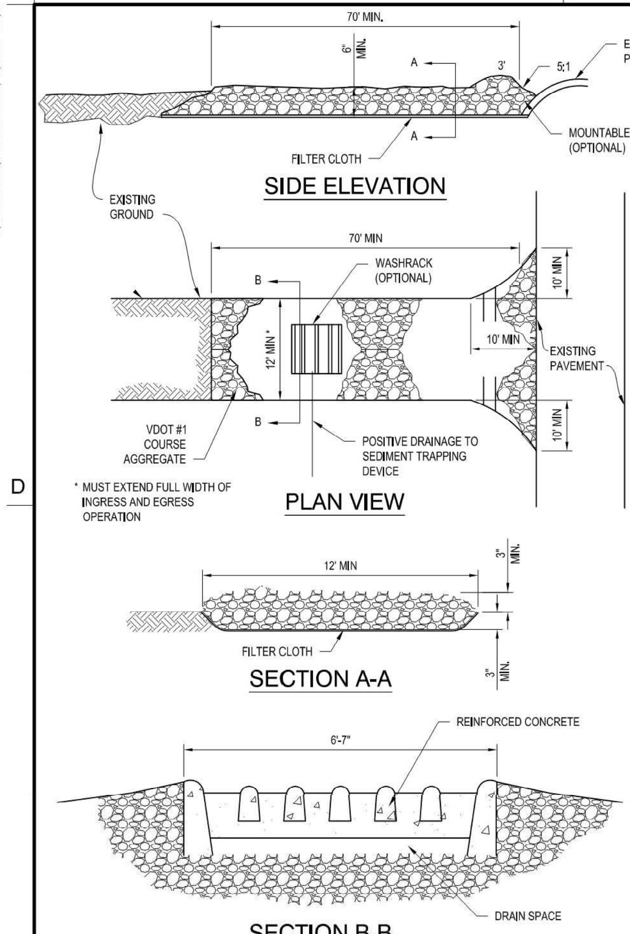
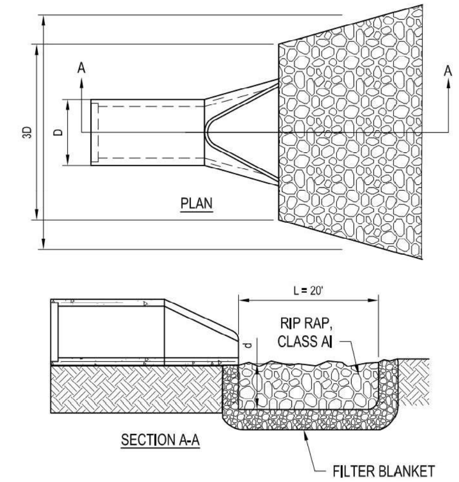


STONE CONSTRUCTION ENTRANCE

(CE)

NO SCALE



NOTES:

1. L IS THE LENGTH OF THE RIPRAP APRON.
2. d=1.5 TIMES THE MAXIMUM STONE DIAMETER BUT NOT LESS THAN 6".
3. D= INSIDE PIPE DIAMETER
4. IN A WELL-DEFINED CHANNEL EXTEND THE APRON UP THE CHANNEL BANKS TO AN ELEVATION OF 6" ABOVE THE MAXIMUM TAILWATER DEPTH OR TO THE TOP OF THE BANK, WHICHEVER IS LESS.
5. A FILTER BLANKET OR FILTER FABRIC SHOULD BE INSTALLED BETWEEN THE RIPRAP AND SOIL FOUNDATION.

OUTLET PROTECTION

(OP)

NO SCALE

TEMPORARY SEDIMENT BASIN # 1 DESIGN DATA SHEET
(WITHOUT EMERGENCY SPILLWAY)

PROJECT: Virginia Beach Arena Infrastructure

BASIN # 1 LOCATION: Virginia Beach, Virginia 7/21/2017

TOTAL AREA DRAINING TO BASIN: 6.68 ACRES

BASIN VOLUME DESIGN

WET STORAGE:

1 MINIMUM REQUIRED VOLUME = CU. YDS. X TOTAL DRAINAGE AREA (ACRES)
67 CU.YDS X 6.68 ACRES= 447.56 CU. YDS (12084.12 CU. FT.)
2 AVAILABLE BASIN VOLUME= 1063.10 CU. YDS AT ELEVATION 9 FT.
(FROM STORAGE -ELEVATION CURVE)
3 EXCAVATE CU.YDS.TO OBTAIN THE REQUIRED VOLUME*
*ELEVATION CORRESPONDING TO REQUIRED VOLUME= INVERT OF THE DEWATERING ORIFICE. 9 FT.
4. AVAILABLE VOLUME BEFORE CLEANOUT REQUIRED.
33 CU.YDS X 6.68 ACRES= 220.44 CU.YDS (5951.88 CU. FT.)
5. ELEVATION CORRESPONDING TO CLEAN OUT LEVEL = 8 FT.
AVAILABLE BASIN VOLUME= 558.00 CU. YDS
6. DISTANCE FROM INVERT OF THE DEWATERING ORIFICE TO CLEAN OUT LEVEL 1.0 FT.
(MIN. = 1.0 FT.)

DRY STORAGE:

7. MINIMUM REQUIRED VOLUME = 67 CU. YDS. X TOTAL DRAINAGE AREA (ACRES)
67 CU.YDS X 6.68 ACRES= 447.56 CU. YDS.(12084.12 CU. FT.)
8. AVAILABLE BASIN VOLUME AT CREST OF RISER*= 3080 CU.YDS (83160 CU.FT)
AT ELEVATION 13.25 FT. (FROM STORAGE - ELEVATION CURVE)
* MINIMUM = 461 CU.YDS / ACRE OF TOTAL DRAINAGE AREA.
9. DIAMETER OF DEWATERING ORIFICE = 8 in. (PART III-107) orifice= 8"
10.DIAMETER OF FLEXIBLE TUBIING = 10 in. (DIAMETER OF DEWATERING ORIFICE PLUS 2 INCHES).
11
CREST OF RISER= 13.25
TOP OF DAM= 16.25
DESIGN HIGH WATER= 13.08
UPSTREAM TOE OF DAM= 7.00

BASIN SHAPE

12. LENGTH OF FLOW L= 165 WIDTH= 82 FT)= 2.01
EFFECTIVE WIDTH
IF > 2, BAFFLES ARE NOT REQUIRED — BAFFLES ARE NOT REQUIRED
IF < 2, BAFFLES ARE REQUIRED

RUNOFF *Peak flow for Q2 and Q25 were computed with PondPack
13. Q2 = 23.10 CFS FROM CHAPTER 5 ; A = 6.68 AC. ; CN = 91)
14. Q25= 46.50 CFS FROM CHAPTER 5 ; A = 6.68 AC. ; CN = 91)

PRINCIPAL SPILLWAY DESIGN (N/A, see PondPack calculations)

15. WITHOUT EMERGENCY SPILLWAY, REQUIRED SPILLWAY CAPACITY Qp = Q25 = 20.00 CFS
(RISER AND BARREL)
16. WITHOUT EMERGENCY SPILLWAY:
ASSUMED AVAILABLE HEAD (h) = 1 FT. (USING Q25)
h = DESIGN HIGH WATER ELEVATION - CREST OF RISER ELEVATION.
17. RISER DIAMETER (Dr) = 18 IN. ACTUAL HEAD (h) = FT.
18. BARREL LENGTH (L) = 90 FT.
HEAD (H) ON BARREL THROUGH EMBANKMENT = FT.
19. BARREL DIAMETER = 24 IN. RCP.
20. TRASH RACK AND ANTI-VORTEX DEVICE
DIAMETER = 27 IN.
HEIGHT = 8 IN.
(FROM TABLE 3.14-D.)

ANTI-SEEP COLLAR DESIGN

23. DEPTH OF WATER AT PRINCIPAL SPILLWAY CREST (Y)= 6.25 FT.
SLOPE OF UPSTREAM FACE OF EMBANKMENT (Z)= 3 :1.
SLOPE OF PRINCIPAL SPILLWAY BARREL (Sb)= 0.20%
LENGTH OF BARREL IN SATURATED ZONE (Ls)= 44 FT.
24. NUMBER OF COLLARS REQD.= 2 DIMENSIONS= 4.25' x 4.25'
(FROM PLATE 3.14-12)

FINAL DESIGN ELEVATIONS

25. TOP OF DAM = 16.25
DESIGN HIGH WATER = 13.08
EMERGENCY SPILLWAY = N/A
PRINCIPAL SPILLWAY CREST= 13.25
DEWATERING ORIFICE INVERT = 9
CLEAN OUT ELEVATION = 8
ELEVATION OF UPSTREAM TOE OF DAM OR EXCAVATED BOTTOM OF "WET STORAGE AREA" (IF EXCAVATION WAS PERFORMED) = 7.00

SEDIMENT BASIN FLOW CALCULATIONS

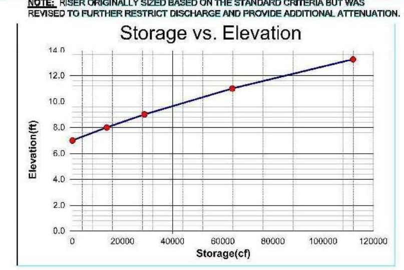
BASIN# 1
D.A.= 6.68 AC.
Tc = 14 MIN.
CN = 91
Q25 = 46.50

PIPE & VOLUME OF SEDIMENT BASIN

DIAM.	LENGTH	INV. IN	INV. OUT	SLOPE
24	90	7.00	6.82	0.20%

	ELEV (ft)	h (ft)	AREA (acres)	VOLUME (acre-ft)	TOTAL VOLUME (acre-ft)	TOTAL VOLUME (cubic ft)	PROVIDED VOLUME: (cubic yds)	AREA (S.FT.)	REQUIRED VOLUMES:
	7.0	0.0	0.2973	0.000	0.000	0	0.00	12950.00	
	8.0	1.0	0.3293	0.313	0.313	13,642	505.24	14345.00	
TOP OF WET STORAGE	9.0	1.0	0.3627	0.346	0.659	28,708	1063.27	15800.00	447.56 CU. YD.
	11.0	2.0	0.4427	0.804	1.463	63,735	2360.57	19285.00	
TOP OF DRY STORAGE	13.3	2.3	0.5188	1.105	2.568	111,853	4142.69	22600.00	1511.00 CU. YD.
	16.3	3.0	0.6432	1.740	4.307	187,631	6949.31	28016.00	

NOTE: RISER ORIGINALLY SIZED BASED ON THE STANDARD CRITERIA BUT WAS REVISED TO FURTHER RESTRICT DISCHARGE AND PROVIDE ADDITIONAL ATTENUATION.



SEDIMENT BASIN CALCULATIONS

VIRGINIA EROSION AND SEDIMENT CONTROL PLAN MINIMUM STANDARDS (MS) CHECKLIST
MAY 1, 2017

YES	N/A		DESCRIBE HOW MS IS ADDRESSED ON PLAN
X		MS1: PERMANENT OR TEMPORARY SOIL STABILIZATION SHALL BE APPLIED TO DENUDED AREAS WITHIN SEVEN DAYS AFTER FINAL GRADE IS REACHED ON ANY PORTION OF THE SITE. TEMPORARY SOIL STABILIZATION SHALL BE APPLIED WITHIN SEVEN DAYS TO DENUDED AREAS THAT MAY NOT BE AT FINAL GRADE BUT WILL REMAIN DORMANT FOR LONGER THAN 14 DAYS. PERMANENT STABILIZATION SHALL BE APPLIED TO AREAS THAT ARE TO BE LEFT DORMANT FOR MORE THAN ONE YEAR.	PERMANENT AND TEMPORARY SOIL STABILIZATION SHALL BE PROVIDED.
X		MS2: DURING CONSTRUCTION OF THE PROJECT, SOIL STOCK PILES AND BORROW AREAS SHALL BE STABILIZED OR PROTECTED WITH SEDIMENT TRAPPING MEASURES. THE APPLICANT IS RESPONSIBLE FOR THE TEMPORARY PROTECTION AND PERMANENT STABILIZATION OF ALL SOIL STOCKPILES ON SITE AS WELL AS BORROW AREAS AND SOIL INTENTIONALLY TRANSPORTED FROM THE PROJECT SITE.	SOIL STOCKPILES AND BORROW AREAS SHALL BE STABILIZED WITH SILT FENCE AS SHOWN ON THE PLANS.
X		MS3: A PERMANENT VEGETATIVE COVER SHALL BE ESTABLISHED ON DENUDED AREAS NOT OTHERWISE PERMANENTLY STABILIZED. PERMANENT VEGETATION SHALL NOT BE CONSIDERED ESTABLISHED UNTIL A GROUND COVER IS ACHIEVED THAT IS UNIFORM, MATURE ENOUGH TO SURVIVE AND WILL INHIBIT EROSION.	PERMANENT VEGETATION SHALL BE ESTABLISHED IN ACCORDANCE WITH THE CITY OF VIRGINIA BEACH EROSION AND SEDIMENT CONTROL ORDINANCE AND THE VIRGINIA EROSION AND SEDIMENT CONTROL HANDBOOK.
X		MS4: SEDIMENT BASINS AND TRAPS, PERIMETER DIKES, SEDIMENT BARRIERS AND OTHER MEASURES INTENDED TO TRAP SEDIMENT SHALL BE CONSTRUCTED AS A FIRST STEP IN ANY LAND-DISTURBING ACTIVITY AND SHALL BE MADE FUNCTIONAL BEFORE UPSLOPE LAND DISTURBANCE TAKES PLACE.	SEDIMENT BARRIERS, INLET AND CULVERT PROTECTION, AND SEDIMENT BASIN SHALL BE INSTALLED PRIOR TO LAND DISTURBANCE ACTIVITY.
X		MS5: STABILIZATION MEASURES SHALL BE APPLIED TO EARTHEN STRUCTURES SUCH AS DAMS, DIKES AND DIVERSIONS IMMEDIATELY AFTER INSTALLATION.	
X		MS6: SEDIMENT TRAPS AND SEDIMENT BASINS SHALL BE DESIGNED AND CONSTRUCTED BASED UPON THE TOTAL DRAINAGE AREA TO BE SERVED BY THE TRAP OR BASIN. a. THE MINIMUM STORAGE CAPACITY OF A SEDIMENT TRAP SHALL BE 134 CUBIC YARDS PER ACRE OF DRAINAGE AREA AND THE TRAP SHALL ONLY CONTROL DRAINAGE AREAS LESS THAN THREE ACRES. b. SURFACE RUNOFF FROM DISTURBED AREAS THAT IS COMPRISED OF FLOW FROM DRAINAGE AREAS GREATER THAN OR EQUAL TO THREE ACRES SHALL BE CONTROLLED BY A SEDIMENT BASIN. THE MINIMUM STORAGE CAPACITY OF A SEDIMENT BASIN SHALL BE 134 CUBIC YARDS PER ACRE OF DRAINAGE AREA. THE OUTFALL SYSTEM SHALL, AT A MINIMUM, MAINTAIN THE STRUCTURAL INTEGRITY OF THE BASIN DURING A 25-YEAR STORM OF 24-HOUR DURATION. RUNOFF COEFFICIENTS USED IN RUNOFF CALCULATIONS SHALL CORRESPOND TO A BARE EARTH CONDITION OR THOSE CONDITIONS EXPECTED TO EXIST WHILE THE SEDIMENT BASIN IS UTILIZED	
X		MS7: CUT AND FILL SLOPES SHALL BE DESIGNED AND CONSTRUCTED IN A MANNER THAT WILL MINIMIZE EROSION. SLOPES THAT ARE FOUND TO BE ERODING EXCESSIVELY WITHIN ONE YEAR OF PERMANENT STABILIZATION SHALL BE PROVIDED WITH ADDITIONAL SLOPE STABILIZING MEASURES UNTIL THE PROBLEM IS CORRECTED.	SLOPE STABILIZATION SHALL BE IN ACCORDANCE WITH THE CITY OF VIRGINIA BEACH EROSION AND SEDIMENT CONTROL ORDINANCE AND THE VIRGINIA EROSION AND SEDIMENT CONTROL HANDBOOK.
	X	MS8: CONCENTRATED RUNOFF SHALL NOT FLOW DOWN CUT OR FILL SLOPES UNLESS CONTAINED WITHIN AN ADEQUATE TEMPORARY OR PERMANENT CHANNEL, FLUME OR SLOPE DRAIN STRUCTURE.	N/A
X		MS9: WHENEVER WATER SEEPS FROM A SLOPE FACE, ADEQUATE DRAINAGE OR OTHER PROTECTION SHALL BE PROVIDED.	SLOPE STABILIZATION AND SEEPAGE PROTECTION SHALL BE IN ACCORDANCE WITH THE CITY OF VIRGINIA BEACH EROSION AND SEDIMENT CONTROL ORDINANCE AND THE VIRGINIA EROSION AND SEDIMENT CONTROL HANDBOOK.
X		MS10: ALL STORM SEWER INLETS THAT ARE MADE OPERABLE DURING CONSTRUCTION SHALL BE PROTECTED SO THAT SEDIMENT-LADEN WATER CANNOT ENTER THE CONVEYANCE SYSTEM WITHOUT FIRST BEING FILTERED OR OTHERWISE TREATED TO REMOVE SEDIMENT.	STORM DRAIN INLET PROTECTION IS REQUIRED AT ALL EXISTING AND NEW STRUCTURES.
X		MS11: BEFORE NEWLY CONSTRUCTED STORMWATER CONVEYANCE CHANNELS OR PIPES ARE MADE OPERATIONAL, ADEQUATE OUTLET PROTECTION AND ANY REQUIRED TEMPORARY OR PERMANENT CHANNEL LINING SHALL BE INSTALLED IN BOTH THE CONVEYANCE CHANNEL AND RECEIVING CHANNEL.	SIDE SLOPES OF DIVERSION DITCHES WILL BE STABILIZED IMMEDIATELY AFTER GRADING.
	X	MS12: WHEN WORK IN A LIVE WATERCOURSE IS PERFORMED, PRECAUTIONS SHALL BE TAKEN TO MINIMIZE ENCROACHMENT, CONTROL SEDIMENT TRANSPORT AND STABILIZE THE WORK AREA TO THE GREATEST EXTENT POSSIBLE DURING CONSTRUCTION. NONERODIBLE MATERIAL SHALL BE USED FOR THE CONSTRUCTION OF CAUSEWAYS AND COFFERDAMS. EARTHEN FILL MAY BE USED FOR THESE STRUCTURES IF ARMORED BY NONERODIBLE COVER MATERIALS.	N/A
	X	MS13: WHEN A LIVE WATERCOURSE MUST BE CROSSED BY CONSTRUCTION VEHICLES MORE THAN TWICE IN ANY SIX-MONTH PERIOD, A TEMPORARY VEHICULAR STREAM CROSSING CONSTRUCTED OF NONERODIBLE MATERIAL SHALL BE PROVIDED	N/A
	X	MS14: ALL APPLICABLE FEDERAL, STATE AND LOCAL CHAPTERS PERTAINING TO WORKING IN OR CROSSING LIVE WATERCOURSES SHALL BE MET.	N/A
	X	MS15: THE BED AND BANKS OF A WATERCOURSE SHALL BE STABILIZED IMMEDIATELY AFTER WORK IN THE WATERCOURSE IS COMPLETED.	N/A
X		MS16: UNDERGROUND UTILITY LINES SHALL BE INSTALLED IN ACCORDANCE WITH THE FOLLOWING STANDARDS IN ADDITION TO OTHER APPLICABLE CRITERIA: a. NO MORE THAN 500 LINEAR FEET OF TRENCH MAY BE OPENED AT ONE TIME. b. EXCAVATED MATERIAL SHALL BE PLACED ON THE UPHILL SIDE OF TRENCHES. c. EFFLUENT FROM DEWATERING OPERATIONS SHALL BE FILTERED OR PASSED THROUGH AN APPROVED SEDIMENT TRAPPING DEVICE, OR BOTH, AND DISCHARGED IN A MANNER THAT DOES NOT ADVERSELY AFFECT FLOWING STREAMS OR OFF-SITE PROPERTY. d. MATERIAL USED FOR BACKFILLING TRENCHES SHALL BE PROPERLY COMPACTED IN ORDER TO MINIMIZE EROSION AND PROMOTE STABILIZATION. e. RESTABILIZATION SHALL BE ACCOMPLISHED IN ACCORDANCE WITH THIS CHAPTER. f. APPLICABLE SAFETY CHAPTERS SHALL BE COMPLIED WITH.	UNDERGROUND UTILITIES SHALL BE INSTALLED IN ACCORDANCE ITEMS A THROUGH F OF MS-16.
X		MS17: WHERE CONSTRUCTION VEHICLE ACCESS ROUTES INTERSECT PAVED OR PUBLIC ROADS, PROVISIONS SHALL BE MADE TO MINIMIZE THE TRANSPORT OF SEDIMENT BY VEHICULAR TRACKING ONTO THE PAVED SURFACE. WHERE SEDIMENT IS TRANSPORTED ONTO A PAVED OR PUBLIC ROAD SURFACE, THE ROAD SURFACE SHALL BE CLEANED THOROUGHLY AT THE END OF EACH DAY. SEDIMENT SHALL BE REMOVED FROM THE ROADS BY SHOVELING OR SWEEPING AND TRANSPORTED TO A SEDIMENT CONTROL DISPOSAL AREA. STREET WASHING SHALL BE ALLOWED ONLY AFTER SEDIMENT IS REMOVED IN THIS MANNER. THIS PROVISION SHALL APPLY TO INDIVIDUAL DEVELOPMENT LOTS AS WELL AS TO LARGER LAND-DISTURBING ACTIVITIES.	CONTROL OF SEDIMENT ONTO PAVED AREAS SHALL BE IN ACCORDANCE WITH THE CITY OF VIRGINIA BEACH EROSION AND SEDIMENT CONTROL ORDINANCE AND THE VIRGINIA EROSION AND SEDIMENT CONTROL HANDBOOK.

YES	N/A		DESCRIBE HOW IS MS ADDRESSED ON PLANS
X		MS18: ALL TEMPORARY EROSION AND SEDIMENT CONTROL MEASURES SHALL BE REMOVED WITHIN 30 DAYS AFTER FINAL SITE STABILIZATION OR AFTER THE TEMPORARY MEASURES ARE NO LONGER NEEDED, UNLESS OTHERWISE AUTHORIZED BY THE VESCP AUTHORITY. TRAPPED SEDIMENT AND THE DISTURBED SOIL AREAS RESULTING FROM THE DISPOSITION OF TEMPORARY MEASURES SHALL BE PERMANENTLY STABILIZED TO PREVENT FURTHER EROSION AND SEDIMENTATION.	INSTALLATION AND REMOVAL OF TEMPORARY SEDIMENT CONTROL MEASURES SHALL BE IN ACCORDANCE WITH THE CITY OF VIRGINIA BEACH EROSION AND SEDIMENT CONTROL ORDINANCE AND THE VIRGINIA EROSION AND SEDIMENT CONTROL HANDBOOK
X		MS19: PROPERTIES AND WATERWAYS DOWNSTREAM FROM DEVELOPMENT SITES SHALL BE PROTECTED FROM SEDIMENT DEPOSITION, EROSION AND DAMAGE DUE TO INCREASES IN VOLUME, VELOCITY AND PEAK FLOW RATE OF STORMWATER RUNOFF FOR THE STATED FREQUENCY STORM OF 24-HOUR DURATION IN ACCORDANCE WITH THE FOLLOWING STANDARDS AND CRITERIA. STREAM RESTORATION AND RELOCATION PROJECTS THAT INCORPORATE NATURAL CHANNEL DESIGN CONCEPTS ARE NOT MAN-MADE CHANNELS AND SHALL BE EXEMPT FROM ANY FLOW RATE CAPACITY AND VELOCITY REQUIREMENTS FOR NATURAL OR MAN-MADE CHANNELS: a. CONCENTRATED STORMWATER RUNOFF LEAVING A DEVELOPMENT SITE SHALL BE DISCHARGED DIRECTLY INTO AN ADEQUATE NATURAL OR MAN-MADE RECEIVING CHANNEL, PIPE OR STORM SEWER SYSTEM. FOR THOSE SITES WHERE RUNOFF IS DISCHARGED INTO A PIPE OR PIPE SYSTEM, DOWNSTREAM STABILITY ANALYSES AT THE OUTFALL OF THE PIPE OR PIPE SYSTEM SHALL BE PERFORMED. b. ADEQUACY OF ALL CHANNELS AND PIPES SHALL BE VERIFIED IN THE FOLLOWING MANNER: 1) THE APPLICANT SHALL DEMONSTRATE THAT THE TOTAL DRAINAGE AREA TO THE POINT OF ANALYSIS WITHIN THE CHANNEL IS ONE HUNDRED TIMES GREATER THAN THE CONTRIBUTING DRAINAGE AREA OF THE PROJECT IN QUESTION; OR 2) (A) NATURAL CHANNELS SHALL BE ANALYZED BY THE USE OF A TWO-YEAR STORM TO VERIFY THAT STORMWATER WILL NOT OVERTOP CHANNEL BANKS NOR CAUSE EROSION OF CHANNEL BED OR BANKS. (B) ALL PREVIOUSLY CONSTRUCTED MAN-MADE CHANNELS SHALL BE ANALYZED BY THE USE OF A TEN-YEAR STORM TO VERIFY THAT STORMWATER WILL NOT OVERTOP ITS BANKS AND BY THE USE OF A TWO-YEAR STORM TO DEMONSTRATE THAT STORMWATER WILL NOT CAUSE EROSION OF CHANNEL BED OR BANKS; AND (C) PIPES AND STORM SEWER SYSTEMS SHALL BE ANALYZED BY THE USE OF A TEN-YEAR STORM TO VERIFY THAT STORMWATER WILL BE CONTAINED WITHIN THE PIPE OR SYSTEM. c. IF EXISTING NATURAL RECEIVING CHANNELS OR PREVIOUSLY CONSTRUCTED MAN-MADE CHANNELS OR PIPES ARE NOT ADEQUATE, THE APPLICANT SHALL: 1) IMPROVE THE CHANNELS TO A CONDITION WHERE A TEN-YEAR STORM WILL NOT OVERTOP THE BANKS AND A TWO-YEAR STORM WILL NOT CAUSE EROSION TO CHANNEL THE BED OR BANKS; OR 2) IMPROVE THE PIPE OR PIPE SYSTEM TO A CONDITION WHERE THE TEN-YEAR STORM IS CONTAINED WITHIN THE APPURTENANCES; 3) DEVELOP A SITE DESIGN THAT WILL NOT CAUSE THE PRE-DEVELOPMENT PEAK RUNOFF RATE FROM A TWO YEAR STORM TO INCREASE WHEN RUNOFF OUTFALLS INTO A NATURAL CHANNEL OR WILL NOT CAUSE THE PREDEVELOPMENT PEAK RUNOFF RATE FROM A TEN-YEAR STORM TO INCREASE WHEN RUNOFF OUTFALLS INTO A MANMADE CHANNEL; OR 4) PROVIDE A COMBINATION OF CHANNEL IMPROVEMENT, STORMWATER DETENTION OR OTHER MEASURES WHICH IS SATISFACTORY TO THE VESCP AUTHORITY TO PREVENT DOWNSTREAM EROSION. d. THE APPLICANT SHALL PROVIDE EVIDENCE OF PERMISSION TO MAKE THE IMPROVEMENTS. e. ALL HYDROLOGIC ANALYSES SHALL BE BASED ON THE EXISTING WATERSHED CHARACTERISTICS AND THE ULTIMATE DEVELOPMENT CONDITION OF THE SUBJECT PROJECT. f. IF THE APPLICANT CHOOSES AN OPTION THAT INCLUDES STORMWATER DETENTION, HE SHALL OBTAIN APPROVAL FROM THE VESCP OF A PLAN FOR MAINTENANCE OF THE DETENTION FACILITIES. THE PLAN SHALL SET FORTH THE MAINTENANCE REQUIREMENTS OF THE FACILITY AND THE PERSON RESPONSIBLE FOR PERFORMING THE MAINTENANCE. g. OUTFALL FROM A DETENTION FACILITY SHALL BE DISCHARGED TO A RECEIVING CHANNEL, AND ENERGY DISSIPATORS SHALL BE PLACED AT THE OUTFALL OF ALL DETENTION FACILITIES AS NECESSARY TO PROVIDE A STABILIZED TRANSITION FROM THE FACILITY TO THE RECEIVING CHANNEL. h. ALL ON-SITE CHANNELS MUST BE VERIFIED TO BE ADEQUATE. i. INCREASED VOLUMES OF SHEET FLOWS THAT MAY CAUSE EROSION OR SEDIMENTATION ON ADJACENT PROPERTY SHALL BE DIVERTED TO A STABLE OUTLET, ADEQUATE CHANNEL, PIPE OR PIPE SYSTEM, OR TO A DETENTION FACILITY. j. IN APPLYING THESE STORMWATER MANAGEMENT CRITERIA, INDIVIDUAL LOTS OR PARCELS IN A RESIDENTIAL, COMMERCIAL OR INDUSTRIAL DEVELOPMENT SHALL NOT BE CONSIDERED TO BE SEPARATE DEVELOPMENT PROJECTS. INSTEAD, THE DEVELOPMENT, AS A WHOLE, SHALL BE CONSIDERED TO BE A SINGLE DEVELOPMENT PROJECT. HYDROLOGIC PARAMETERS THAT REFLECT THE ULTIMATE DEVELOPMENT CONDITION SHALL BE USED IN ALL ENGINEERING CALCULATIONS. k. ALL MEASURES USED TO PROTECT PROPERTIES AND WATERWAYS SHALL BE EMPLOYED IN A MANNER WHICH MINIMIZES IMPACTS ON THE PHYSICAL, CHEMICAL AND BIOLOGICAL INTEGRITY OF RIVERS, STREAMS AND OTHER WATERS OF THE STATE. l. ANY PLAN APPROVED PRIOR TO JULY 1, 2014, THAT PROVIDES FOR STORMWATER MANAGEMENT THAT ADDRESSES ANY FLOW RATE CAPACITY AND VELOCITY REQUIREMENTS FOR NATURAL OR MAN-MADE CHANNELS SHALL SATISFY THE FLOW RATE CAPACITY AND VELOCITY REQUIREMENTS FOR NATURAL OR MAN-MADE CHANNELS IF THE PRACTICES ARE DESIGNED TO I. DETAIN THE WATER QUALITY VOLUME AND TO RELEASE IT OVER 48 HOURS; II. DETAIN AND RELEASE OVER A 24-HOUR PERIOD THE EXPECTED RAINFALL RESULTING FROM THE ONE YEAR, 24- HOUR STORM; AND III. REDUCE THE ALLOWABLE PEAK FLOW RATE RESULTING FROM THE 1.5, 2, AND 10-YEAR, 24-HOUR STORMS TO A LEVEL THAT IS LESS THAN OR EQUAL TO THE PEAK FLOW RATE FROM THE SITE ASSUMING IT WAS IN A GOOD FORESTED CONDITION, ACHIEVED THROUGH MULTIPLICATION OF THE FORESTED PEAK FLOW RATE BY A REDUCTION FACTOR THAT IS EQUAL TO THE RUNOFF VOLUME FROM THE SITE WHEN IT WAS IN A GOOD FORESTED CONDITION DIVIDED BY THE RUNOFF VOLUME FROM THE SITE IN ITS PROPOSED CONDITION, AND SHALL BE EXEMPT FROM ANY FLOW RATE CAPACITY AND VELOCITY REQUIREMENTS FOR NATURAL OR MAN-MADE CHANNELS AS DEFINED IN ANY REGULATIONS PROMULGATED PURSUANT TO § 10.1-562 OR 10.1-570 OF THE ACT. m. FOR PLANS APPROVED ON AND AFTER JULY 1, 2014, THE FLOW RATE CAPACITY AND VELOCITY REQUIREMENTS OF § 10.1-561 A OF THE ACT AND THIS SUBSECTION SHALL BE SATISFIED BY COMPLIANCE WITH WATER QUANTITY REQUIREMENTS IN THE STORMWATER MANAGEMENT ACT (§ 10.1-603.2 ET SEQ. OF THE CODE OF VIRGINIA) AND ATTENDANT REGULATIONS, UNLESS SUCH LAND DISTURBING ACTIVITIES ARE IN ACCORDANCE WITH 4VAC50-60-48 OF THE VIRGINIA STORMWATER MANAGEMENT PROGRAM (VSMP) PERMIT REGULATIONS. n. COMPLIANCE WITH THE WATER QUANTITY MINIMUM STANDARDS SET OUT IN 4VAC50-60-66 OF THE VIRGINIA STORMWATER MANAGEMENT PROGRAM (VSMP) PERMIT REGULATIONS SHALL BE DEEMED TO SATISFY THE REQUIREMENTS OF MINIMUM .STANDARD 19.	THE STORM SYSTEM CONNECTS TO THE EXISTING ADEQUATE CITY STORM DRAIN SYSTEM. DETAILED CALCULATIONS ARE PROVIDED IN THE DRAINAGE REPORT. THESE PLANS HAVE BEEN CHECKED TO ENSURE INCLUSION OF EROSION AND SEDIMENT CONTROL MEASURES APPROPRIATE FOR THE PROJECT. PW ENGINEERING E&S ADMINISTRATOR ____ DATE ____

City of Virginia Beach
MEB General Contractors

VIRGINIA BEACH SPORTS CENTER

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Virginia Beach, Virginia

DESIGNER

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CONSULTANT

SEALS

SUBMITTAL
05/18/18
PROGRESS PRINT

REVISIONS

KEY PLAN

SHEET
DETAILS

C-502

SHEET - OF XX -

DESIGN: RMS
DRAWN: TAW
REVIEW: -

CN 7142

Spell checked by TWEAVER on 05/14/2018 1:42pm

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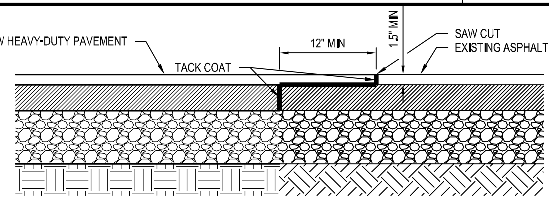

NEW TO EXISTING PAVEMENT INTERFACE

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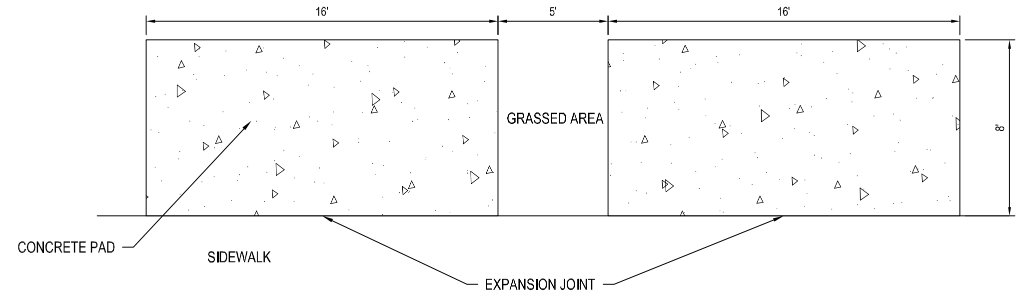
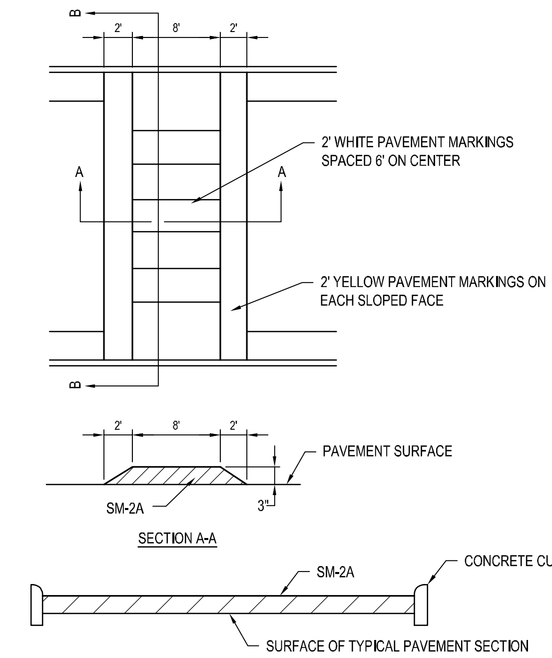


BUS SHELTER PAD @ 17TH ST

NO SCALE



SPEED BUMP DETAIL

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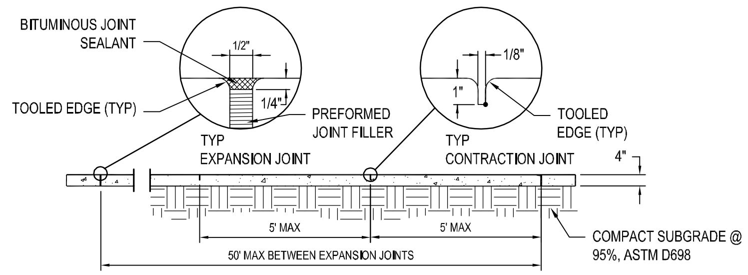


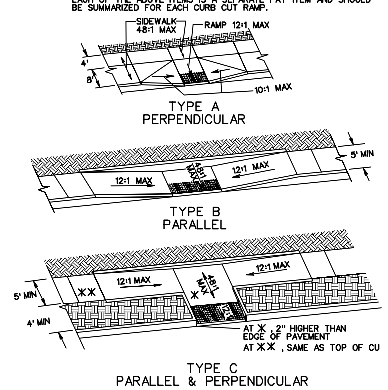
NOTES:
1. FOR SIDEWALK WIDTHS SEE PLAN VIEW.
2. AT DRIVEWAY APRONS, SIDEWALKS SHALL MATCH APRON THICKNESS.

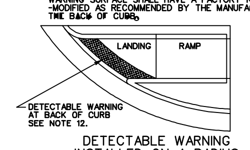
CONCRETE SIDEWALK

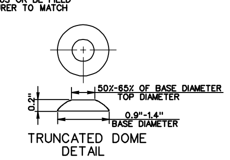
NO SCALE

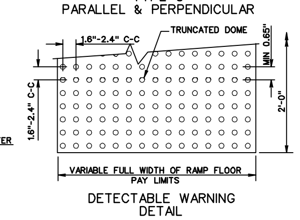
GENERAL NOTES:
1. THE DETECTABLE WARNING SHALL BE PROVIDED BY TRUNCATED DOMES.
2. DETECTABLE WARNING SHALL BE FROM THE MATERIALS APPROVED LIST FOR DETECTABLE WARNING SUFACES. PRODUCTS NOT LISTED SHALL MEET THE REQUIREMENTS OF THE SPECIAL PROVISION FOR CG-12 DETECTABLE WARNING SURFACE AND SHALL BE SUBMITTED TO THE STANDARDS AND SPECIAL DESIGN SECTION FOR APPROVAL.
3. SLOPING SIDES OF CURB RAMP MAY BE POURED MONOLITHICALLY WITH RAMP FLOOR OR BY USING PERMISSIBLE CONSTRUCTION JOINT WITH REQUIRED BARS.
4. IF RAMP FLOOR IS PRECAST, HOLES MUST BE PROVIDED FOR DOWEL BARS SO THAT ADJOINING FLARED SIDES CAN BE CAST IN PLACE AFTER PLACEMENT OF PRECAST RAMP FLOOR. PRECAST CONCRETE SHALL BE CLASS A-4.
5. REQUIRED BARS ARE TO BE NO. 5 X 8" PLACED 1' CENTER TO CENTER ALONG BOTH SIDES OF THE RAMP FLOOR, MID-DEPTH OF RAMP FLOOR. MINIMUM CONCRETE COVER 1½".
6. CURB / CURB AND GUTTER SLOPE TRANSITIONS ADJACENT TO CURB RAMPS ARE INCLUDED IN PAYMENT FOR CURB / CURB AND GUTTER.
7. CURB RAMPS ARE TO BE LOCATED AS SHOWN ON THE PLANS OR AS DIRECTED BY THE ENGINEER. THEY ARE TO BE PROVIDED AT INTERSECTIONS WHEREVER AN ACCESSIBLE ROUTE WITHIN THE RIGHT OF WAY OF A HIGHWAY FACILITY CROSSES A CURB REGARDLESS OF WHETHER SIDEWALK IS EXISTING, PROPOSED, OR NONEXISTENT. THEY MUST BE LOCATED WITHIN PEDESTRIAN CROSSWALKS AS SHOWN ON PLANS OR AS DIRECTED BY THE ENGINEER, AND SHOULD NOT BE LOCATED BEHIND VEHICLE STOP LINES, EXISTING LIGHT POLES, FIRE HYDRANTS, DROP INLETS, ETC. ACCESSIBLE ROUTES PROVIDE A CONTINUOUS UNOBSTRUCTED, STABLE, FIRM AND SLIP RESISTANT PATH CONNECTING ALL ACCESSIBLE ELEMENTS OF A FACILITY THAT CAN BE APPROACHED, ENTERED AND USED BY PEDESTRIANS.
8. RAMPS MAY BE PLACED ON RADIAL OR TANGENTIAL SECTIONS PROVIDED THAT THE CURB OPENING IS PLACED WITHIN THE LIMITS OF THE CROSSWALK AND THAT THE SLOPE AT THE CONNECTION OF THE CURB OPENING IS PERPENDICULAR TO THE CURB.
9. TYPICAL CONCRETE SIDEWALK IS 4" THICK. WHEN THE ENTRANCE RADII CANNOT ACCOMMODATE THE TURNING REQUIREMENTS OF ANTICIPATED HEAVY TRUCK TRAFFIC, REFER TO STANDARD CG-13, COMMERCIAL ENTRANCE (HEAVY TRUCK TRAFFIC) FOR CONCRETE DEPTH.
10. WHEN CURB RAMPS ARE USED IN CONJUNCTION WITH A SHARED USE PATH, THE MINIMUM WIDTH SHALL BE THE WIDTH OF THE SHARED USE PATH.
11. WHEN ONLY ONE CURB RAMP IS PROVIDED FOR TWO CROSSINGS (DIAGONAL), A 4' x 4' LANDING AREA SHALL BE PROVIDED TO MANEUVER A WHEELCHAIR INTO THE CROSSWALK WITHOUT GOING INTO THE TRAVELWAY. THIS 4' x 4' LANDING AREA MAY INCLUDE THE GUTTER PAN.
12. ALL CASES WHERE CURB RAMPS INTERSECT A RADIAL SECTION OF CURB AT ENTRANCES OR STREET CONNECTIONS THE DETECTABLE WARNING SURFACE SHALL HAVE A FACTORY RADIUS OR BE FIELD -MODIFIED AS RECOMMENDED BY THE MANUFACTURER TO MATCH THE BACK OF CURB.

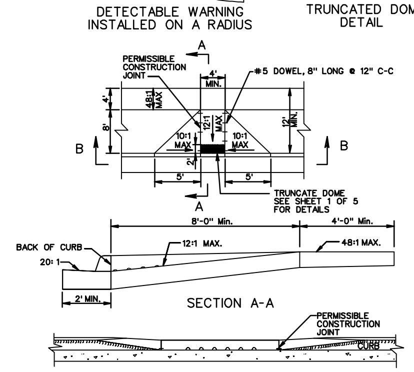
NOTE: COMPONENTS OF CURB RAMPS CONSIST OF THE FOLLOWING:
HYDRAULIC CEMENT SIDEWALK (DEPTH IN INCHES, AREA IN SQUARE YAR
CURB WHEN REQUIRED (CG-2 OR CG-3 IN LINEAR FEET)
DETECTABLE WARNING SURFACE (AREA IN SQUARE YARDS)
EACH OF THE ABOVE ITEMS IS A SEPARATE PAY ITEM AND SHOULD BE SUMMARIZED FOR EACH CURB CUT RAMP.

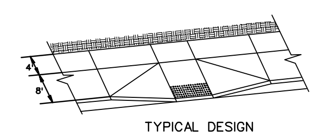


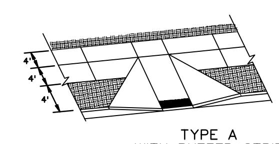






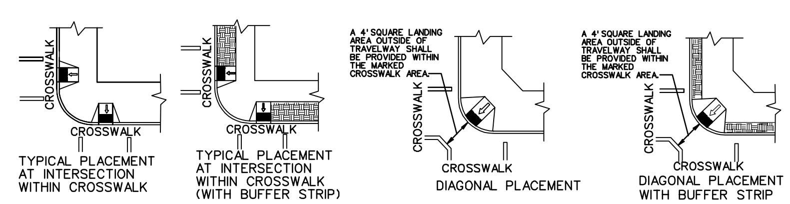






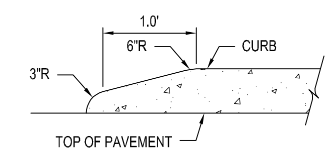
NOTES: FOR GENERAL NOTES ON THE DETECTABLE WARNING SURFACE, SEE SHEET 1 OF 5.

THIS DESIGN TO BE USED FOR CONSTRUCTION THAT INCORPORATES WIDER SIDEWALK. LANDING (4' WIDE) REQUIRED AT TOP OF CURB RAMP. MINIMUM CURB RAMP LENGTH 8 FEET FOR NEW CONSTRUCTION.



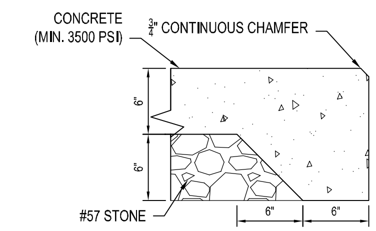
CURB RAMP (CG-12 TYPE A) WITH DETECTABLE WARNING SURFACE

NO SCALE



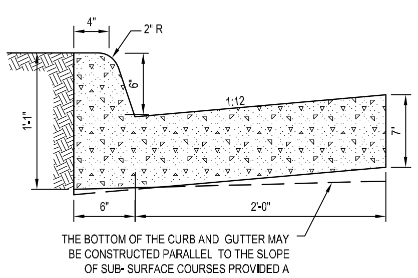
CURB WIPEDOWN

NO SCALE



BUS SHELTER PAD SECTION

NO SCALE



NOTES:

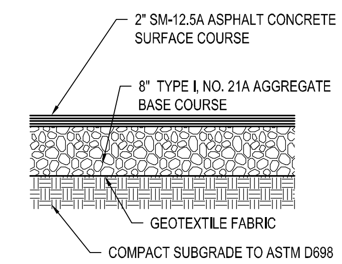
THIS ITEM MAY BE PRECAST OR CAST IN PLACE.

CONCRETE TO BE CLASS A3 IF CAST IN PLACE, 4000 PSI IF PRECAST.

FOR USE WITH STABILIZED OPEN-GRADED DRAINAGE LAYER, THE BOTTOM OF THE CURB AND GUTTER SHALL BE CONSTRUCTED PARALLEL TO THE SLOPE OF SUBBASE COURSES AND TO THE DEPTH OF THE PAVEMENT.

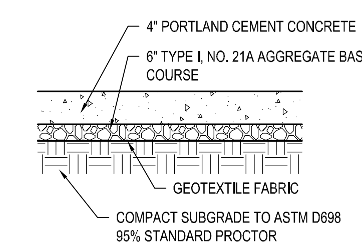
CONCRETE 6" CURB AND GUTTER (VDOT STD CG-6)

NO SCALE



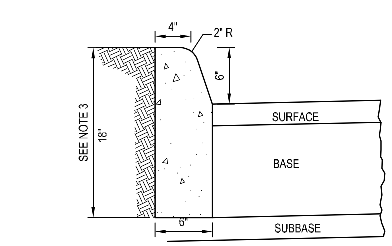
LIGHT DUTY ASPHALT PAVEMENT

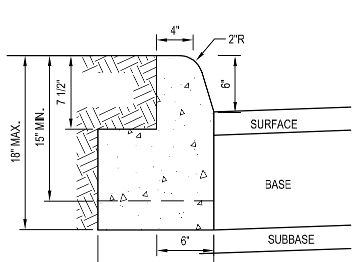
NO SCALE



LIGHT DUTY CONCRETE PAVEMENT

NO SCALE



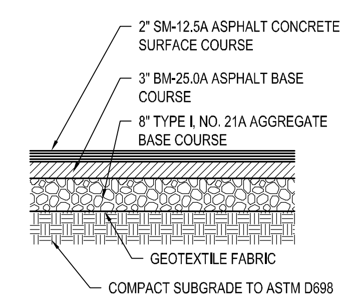


NOTES:
1. THIS ITEM MAY BE PRECAST OR CAST IN PLACE.
2. CONCRETE TO BE CLASS A3 IF CAST IN PLACE, 4000 PSI IF PRECAST.
3. THE DEPTH OF CURB MAY BE REDUCED AS MUCH AS 3" (15" DEPTH) OR INCREASED AS MUCH AS 3" (21" DEPTH) IN ORDER THAT THE BOTTOM OF CURB WILL COINCIDE WITH THE TOP OF A COURSE OF THE PAVEMENT SUBSTRUCTURE. OTHERWISE THE DEPTH IS TO BE 18" AS SHOWN. NO ADJUSTMENT IN THE PRICE BID IS TO BE MADE FOR A DECREASE OR AN INCREASE IN DEPTH.

ACCEPTABLE ALTERNATE IF CURB IS USED

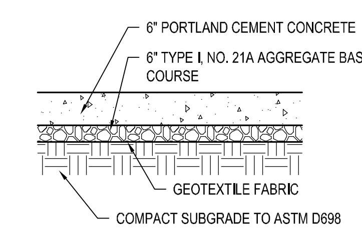
CONCRETE 6" CURB (VDOT STD CG-2)

NO SCALE



HEAVY DUTY ASPHALT PAVEMENT

NO SCALE



HEAVY DUTY CONCRETE PAVEMENT

NO SCALE

City of Virginia Beach
MEB General Contractors
VIRGINIA BEACH SPORTS CENTER

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Virginia Beach, Virginia

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SEALS

SUBMITTAL

05/18/18

PROGRESS PRINT

REVISIONS

KEY PLAN

SHEET

DETAILS

C-503

SHEET - OF XX -

DESIGN: RMS
DRAWN: TAW
REVIEW: -

CN 7142

Spell checked by TWEAVER on 05/18/2018 3:46pm

I:\Projects\7000\7142-HR Regional Sports Pavilion\CAD\Sheets\C\C-503.dwg Fri, 18 May 2018 - 4:11pm tweaver

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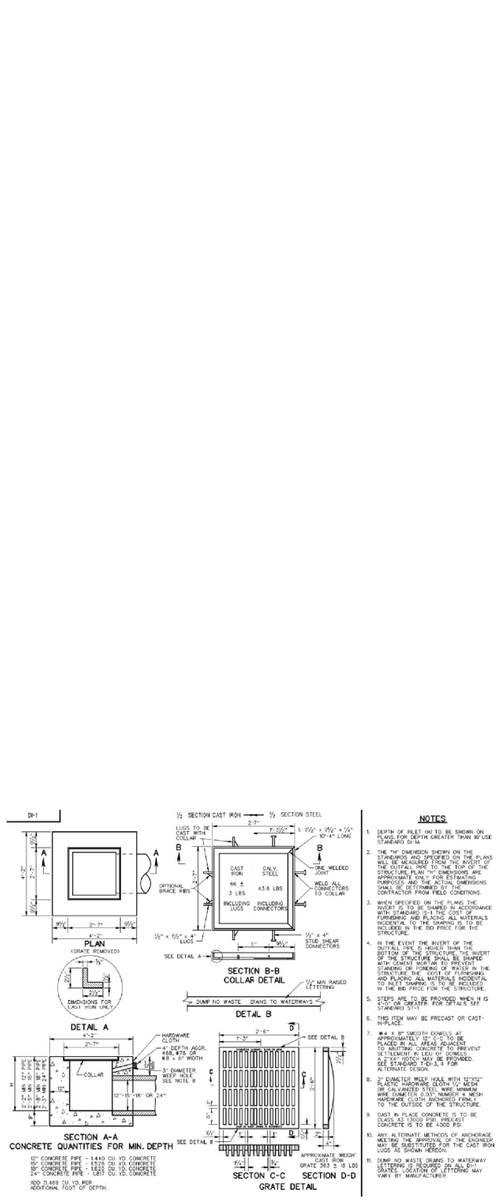

DROP INLET (VDOT DI-1)

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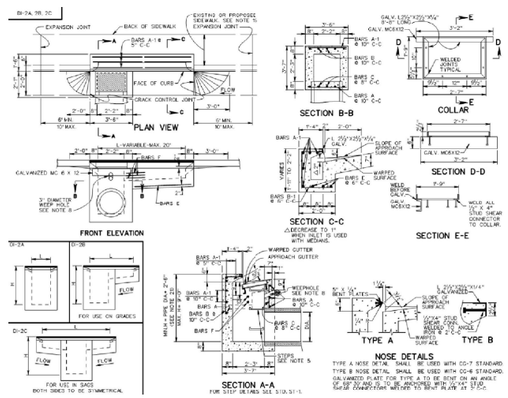

CURB INLET (VDOT DI-2)

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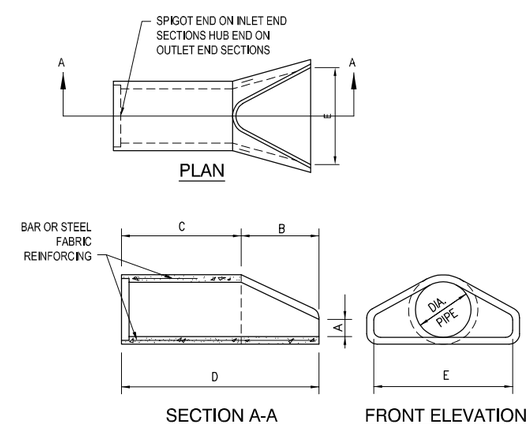


END SECTION DIMENSIONS					
DIA.	A	B	C	D	E
12"	4"	2'-0"	2'-0"	4'-0"	2'-0"
15"	6"	2'-3"	1'-9"	4'-0"	2'-6"
18"	9"	2'-3"	1'-9"	4'-0"	3'-0"
24"	9 1/2"	3'-7"	2'-6"	6'-1"	4'-0"
30"	1'-0"	4'-6"	1'-7 3/4"	6'-1 3/4"	5'-0"
36"	1'-3"	5'-3"	2'-10 3/4"	8'-1 3/4"	6'-0"
42"	1'-9"	5'-3"	2'-11"	8'-2"	6'-6"
48"	2'-0"	6'-0"	2'-2"	8'-2"	7'-0"
54"	2'-3"	5'-5"	2'-9 1/4"	8'-2 1/4"	7'-6"
60"	2'-11"	5'-0"	3'-3"	8'-3"	8'-0"

FLARED END SECTION (VDOT ES-1)

NO SCALE

City of Virginia Beach

35 MEB General Contractors

VIRGINIA BEACH SPORTS CENTER

1045 19th Street
Virginia Beach, Virginia

DESIGNER

CLARKNEXSEN

4525 Main Street, Suite 1400
Virginia Beach, VA 23462
757.455.5800

CONSULTANT

SEALS

SUBMITTAL

05/18/18

PROGRESS PRINT

REVISIONS

KEY PLAN

101	103	105	107
102	104	106	108

SHEET

DETAILS

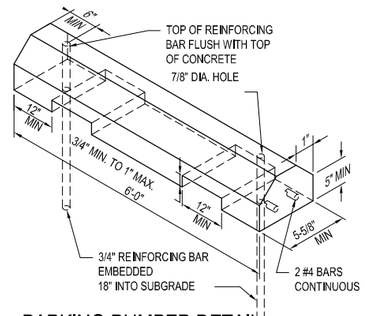
C-504

SHEET - OF XX -

DESIGN: RMS
DRAWN: TAW
REVIEW: -

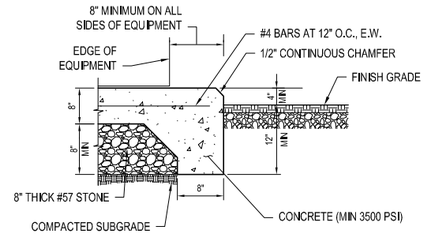
CN 7142

E:\Projects\7000\7142-HR Regional Sports Pavilion\CAD\Sheets\C\C-504.dwg Fri, 18 May 2018 - 4:11pm twever



PARKING BUMPER DETAIL

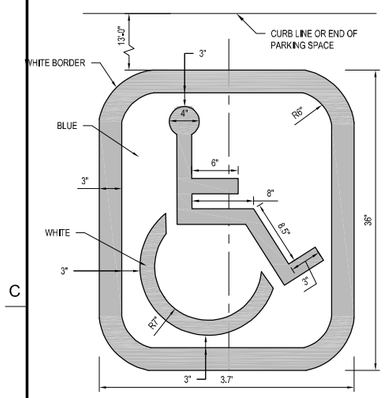
NO SCALE



NOTES:
1. REVISE THE PAD SIZE AND SHAPE BASED ON:
   A. THE EQUIPMENT PROVIDED.
   B. CLEARANCE REQUIREMENTS BY THE EQUIPMENT MANUFACTURER AND CODES.

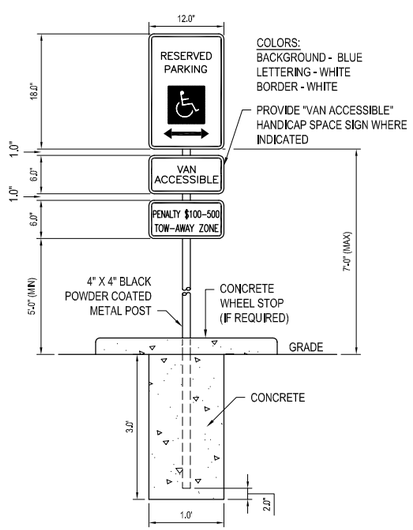
EQUIPMENT PAD

NO SCALE



HANDICAP PARKING SYMBOL

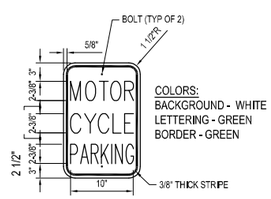
NO SCALE



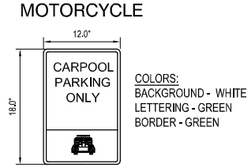
HANDICAP SIGN (MUTCD R7-8)

RESERVED PARKING SIGN AND POST

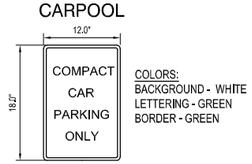
NO SCALE



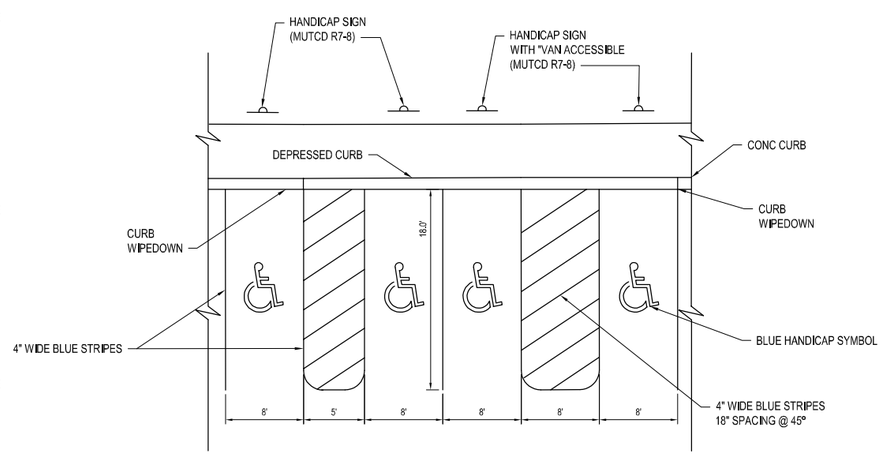
MOTORCYCLE



CARPOOL

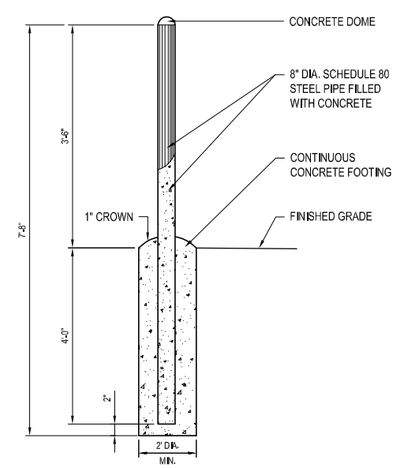


COMPACT CAR



TYPICAL ACCESSIBLE PARKING DETAIL

NO SCALE



NOTE: BOLLARD SHALL BE PAINTED SAFETY YELLOW.

UTILITY BOLLARD DETAIL

NO SCALE

Virginia Beach
35MEB General Contractors

VIRGINIA BEACH SPORTS CENTER

1045 19th Street
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DESIGNER

CLARKNEXSEN

4525 Main Street, Suite 1400
Virginia Beach, VA 23462
757.455.5800

CONSULTANT

SEALS

SUBMITTAL

05/18/18

PROGRESS PRINT

REVISIONS

KEY PLAN

SHEET

DETAILS

C-505

SHEET - OF XX -

DESIGN: RMS
DRAWN: TAW
REVIEW: -

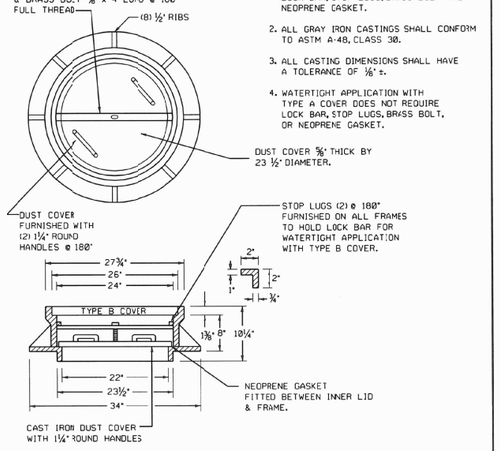
CN 7142

Spell checked by TWEAKER on 05/14/2018 1:47pm
I:\Projects\7000\7142-HR Regional Sports Pavilion\CAD\Sheets\C\C-505.dwg Fri, 18 May 2018 - 4:11pm tweaver

REVISED: / / DATE | PU DETAIL NO. 7-1
APPROVED: 04/13/01 DATE | GARY L. JONES, P.E ENGINEERING MANAGER

WITH TYPE E COVER, WATERTIGHT FURNISHED WITH LOCK BAR 1"x 1" STEEL 23½" LONG & BRASS BOLT ⅝" x 4" LONG @ 180° FULL THREAD

NOTES:
1. FOR NON-WATERTIGHT APPLICATIONS, DELETE LOCK BAR, STOP LUGS, BRASS BOLT AND NEOPRENE GASKET.
2. ALL GRAY IRON CASTINGS SHALL CONFORM TO ASTM A-48, CLASS 30.
3. ALL CASTING DIMENSIONS SHALL HAVE A TOLERANCE OF ⅛" ±.
4. WATERTIGHT APPLICATION WITH TYPE A COVER DOES NOT REQUIRE LOCK BAR, STOP LUGS, BRASS BOLT, OR NEOPRENE GASKET.

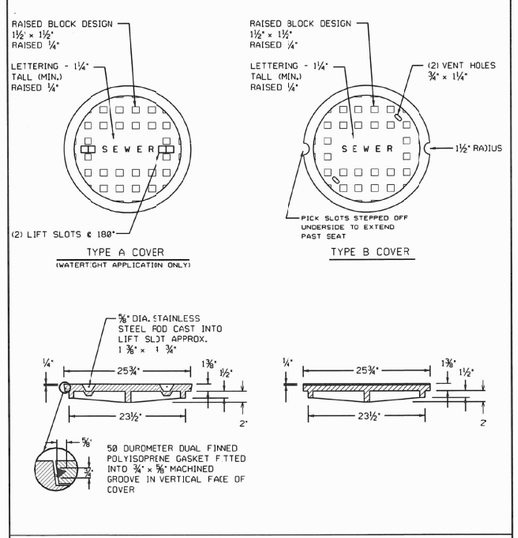


ALTERNATE COVERS AVAILABLE
1. SAME AS ABOVE WITH 23½" DIAMETER SKIRT 1½" DEEP EXCEPT WITH SOLID COVER LETTERED "SANITARY SEWER".
2. AS ABOVE EXCEPT WITHOUT SKIRT. UNDERSIDE TO HAVE 6 CROSS RIBS 21½" LONG TO ALLOW FOR USE OF INSERTS.

MANHOLE FRAME AND COVER

CITY OF VIRGINIA BEACH • DEPARTMENT OF PUBLIC UTILITIES

REVISED: / / DATE | PU DETAIL NO. 7-2
APPROVED: 04/13/01 DATE | GARY L. JONES, P.E ENGINEERING MANAGER

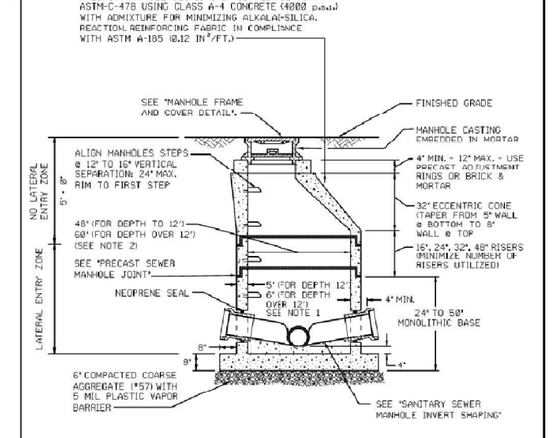


MANHOLE FRAME AND COVER

CITY OF VIRGINIA BEACH • DEPARTMENT OF PUBLIC UTILITIES

REVISED: / / DATE | PU DETAIL NO. 1
APPROVED: 04/13/01 DATE | GARY L. JONES, P.E ENGINEERING MANAGER

PRECAST MANHOLE SECTIONS IN COMPLIANCE WITH ASTM-C-478 USING CLASS A-4 CONCRETE (4000 psi) WITH ADMIXTURE FOR MINIMIZING ALKALAI-SILICA. REACTIVE REINFORCING FABRIC IN COMPLIANCE WITH ASTM A-185 @.12 IN²/FT.

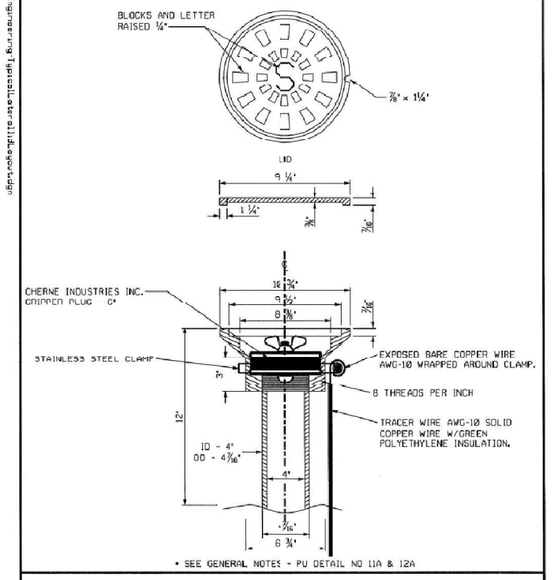


NOTES:
1. FOR MANHOLE DEPTH GREATER THAN 25' (RIM TO INVERT) STRUCTURAL ANALYSIS BY PROFESSIONAL ENGINEER TO BE PROVIDED.
2. SPECIFIED DIAMETER TO BE UTILIZED THROUGHOUT STRUCTURE (i.e. DO NOT REDUCE DIAMETER @ THRESHOLD DEPTH).
3. PROVIDE PROTECTIVE COATING WITH APPROVED EPOXY-RESIN BASED HIGH BUILD SYSTEM.
4. LATERAL ENTRY SHALL BE NO CLOSER THAN 6-INCHES TO ANY JOINT LINE.

PRECAST SANITARY SEWER MANHOLE

CITY OF VIRGINIA BEACH • DEPARTMENT OF PUBLIC UTILITIES

REVISED: 12/27/13 DATE | PU DETAIL NO. 10
APPROVED: 12/31/13 DATE | ROBERT E. CLARK, P.E. ENGINEERING MANAGER



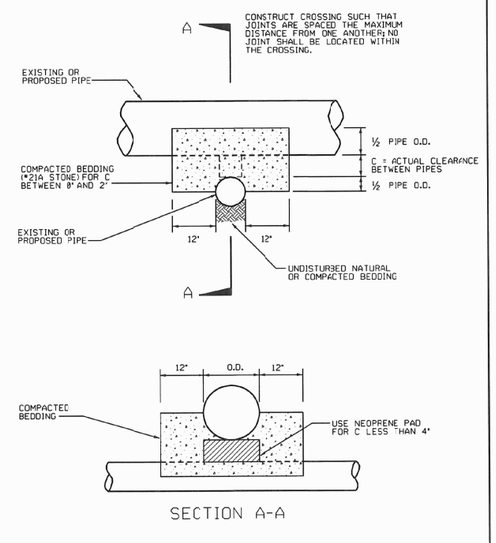
• SEE GENERAL NOTES - PU DETAIL NO 11A & 12A

HOUSE LATERAL CLEANOUT

CITY OF VIRGINIA BEACH • DEPARTMENT OF PUBLIC UTILITIES

REVISED: / / DATE | PU DETAIL NO. 20
APPROVED: 04/13/01 DATE | GARY L. JONES, P.E ENGINEERING MANAGER

CONSTRUCT CROSSING SUCH THAT JOINTS ARE SPACED THE MAXIMUM DISTANCE FROM ONE ANOTHER; NO JOINT SHALL BE LOCATED WITHIN THE CROSSING.



SECTION A-A

PIPE CROSSING BEDDING

CITY OF VIRGINIA BEACH • DEPARTMENT OF PUBLIC UTILITIES

City of Virginia Beach
35 MEB General Contractors

VIRGINIA BEACH SPORTS CENTER

1045 19th Street
Virginia Beach, Virginia

DESIGNER
CLARKNEXSEN
4525 Main Street, Suite 1400
Virginia Beach, VA 23462
757.455.5800

CONSULTANT

SEALS

SUBMITTAL
05/18/18
PROGRESS PRINT

REVISIONS

KEY PLAN

SHEET
UTILITY DETAILS

C-601

SHEET - OF XX -

DESIGN: RMS
DRAWN: TAW
REVIEW: -

CN 7142

Spell checked by TWEAVER on 05/07/2018 12:21pm

E:\Projects\7000\7142-HR Regional Sports Pavilion\CAD\Sheets\C\C-601.dwg Fri, 18 May 2018 - 4:11pm tweaver

REVISED: DATE / /	PU DETAIL NO. 18-1
APPROVED: 04/13/01 DATE	GARY L. JONES, P.E ENGINEERING MANAGER

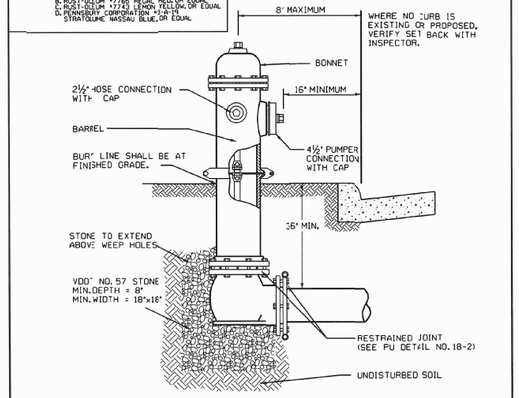
COLOR CODE

OWNER	BONNET	CAPS	BARREL
CITY	White	White	Red
CITY (COUNTER-CLOCKWISE)	Yellow	Yellow	Red
PRIVATE	Blue	Blue	Red
PRIVATE (COUNTER-CLOCKWISE)	Blue	Yellow	Red
DPU (DRAFTING)	Blue	Blue	Blue

HYDRANT PAINT

A. RUST-OLEUM #7792 GLOSS WHITE, OR EQUAL
B. RUST-OLEUM #7765 REGAL RED, OR EQUAL
C. RUST-OLEUM #7743 LEMON YELLOW, OR EQUAL
D. PENNSBURY CORPORATION #3-0-14 STRATOLUME NASSAU BLUE, OR EQUAL

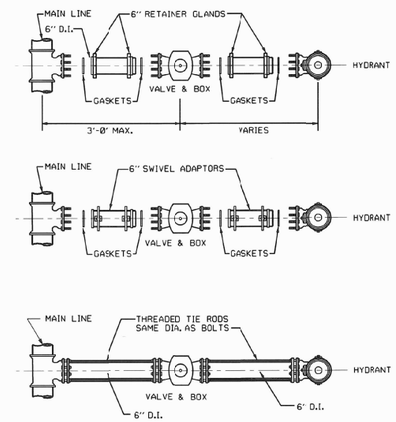
NOTE:
HYDRANT SHALL BE VERTICALLY PLUMB, PUMPER CONNECTION SHALL FACE 90° TO STREET, UNLESS OTHERWISE SPECIFIED.



FIRE HYDRANT SETTING

CITY OF VIRGINIA BEACH • DEPARTMENT OF PUBLIC UTILITIES

REVISED: DATE / /	PU DETAIL NO. 18-2
APPROVED: 04/13/01 DATE	GARY L. JONES, P.E ENGINEERING MANAGER

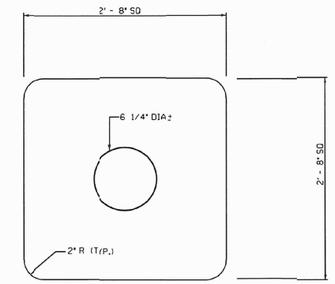


NOTE:
ALL HYDRANT CONNECTIONS MUST BE FIELD INSPECTED, BY A PUBLIC UTILITIES INSPECTOR, PRIOR TO BACKFILLING.

FIRE HYDRANT CONNECTIONS

CITY OF VIRGINIA BEACH • DEPARTMENT OF PUBLIC UTILITIES

REVISED: DATE / /	PU DETAIL NO. 18-3
APPROVED: 04/13/01 DATE	GARY L. JONES, P.E ENGINEERING MANAGER

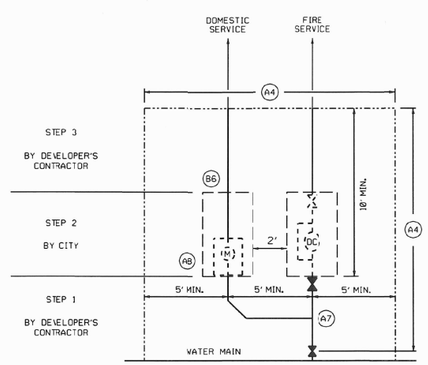


NOTES:
1. 12 GAUGE SHEET METAL USED FOR SIGN STOCK.
2. PAINT BRIGHT YELLOW ON BOTH SIDES.
3. PLACED BY THE CONTRACTOR TO IDENTIFY NEW HYDRANTS WHICH ARE NOT IN SERVICE WHILE BEING INSTALLED OR HYDRANTS TAKEN OUT OF SERVICE DURING SHUT DOWNS.
4. REMOVED BY THE CONTRACTOR IMMEDIATLY UPON PLACING HYDRANT IN SERVICE.

FIRE HYDRANT TEMPORARY OUT OF SERVICE SIGN

CITY OF VIRGINIA BEACH • DEPARTMENT OF PUBLIC UTILITIES

REVISED: DATE / /	PU DETAIL NO. 16-1
APPROVED: 04/13/01 DATE	GARY L. JONES, P.E ENGINEERING MANAGER



NOTES:
1. DETECTOR CHECK (DC) VAULT SIZE = 36" x 60"
   WATER METER (M) VAULT SIZE = UP TO 1" LINE = MBX-1
   > 1" AND ≤ 2" = 18" x 36"
   > 3" = 36" x 60"
2. SEE PU DETAIL NO. 16-2

DETECTOR CHECK AND DOMESTIC METER LAYOUT

CITY OF VIRGINIA BEACH • DEPARTMENT OF PUBLIC UTILITIES

REVISED: DATE 10/17/2012	PU DETAIL NO. 16-2
APPROVED: 04/13/01 DATE	ROBERT E. CLARK ENGINEERING MANAGER

DETECTOR CHECK/DOMESTIC METER STANDARD RESPONSIBILITY

Engineer's responsibility (design)

A1. Determine domestic and fire flow requirements.
A2. Design public side so as not to conflict with existing and proposed utilities.
A3. Use tees for same size taps. i.e. 8" x 8
A4. Provide easement as necessary. A 15' x 15' minimum maintenance area is required. This is to include right of way and easement area. Any required easement shall be dedicated and recorded prior to installation of the detector check and domestic meter assemblies.
A5. Maximum depth of service lines in the maintenance area shall be 36". Fire service and/or domestic service larger than 2" shall have from 30" to 36" of cover from finished grade at the box. Curb stops for domestic meters 1" and smaller shall have 12" of cover from finished grade at the box. Curb stops for 1½" and 2" domestic meters shall have 12" to 14" of cover from finished grade at the box.
A6. Lines 2" and smaller shall be type "K" soft copper. 3" lines may be either type "K" soft copper or ductile iron. Lines 4" and larger shall be ductile iron.
A7. A corporation stop shall be installed for all service lines 2" and smaller. Either a tapped tee or double strap service clamp (tapping saddle) from the PU Approved Products List shall be used for 1½" or 2" taps. A branch valve shall be installed on all ductile iron domestic service lines (not shown in PU Detail No. 16-1).
A8. Flanged locking type curb stops shall be used for 1½" and 2" domestic meters. Locking type curb stops shall be used for ⅝" and 1" domestic meters. Service lines larger than 2" shall be capped or plugged.
A9. Boxes shall not be located in paved areas, swales or berms.
A10. Provide a site specific detail of the detector check installation on the plan. Show all existing and proposed utilities in plan and profile.
A11. 90 degree bends shall not be used.

Owner's/Contractor's responsibility (construction)

B1. If public water main shut down is required, PU inspections must be contacted to schedule the shut down.
B2. Install all pipe work in sequence shown on detail. Until installation of the detector check and domestic meter have been performed, a minimum 10' gap shall be maintained between the valve on the fire service line and any private fire service piping installed. Similarly, this 10' gap shall be maintained between the curb stop on the domestic service line and any private domestic service piping installed.
B3. Test the public mains as directed by PU inspections.
B4. Excavate areas where detector check and domestic meter are to be installed. Excavated areas shall be maintained until installation of the detector check and domestic meter is completed (Note: see A4). Provide finished grade stakes on either side of the work area. Install 8" of #57 stone base within excavations. Finished grade of #57 stone shall be below bottom of pipe.
B5. Call 385-4171 to schedule onsite meeting with PU Inspections and PU Operations for approval to have detector check/domestic meter installed. Call 385-1400 for detector check/domestic meter installation once onsite meeting has been conducted and public mains have been released.
B6. Connect on-site utilities to the detector check and/or domestic meter assembly.
B7. Contact PU Customer Service to activate the system.
B8. Set meter boxes/vaults to finished grade.

City's responsibility

C1. Provide detector check vault, domestic meter box/vault, and one course of block for Owner/Contractor to install.
C2. Install detector check and domestic meter assemblies.

DETECTOR CHECK AND DOMESTIC METER LAYOUT

CITY OF VIRGINIA BEACH • DEPARTMENT OF PUBLIC UTILITIES

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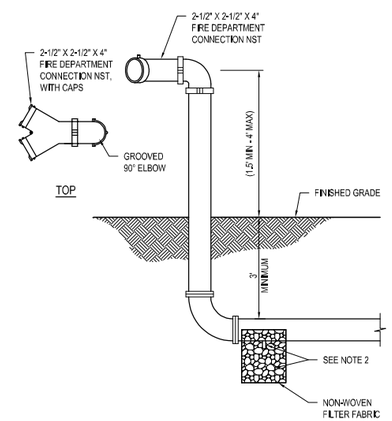


NOTES:
1. PIPING AND FITTINGS ASSOCIATED WITH THE FIRE DEPARTMENT CONNECTION SHALL BE RESTRAINED ALONG ENTIRE LINE UP TO THE BUILDING.
2. INSTALL 1/2" AUTOMATIC BALL DRIP VALVE AT LOW POINT(S) ON FIRE DEPARTMENT CONNECTION PIPING OUTSIDE THE BUILDING. THE BALL DRIP VALVE SHALL BE CORROSION RESISTANT AND INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S INSTRUCTIONS. A PIT TWO FEET DEEP AND TWO FEET IN DIAMETER SHALL BE EXCAVATED BELOW EACH DRAIN AND FILLED WITH COMPACTED CRUSHED STONE MIXED WITH COARSE SAND TO A LEVEL 6 INCHES ABOVE THE DRAIN.
3. EACH FDC SHALL BE IDENTIFIED WITH A SIGN IN ACCORDANCE WITH NFPA 14.
4. FIRE DEPARTMENT CONNECTIONS SHALL CONFORM TO UL 405.

FREE STANDING FIRE DEPARTMENT CONNECTION

NO SCALE

City of Virginia Beach
35 MEB General Contractors

VIRGINIA BEACH SPORTS CENTER

1045 19th Street
Virginia Beach, Virginia

DESIGNER
CLARKNEXSEN
4525 Main Street, Suite 1400
Virginia Beach, VA 23462
757.455.5800

CONSULTANT

SEALS

SUBMITTAL
05/18/18
PROGRESS PRINT

REVISIONS

KEY PLAN

SHEET
UTILITY DETAILS

C-602

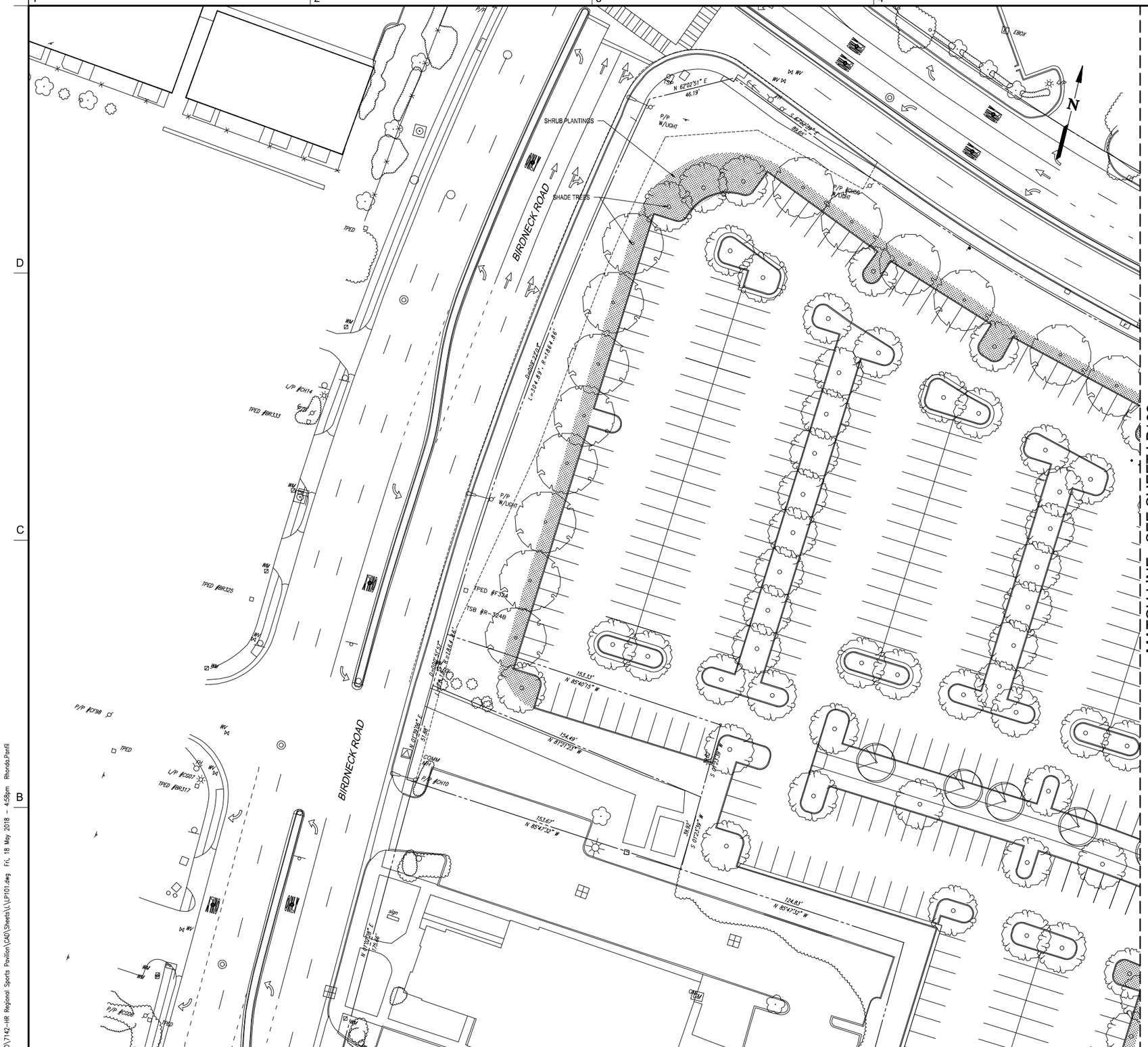
SHEET - OF XX -

DESIGN: RMS
DRAWN: TAW
REVIEW: -

CN 7142

Spell checked by TWEAVER on 05/07/2018 12:39pm

\\Projects\7000\7142-HR Regional Sports Pavilion\CAD\Sheets\C\C602.dwg Fri, 18 May 2018 - 4:12pm twever



GENERAL NOTES

1. RE-STRIPE PAVEMENT ON VIRGINIA BEACH BOULEVARD BETWEEN BIRCH LAKE ROAD AND WASHINGTON AVE WITH PAVEMENT STRIPING, PAVEMENT MESSAGE AND PAVEMENT ARROWS.
2. SEE LAYOUT CONTROL SHEET C-005 FOR NORTHING AND EASTING COORDINATES ALONG CONSTRUCTION BASELINE.

CONSTRUCTION NOTES

1.

LEGEND

- SHADE TREE- 2"-2 1/2" CALIPER
- MEDIUM SIZED TREE 2"-2 1/2" CALIPER
- ORNAMENTAL TREE 8'-10' HEIGHT
- PLANTING BED- SHRUBS, ORNAMENTAL GRASSSES AND GROUNDCOVER

GRAPHIC SCALE(S)

1"=25' 0 25' 50' 100'

Virginia Beach
MEB General Contractors

VIRGINIA BEACH SPORTS CENTER

1045 19th Street
Virginia Beach, Virginia

DESIGNER

CLARKNEXSEN

4525 Main Street, Suite 1400
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757.455.5800

CONSULTANT

SEALS

SUBMITTAL

05/18/18

PROGRESS PRINT

REVISIONS

KEY PLAN

	103	105	107
102	104	106	108

SHEET

LANDSCAPE PLAN

LP101

SHEET - OF XX -

DESIGN -
DRAWN -
REVIEW -

CN 7142

h:\Projects\7000\7142-HR Regional Sports Pavilion\CAD\Sheets\L\LP101.dwg Fri, 18 May 2018 - 4:58pm Rhonda.Parrill

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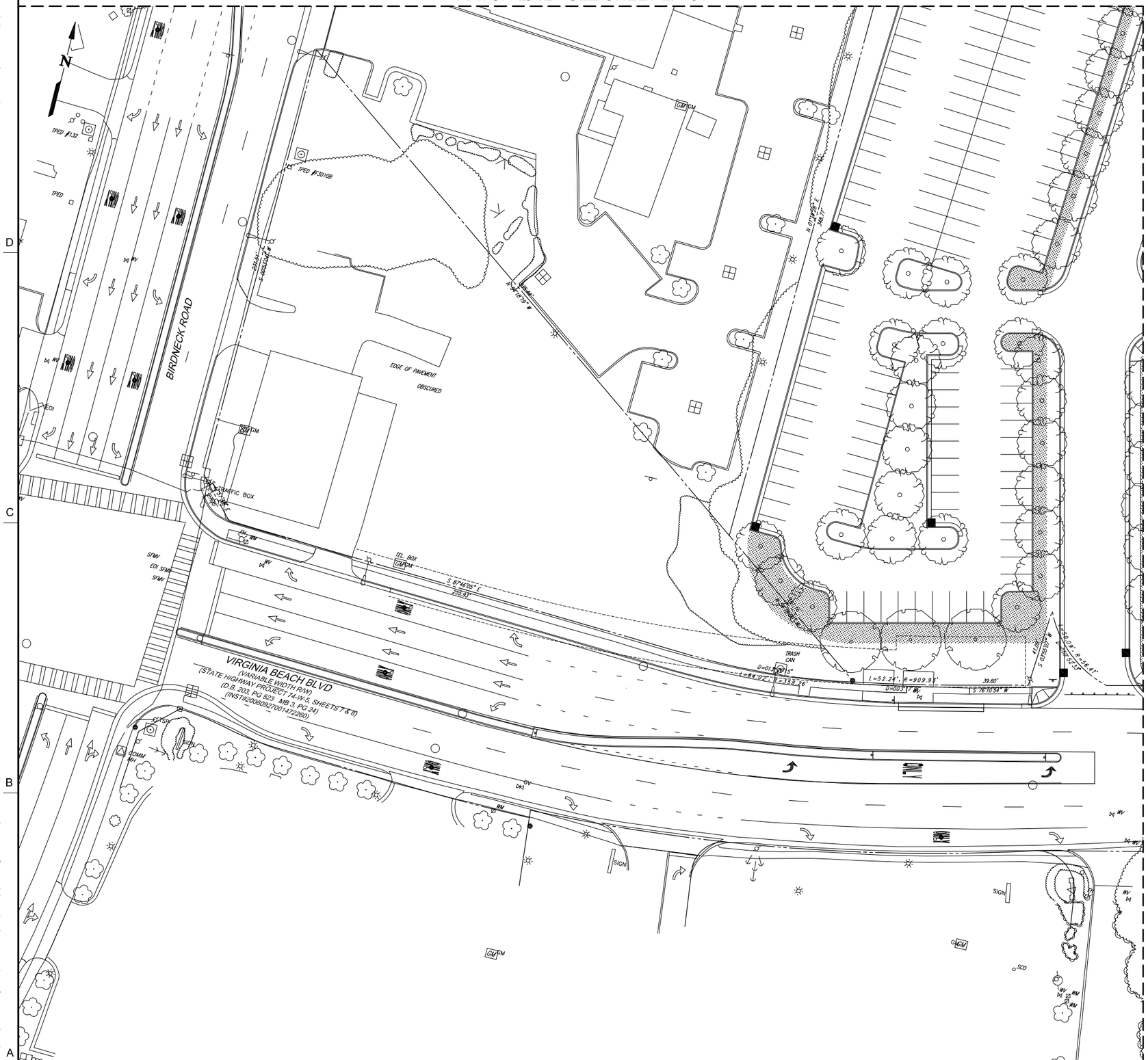
MATCH LINE - SEE SHEET LP101



MATCH LINE - SEE SHEET LP104

GENERAL NOTES

1. RE-STRIPE PAVEMENT ON VIRGINIA BEACH BOULEVARD BETWEEN BIRCH LAKE ROAD AND WASHINGTON AVE WITH PAVEMENT STRIPING, PAVEMENT MESSAGE AND PAVEMENT ARROWS.
2. SEE LAYOUT CONTROL SHEET C-005 FOR NORTHING AND EASTING COORDINATES ALONG CONSTRUCTION BASELINE.

CONSTRUCTION NOTES

1.

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- SHADE TREE- 2"-2 1/2" CALIPER
- MEDIUM SIZED TREE 2"-2 1/2" CALIPER
- ORNAMENTAL TREE 8'-10' HEIGHT
- PLANTING BED- SHRUBS, ORNAMENTAL GRASSSES AND GROUNDCOVER

GRAPHIC SCALE(S)

1"=25' 0 25' 50' 100'

City of Virginia Beach

35 MEB General Contractors

VIRGINIA BEACH SPORTS CENTER

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DESIGNER

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SEALS

SUBMITTAL

05/18/18

PROGRESS PRINT

REVISIONS

KEY PLAN

101	103	105	107
	104	106	108

SHEET

LANDSCAPE PLAN

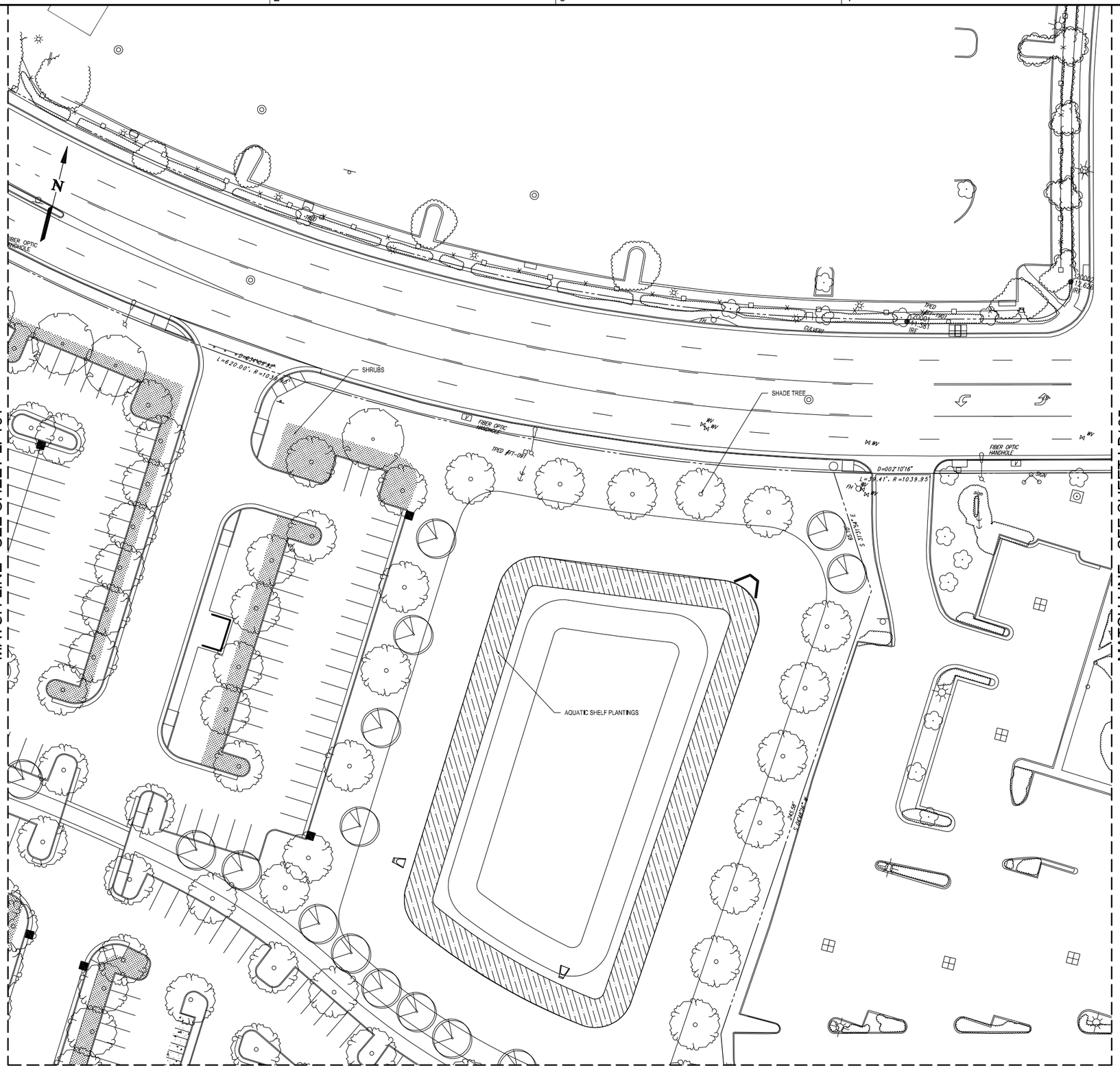
LP102

SHEET - OF XX -

DESIGN -
DRAWN -
REVIEW -

CN 7142

E:\Projects\7000\7142-HR Regional Sports Pavilion\CAD\Sheets\L\LP102.dwg Fri, 18 May 2018 - 4:46pm bsilver



GENERAL NOTES

1. RE-STRIPE PAVEMENT ON VIRGINIA BEACH BOULEVARD BETWEEN BIRCH LAKE ROAD AND WASHINGTON AVE WITH PAVEMENT STRIPING, PAVEMENT MESSAGE AND PAVEMENT ARROWS.
2. SEE LAYOUT CONTROL SHEET C-005 FOR NORTHING AND EASTING COORDINATES ALONG CONSTRUCTION BASELINE.

CONSTRUCTION NOTES

1.

LEGEND

- SHADE TREE- 2"-2 1/2" CALIPER
- MEDIUM SIZED TREE 2"-2 1/2" CALIPER
- ORNAMENTAL TREE 8'-10' HEIGHT
- PLANTING BED- SHRUBS, ORNAMENTAL GRASSSES AND GROUNDCOVER

GRAPHIC SCALE(S)

1"=25' 0 25' 50' 100'

City of Virginia Beach

35 MEB General Contractors

VIRGINIA BEACH SPORTS CENTER

1045 19th Street
Virginia Beach, Virginia

DESIGNER

CLARKNEXSEN

4525 Main Street, Suite 1400
Virginia Beach, VA 23462
757.455.5800

CONSULTANT

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PROGRESS PRINT

REVISIONS

KEY PLAN

101		105	107
102	104	106	108

SHEET

LANDSCAPE PLAN

LP103

SHEET - OF XX -

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CN 7142

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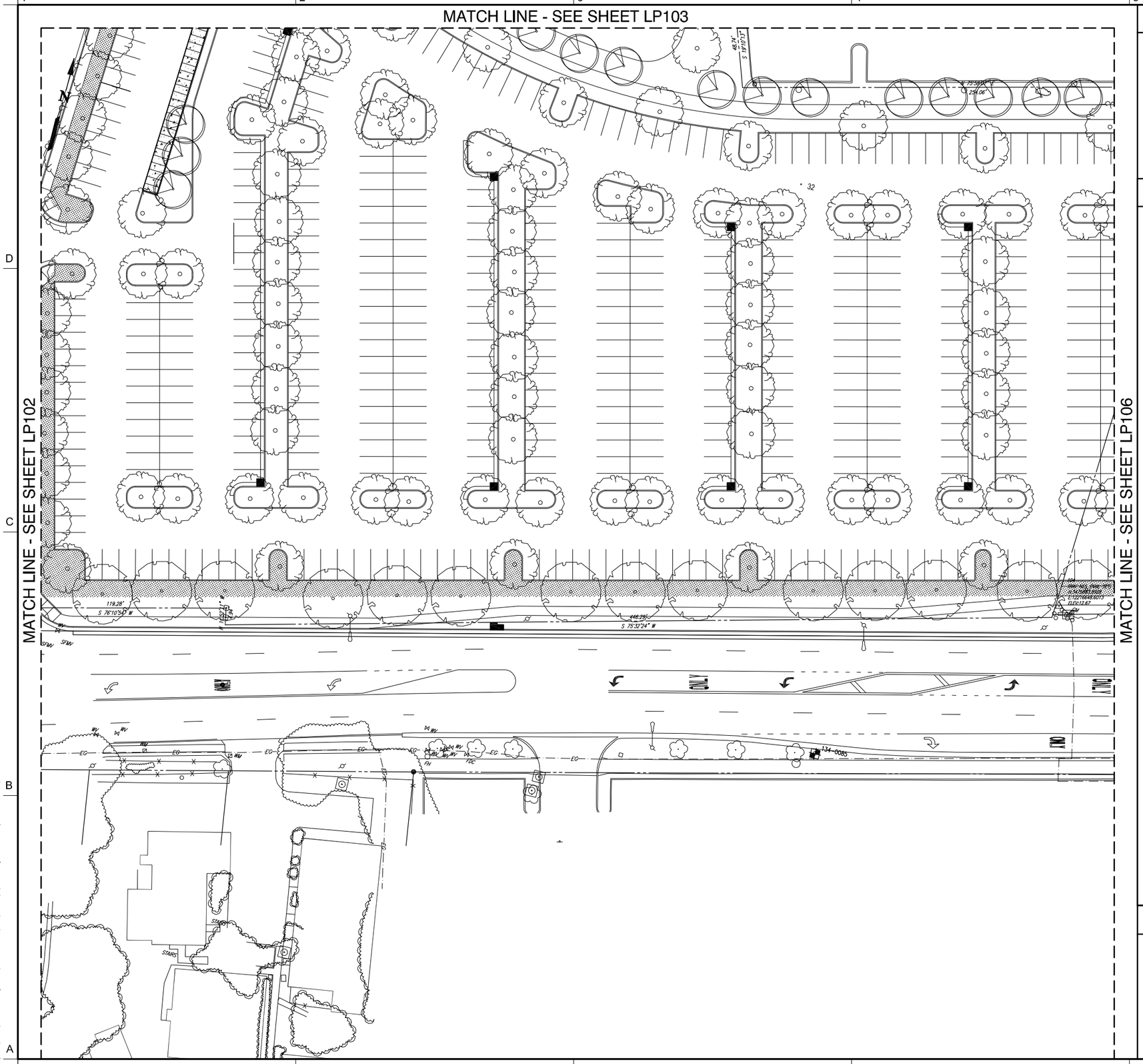

GENERAL NOTES

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CONSTRUCTION NOTES

1.

LEGEND

SHADE TREE- 2"-2 1/2" CALIPER

MEDIUM SIZED TREE 2"-2 1/2" CALIPER

ORNAMENTAL TREE 8'-10' HEIGHT

PLANTING BED- SHRUBS, ORNAMENTAL GRASSSES AND GROUNDCOVER

GRAPHIC SCALE(S)

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City of Virginia Beach

MEB General Contractors

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CONSULTANT

SEALS

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PROGRESS PRINT

REVISIONS

KEY PLAN

101	103	105	107
102		106	108

SHEET

LANDSCAPE PLAN

LP104

SHEET - OF XX -

DESIGN -
DRAWN -
REVIEW -

CN 7142

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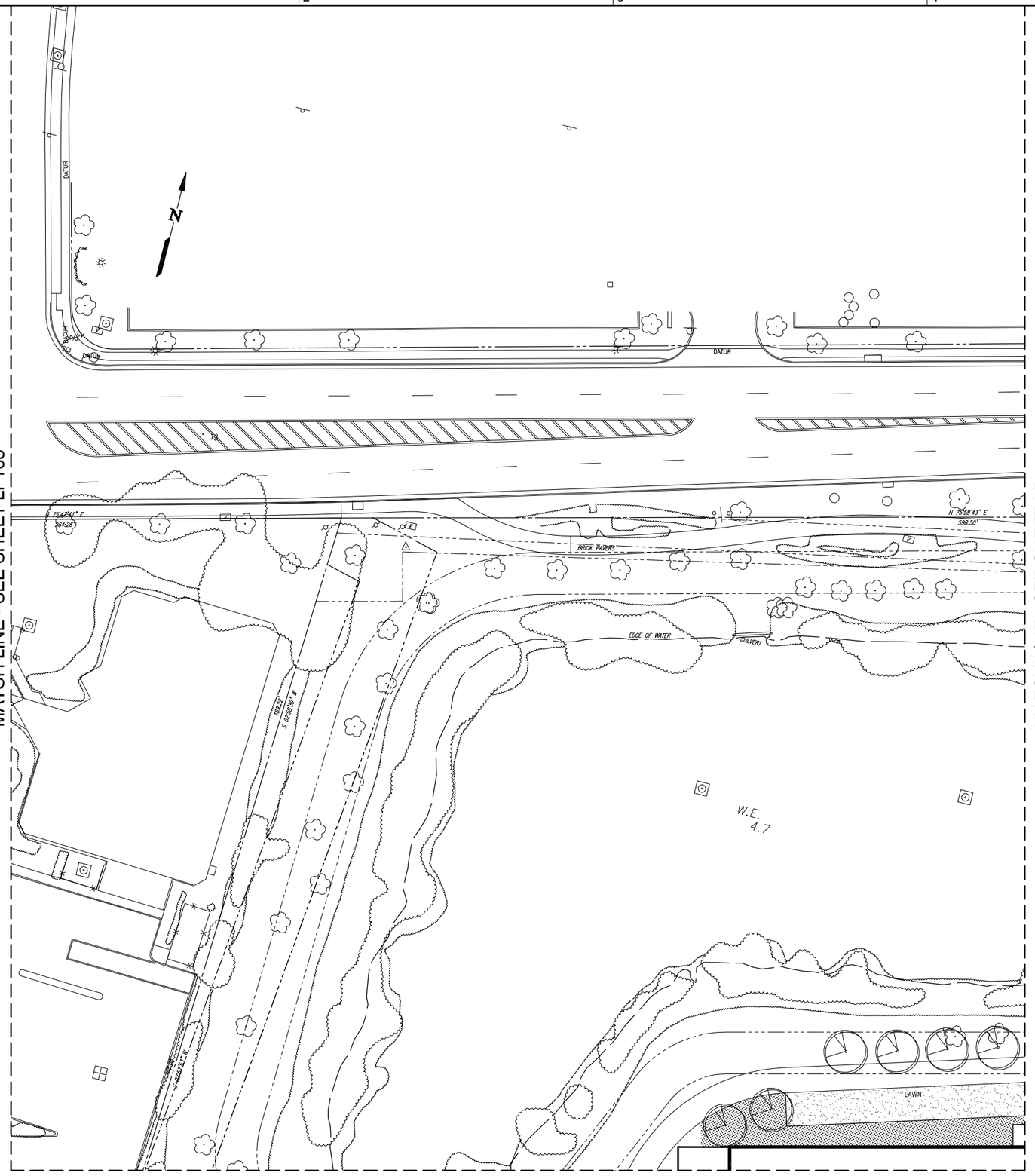

GENERAL NOTES

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2. SEE LAYOUT CONTROL SHEET C-005 FOR NORTHING AND EASTING COORDINATES ALONG CONSTRUCTION BASELINE.

CONSTRUCTION NOTES

1. CONCRETE SIDEWALK

LEGEND

- SHADE TREE- 2"-2 1/2" CALIPER
- MEDIUM SIZED TREE 2"-2 1/2" CALIPER
- ORNAMENTAL TREE 8'-10' HEIGHT
- PLANTING BED- SHRUBS, ORNAMENTAL GRASSSES AND GROUNDCOVER

GRAPHIC SCALE(S)

1"=25' 0 25' 50' 100'

City of Virginia Beach

35 MEB General Contractors

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REVISIONS

KEY PLAN

101	103		107
102	104	106	108

SHEET

LANDSCAPE PLAN

LP105

SHEET - OF XX -

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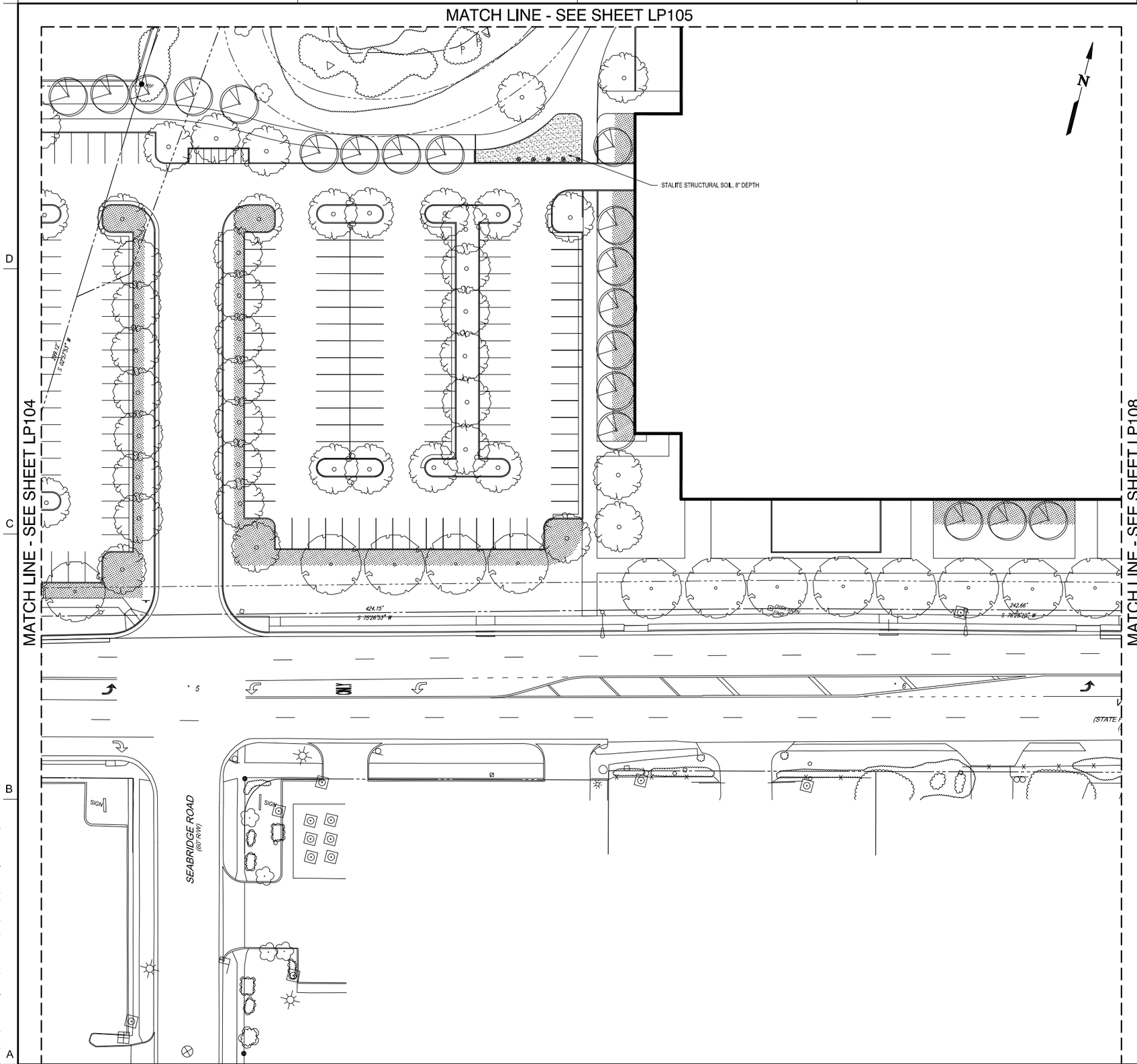

GENERAL NOTES

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CONSTRUCTION NOTES

1.

LEGEND

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City of Virginia Beach

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KEY PLAN

101	103	105	107
102	104		108

SHEET

LANDSCAPE PLAN

LP106

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REVIEW -

CN 7142

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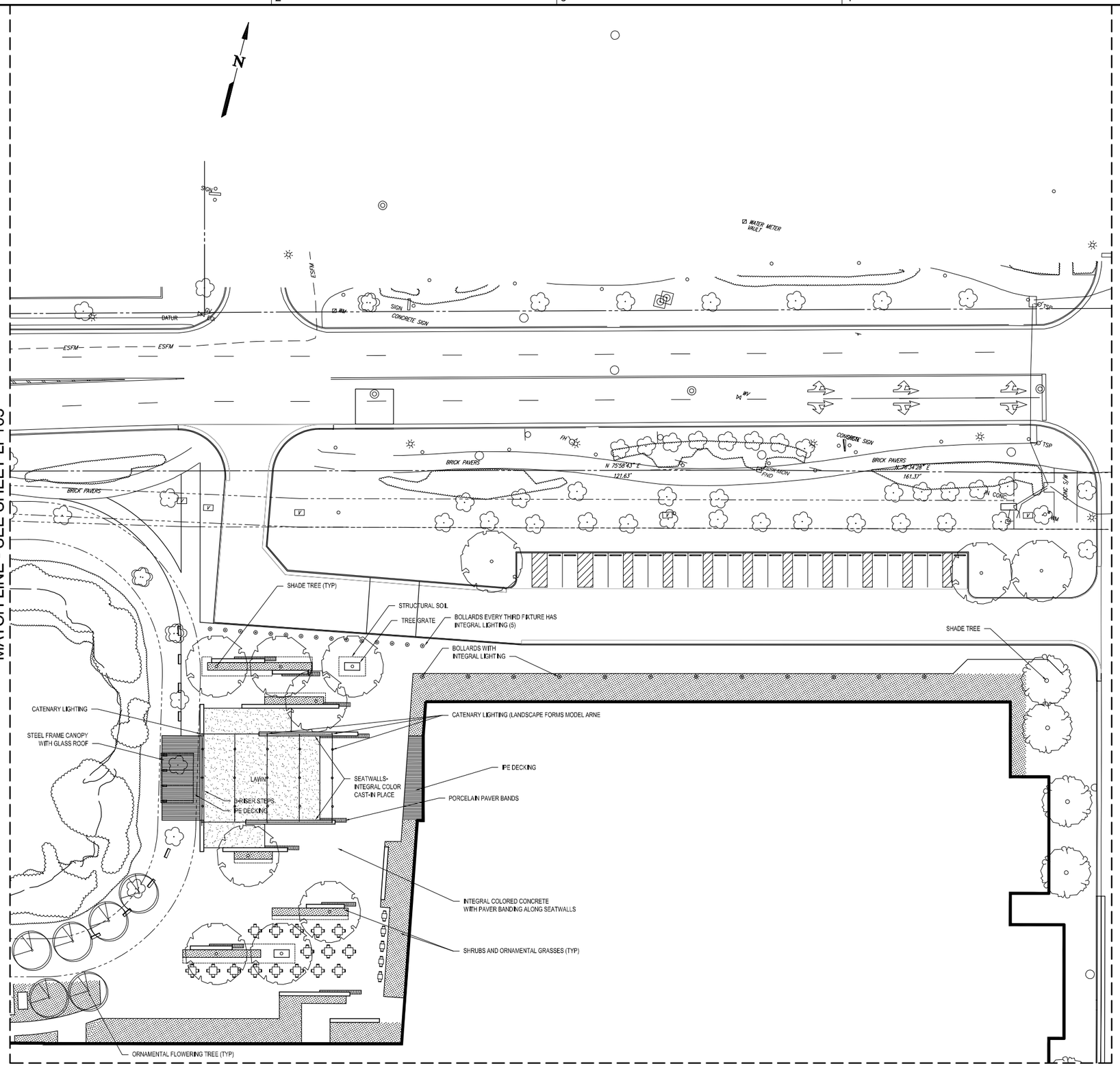

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2. SEE LAYOUT CONTROL SHEET C-005 FOR NORTHING AND EASTING COORDINATES ALONG CONSTRUCTION BASELINE.

CONSTRUCTION NOTES

1. LAWN AREA IN PLAZA TO HAVE 6" THICK STALITE SOIL BASE WITH UNDERDRAINS.
2.

LEGEND

SHADE TREE- 2"-2 1/2" CALIPER

MEDIUM SIZED TREE 2"-2 1/2" CALIPER

ORNAMENTAL TREE 8'-10' HEIGHT

PLANTING BED- SHRUBS, ORNAMENTAL GRASSSES AND GROUNDCOVER

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101	103	105	
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SHEET

LANDSCAPE PLAN

LP107

SHEET - OF XX -

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CN 7142

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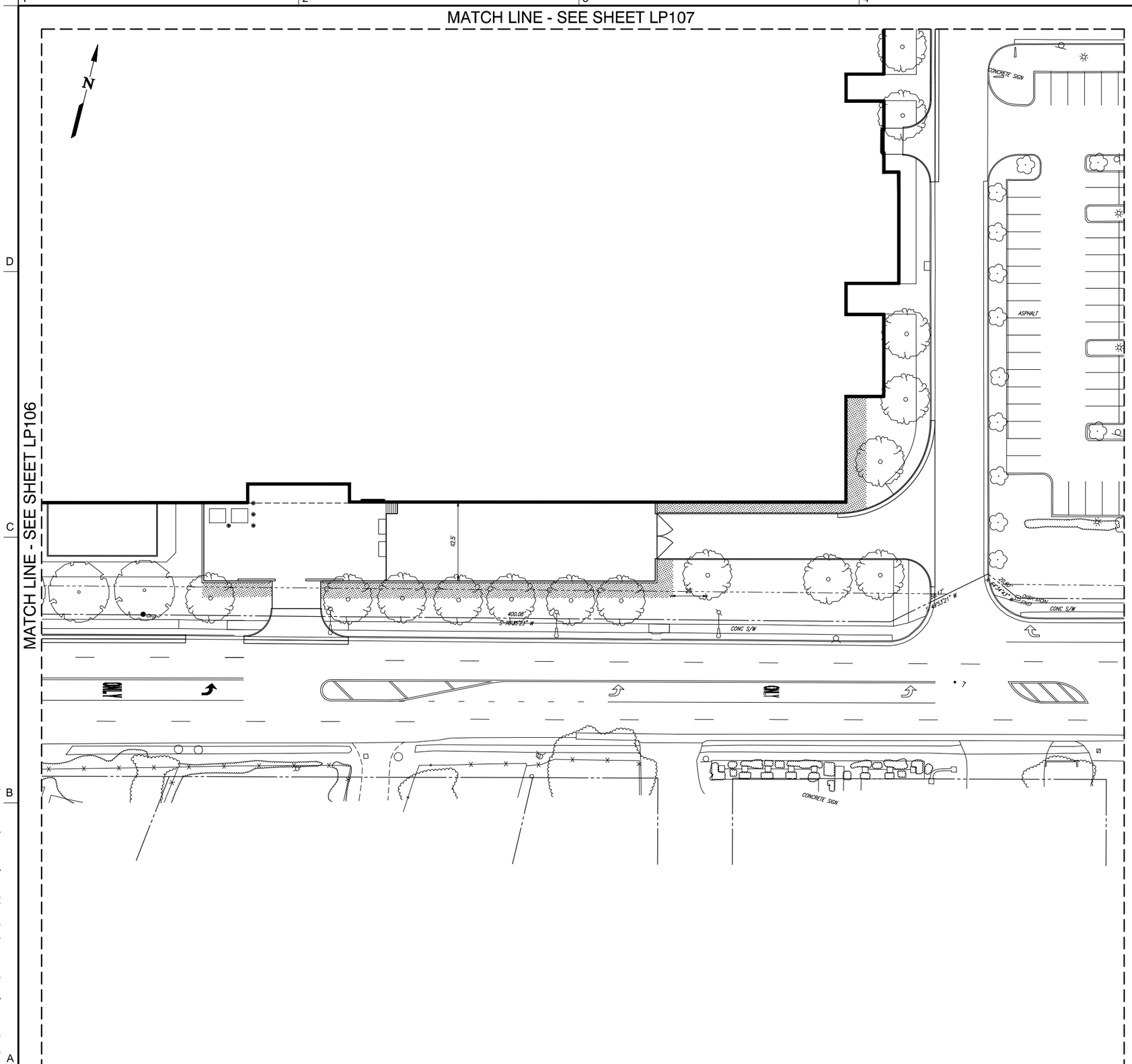

GENERAL NOTES

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2. SEE LAYOUT CONTROL SHEET C-005 FOR NORTHING AND EASTING COORDINATES ALONG CONSTRUCTION BASELINE.

CONSTRUCTION NOTES

1. CONCRETE SIDEWALK
2. CONCRETE CURB AND GUTTER (VDOT STD CG-6)
3. HEAVY DUTY ASPHALT PAVEMENT
4. HEAVY DUTY CONCRETE PAVEMENT
5. PAVEMENT MARKING
6. SCREEN WALL
7. FIXED BOLLARD BARRIER
8. RETRACTABLE GATE

GRAPHIC SCALE(S)

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City of Virginia Beach

35 MEB General Contractors

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REVISIONS

KEY PLAN

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SHEET

LANDSCAPE PLAN

LP108

SHEET - OF XX -

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REVIEW -

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ELECTRICAL LEGEND

SYMBOL EXISTING	SYMBOL PROVIDE	DESCRIPTION
		LED PARKING AND STREET POLE AND ARM MOUNTED LIGHTING FIXTURE – TYPE S1, S2, S4 AS INDICATED ON THE DRAWINGS .
		BOLLARD WITH LED LIGHTING FIXTURE – TYPE B1.
		LED POST TOP LIGHTING FIXTURE AND POLE – TYPE P1.
		LIGHT POLE
		POWER POLE WITH LIGHT
		POWER POLE
—EUE—		UNDERGROUND ELECTRIC
—EUC—		UNDERGROUND COMMUNICATION
	H	HANDHOLE, JB–S1, UON, SEE DETAIL ON SHEET ES502.
	A	NOTE REFERENCE NUMBER.
		POINT OF CONNECTION NEW–TO–EXISTING (SEE LEGEND NOTE)
		REMOVE TO THIS POINT.

LIGHTING FIXTURE SCHEDULE

FIXTURE TYPE	FIXTURE DESCRIPTION	MANUFACTURER	LED COLOR	HOUSING COLOR	WATTAGE	LUMENS
S1, S2, S4	LED STREET LIGHTING FIXTURE – IES TYPE 3	LEOTEK LED, ARIETA # AR13–15M–HV–NW–3WDB–700	4000K	GIBRALTA GRAY	130W	13,628
P1	LED POST TOP PEDESTRAIN WAY LIGHTING FIXTURE	LOUIS POULSEN "DUO" #31.5–2/150W/CMH/T6–G12–277V–GRAPHIT–T–RSA–5"	4000K	GRAPHIT	56W	3,907
B1	LIGHTED BOLLARD, 44" HIGH	LANDSCAPE FORM #AE–SM–200	4000K	METALIC SILVER	27W	294

LEGEND NOTES

1. WIRE AND CONDUIT FOR MOTOR AND EQUIPMENT LOADS SHALL BE CONTINUOUS IN SIZE AND FROM SOURCE TO FINAL CONNECTION. SIZE AND COUNT SHALL BE AS INDICATED ON THE CIRCUIT HOMERUN UNLESS OTHERWISE NOTED.
2. WHERE A NEW–TO–EXISTING CONNECTION IS INDICATED, THE CONTRACTOR SHALL PROVIDE ALL MATERIALS (JUNCTION BOXES, CONDUIT, WIRE, ETC,) AND LABOR REQUIRED TO MAKE THE CONNECTION.

GENERAL NOTES

A. WORK AND EQUIPMENT SHALL BE IN ACCORDANCE WITH APPLICABLE CODES, ORDINANCES AND N.E.C. 2011 EDITION.

B. WIRING SHALL BE IN CONDUIT, MINIMUM SIZE THREE–QUARTER (3/4) INCH WITH LARGER SIZES AS INDICATED OR REQUIRED BY N.E.C.

C. WIRE AND CABLE SHALL BE #12 AWG MINIMUM, TYPE THHN INSULATION UNLESS OTHERWISE INDICATED ON THE DRAWINGS. CONDUCTORS SHALL BE COPPER, #10 AWG AND SMALLER SHALL BE SOLID, #8 AWG AND LARGER SHALL BE STRANDED. WORK AND MATERIAL SHOWN IS NEW AND SHALL BE PROVIDED BY THE CONTRACTOR.

D. GROUNDING SHALL BE PROVIDED FOR ALL ENCLOSURES. PROVIDE SEPARATE EQUIPMENT GROUNDING CONDUCTOR IN NEW WORK, SIZED AS INDICATED ON THE DRAWINGS.

GENERAL DEMOLITION NOTE

WHERE EQUIPMENT OR DEVICES ARE NOTED AS "REMOVE", REMOVE ALL CONDUCTORS ASSOCIATED WITH THESE ITEMS TO THE LAST ACTIVE ITEM ON THE CIRCUIT, OR TO THE BRANCH CIRCUIT BREAKER IF ALL ITEMS ON THE CIRCUIT ARE REMOVED. REMOVE CONDUITS FOR THESE CIRCUITS WHERE THEY RUN EXPOSED OR IN CEILING OR FLOOR PLENUMS. CONDUITS RUN CONCEALED IN WALLS OR FLOOR SLABS SHALL BE CUT OFF FLUSH WITH SURFACE AND ABANDONED. VOIDS IN WALLS OR FLOOR LEFT BY THE REMOVAL OF ELECTRICAL EQUIPMENT OR CONDUITS SHALL BE FILLED WITH NON–SHRINK GROUT AND FINISHED TO MATCH EXISTING ADJACENT SURFACES

ABBREVIATIONS

A	AMPERE	KCMIL	THOUSAND CIRCULAR MILS
AF	AMPERE FRAME	KVA	KILOVOLT AMPERE
AFF	ABOVE FINISHED FLOOR	LTG	LIGHTING
AFG	ABOVE FINISHED GRADE	MCB	MAIN CIRCUIT BREAKER
AT	AMPERE TRIP	MH	MANHOLE
AWG	AMERICAN WIRE GAUGE	MLO	MAIN LUG ONLY
BG	BELOW GRADE	MTD	MOUNTED
BLDG	BUILDING	MTG HT	MOUNTING HEIGHT
BRKR	BREAKER	NF	NON–FUSED
C	CONDUIT	NEU	NEUTRAL
CB	CIRCUIT BREAKER	NIC	NOT IN CONTRACT
CKT	CIRCUIT	P	POLE
DISC SW	DISCONNECT SWITCH	PH	PHASE
DWG	DRAWING	PNL	PANEL
EC	EMPTY CONDUIT	PVC	POLY VINYL CHLORIDE
EF	EXHAUST FAN	QTY	QUANTITY
EGC	EQUIPMENT GROUNDING CONDUCTOR	RECEPT	RECEPTACLE
EMT	ELECTRICAL METALLIC TUBING	REQ'D	REQUIRED
EQUIP	EQUIPMENT	SC	SPLIT CIRCUIT
EXIST	EXISTING	SW	SWITCH
FLA	FULL LOAD AMPS	TVSS	TRANSIENT VOLTAGE SURGE SUPPRESSOR
GFI	GROUND FAULT INTERRUPTER	UH	UNIT HEATER
GND	GROUND	UG	UNDERGROUND
GRS	GALVANIZED RIGID STEEL	UON	UNLESS OTHERWISE NOTED
HID	HIGH INTENSITY DISCHARGE	V	VOLTS
HH	HANDHOLE	W	WIRE
HP	HORSEPOWER	WP	INDICATES WEATHERPROOF EQUIPMENT
KAIC	THOUSAND AMP INTERRUPTING CAPACITY, RMS SYMMETRICAL	XFMR	TRANSFORMER

City of Virginia Beach
35 MEB General Contractors

VIRGINIA BEACH SPORTS CENTER

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757.455.5800

CONSULTANT

SEALS

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05/18/18

PROGRESS PRINT

REVISIONS

KEY PLAN

SHEET

ELECTRICAL LEGEND AND ABBREVIATIONS

E-001

SHEET – OF XX

DESIGN: –
DRAWN: –
REVIEW: –

CN 7142

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NOTES

GRAPHIC SCALE(S)

1"=25' 0 25' 50' 100'

VB City of Virginia Beach

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REVISIONS

KEY PLAN

ES101	ES103	ES105	ES107
ES102	ES104	ES106	ES108

SHEET

PARTIAL ELECTRICAL SITE PLAN

ES101

SHEET – OF XX

DESIGN: -
DRAWN: -
REVIEW: -

CN 7142

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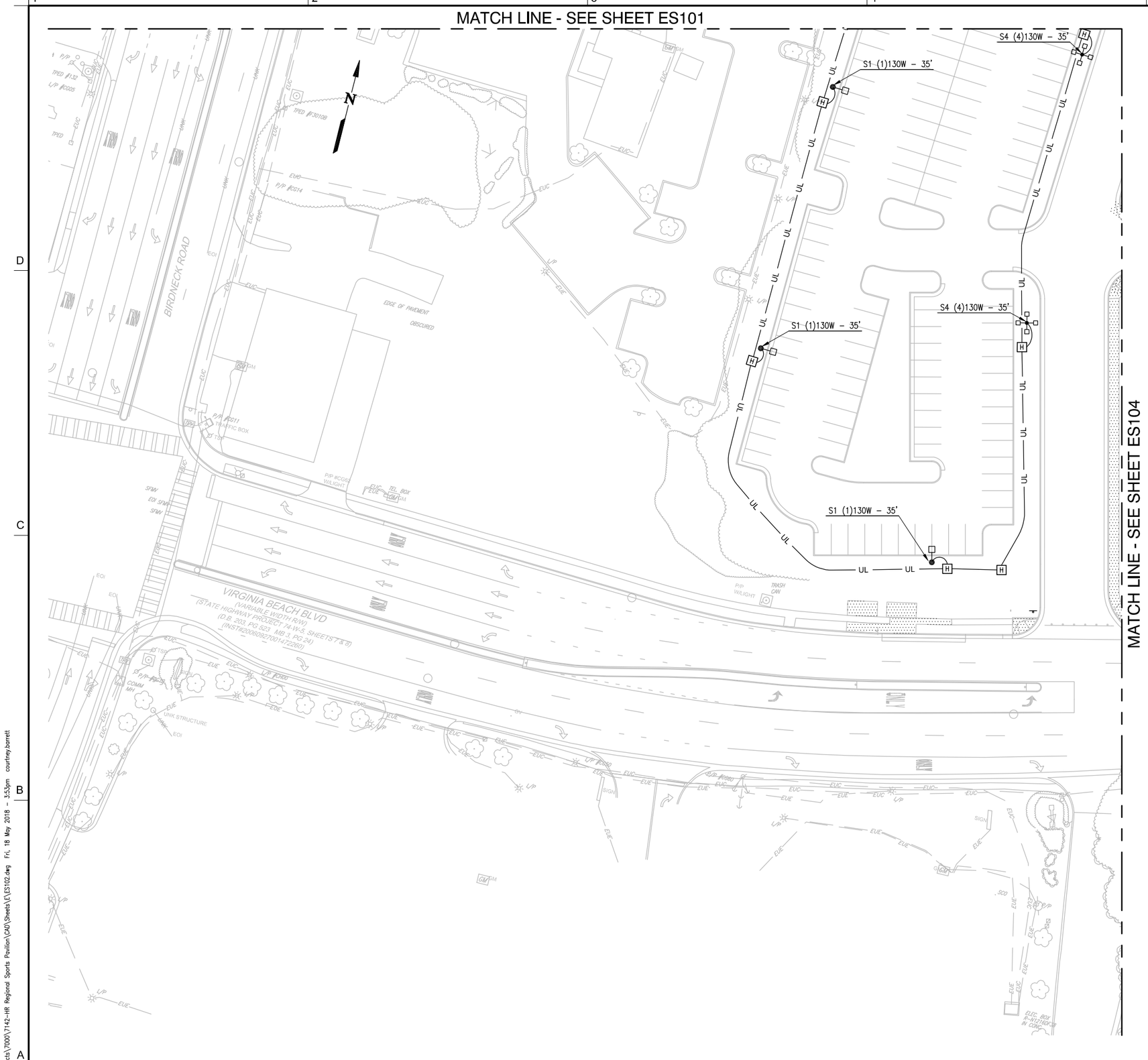

NOTES

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VB City of Virginia Beach

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PROGRESS PRINT

REVISIONS

KEY PLAN

ES101	ES103	ES105	ES107
ES102	ES104	ES106	ES108

SHEET

PARTIAL ELECTRICAL SITE PLAN

ES102

SHEET – OF XX

DESIGN: -
DRAWN: -
REVIEW: -

CN 7142

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NOTES

GRAPHIC SCALE(S)

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City of Virginia Beach

35 MEB General Contractors

VIRGINIA BEACH SPORTS CENTER

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KEY PLAN

ES101	ES103	ES105	ES107
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SHEET

PARTIAL ELECTRICAL SITE PLAN

ES103

SHEET – OF XX

DESIGN -
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REVIEW -

CN 7142

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NOTES

GRAPHIC SCALE(S)

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Virginia Beach
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SHEET

PARTIAL ELECTRICAL SITE PLAN

ES104

SHEET – OF XX

DESIGN: -
DRAWN: -
REVIEW: -

CN 7142

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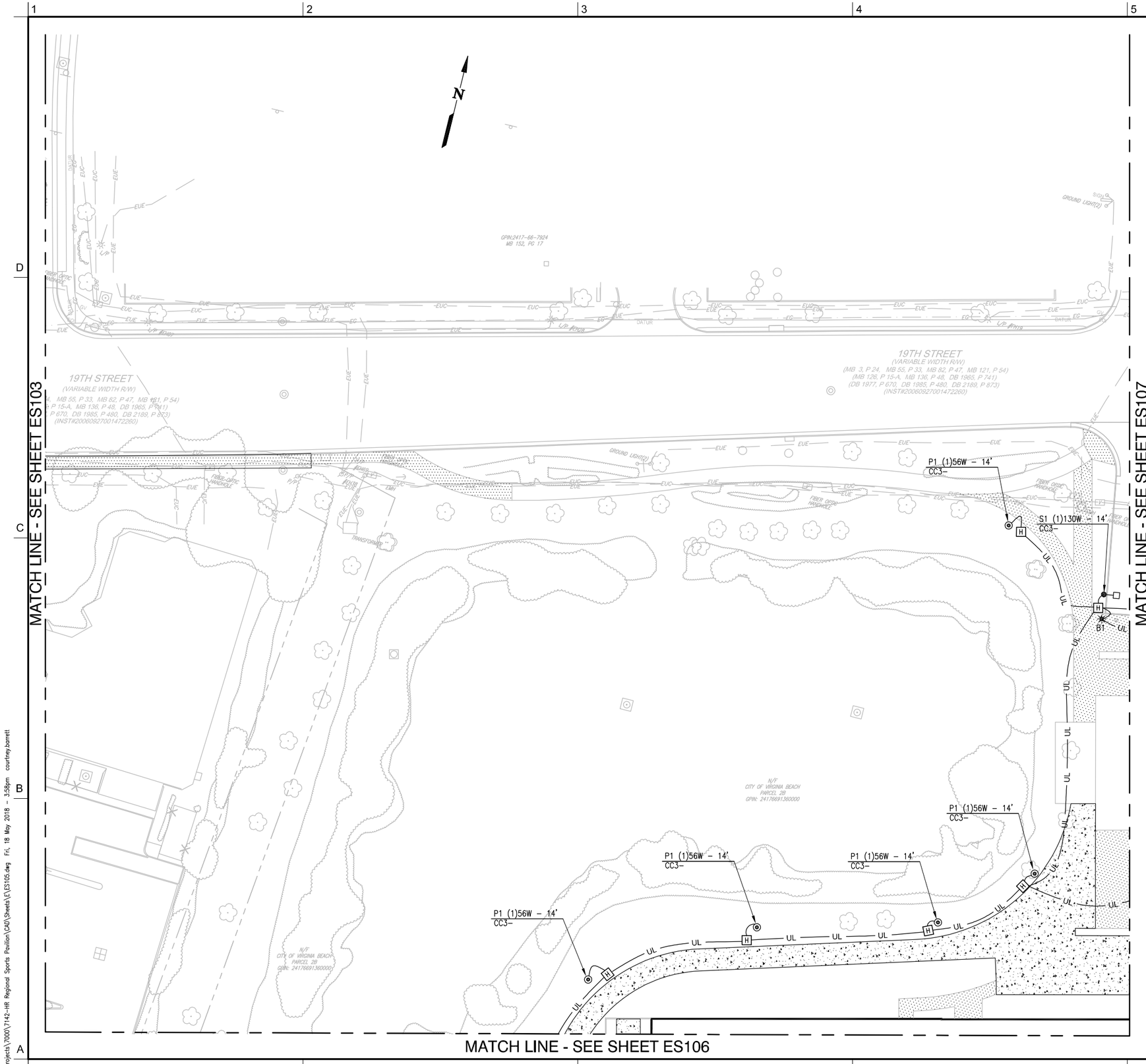

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ES101	ES103	ES105	ES107
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SHEET

PARTIAL ELECTRICAL SITE PLAN

ES105

SHEET - OF XX

DESIGN: -
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CN 7142

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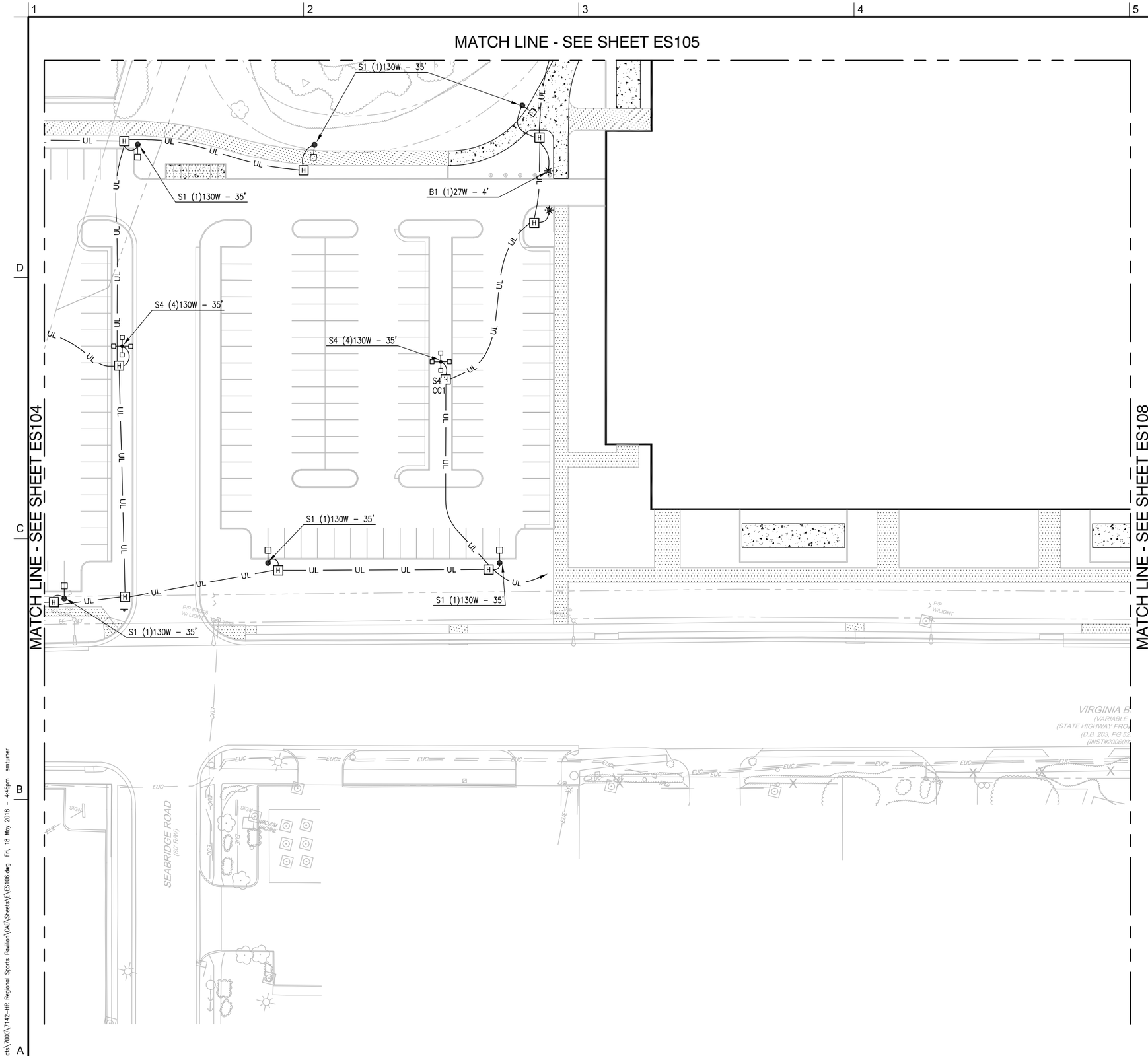

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Virginia Beach
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SHEET

PARTIAL ELECTRICAL SITE PLAN

ES106

SHEET – OF XX

DESIGN: -
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REVIEW: -

CN 7142

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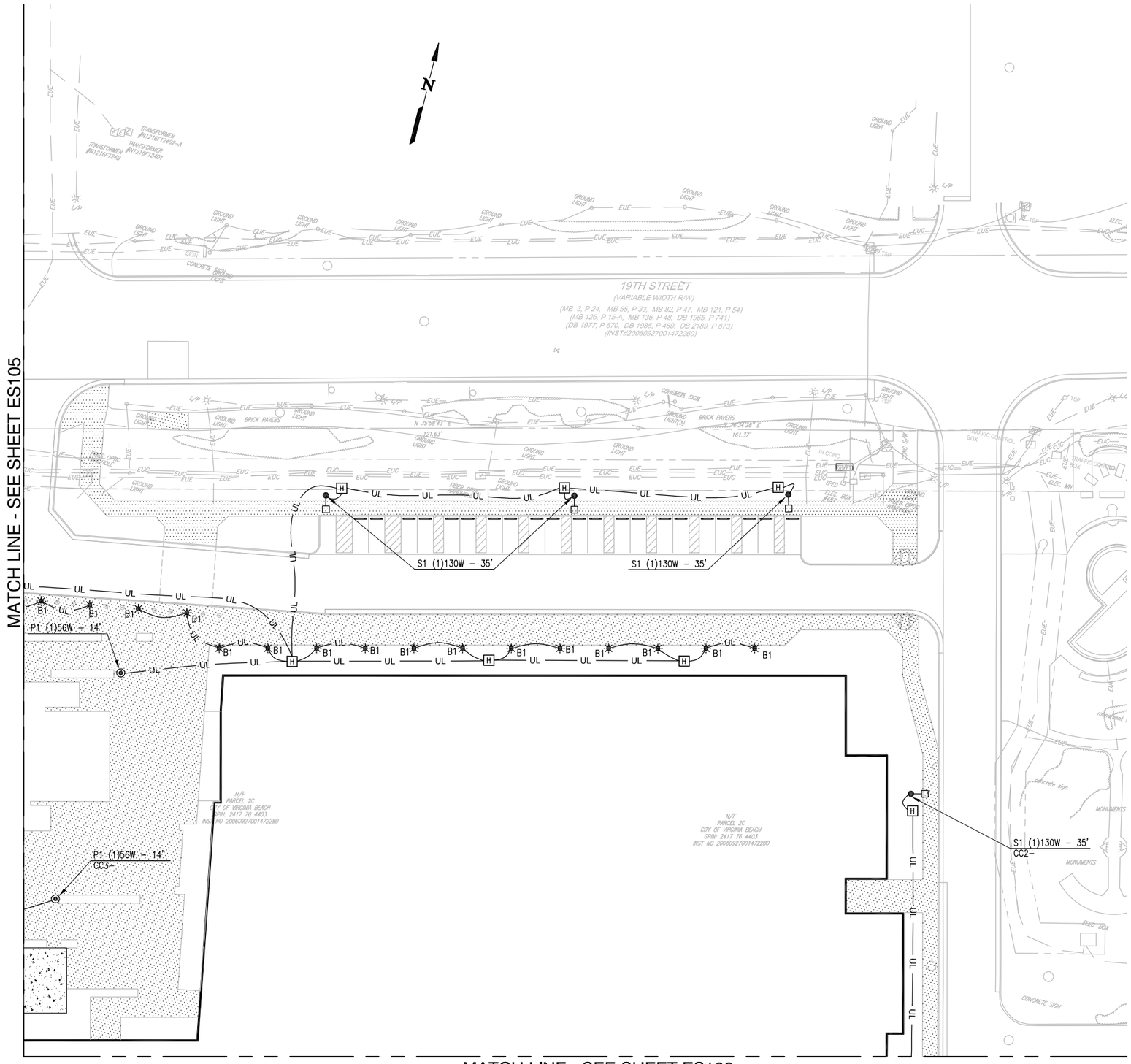

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SHEET

PARTIAL ELECTRICAL SITE PLAN

ES107

SHEET - OF XX

DESIGN: -
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CN 7142

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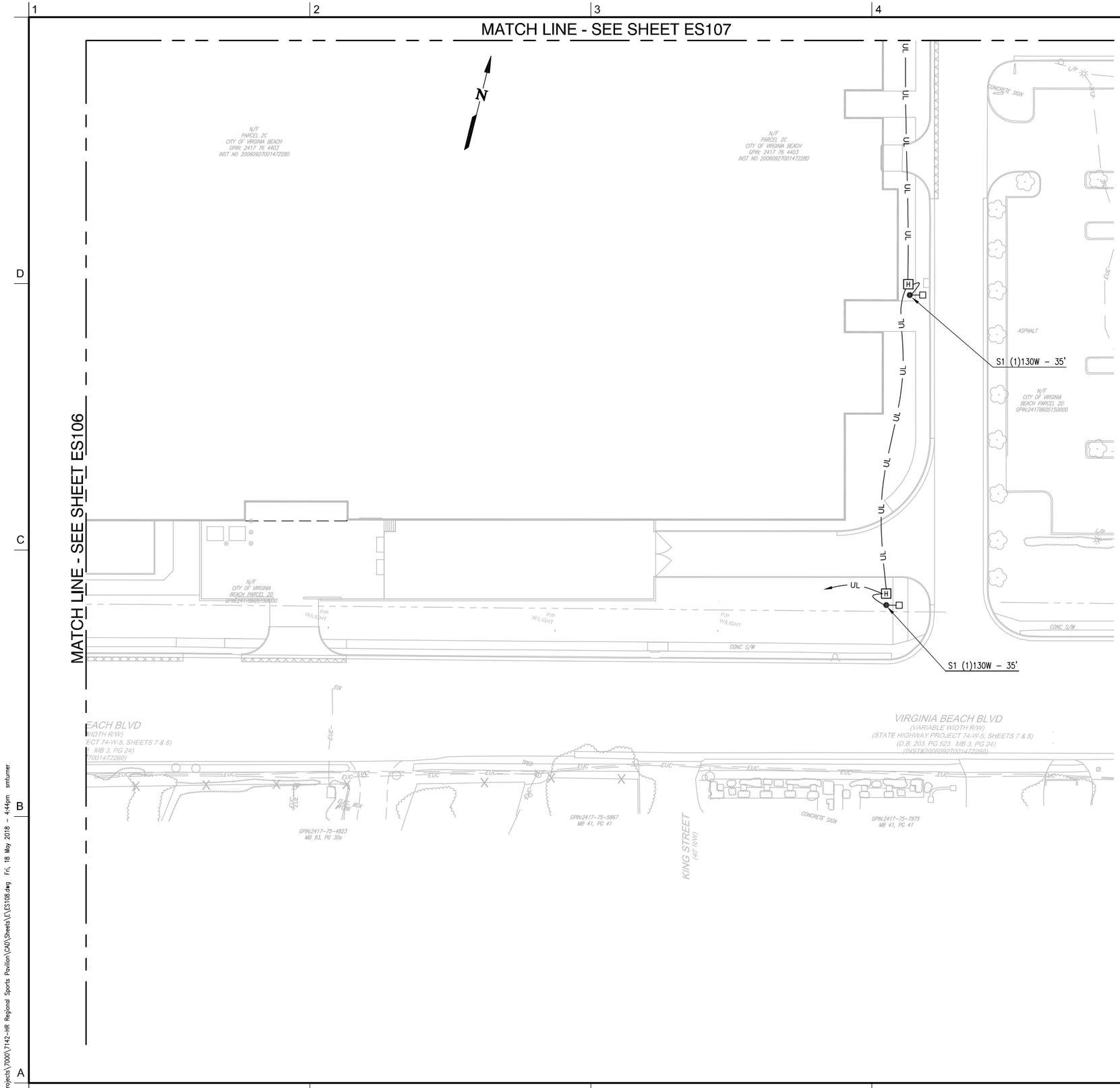

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SHEET

PARTIAL ELECTRICAL SITE PLAN

ES108

SHEET – OF XX

DESIGN: -
DRAWN: -
REVIEW: -

CN 7142

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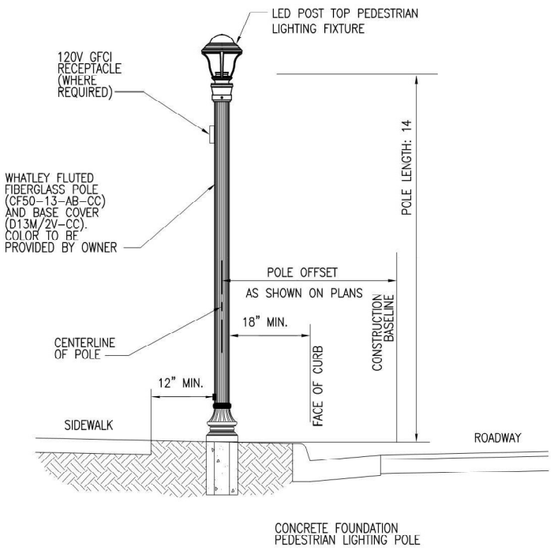
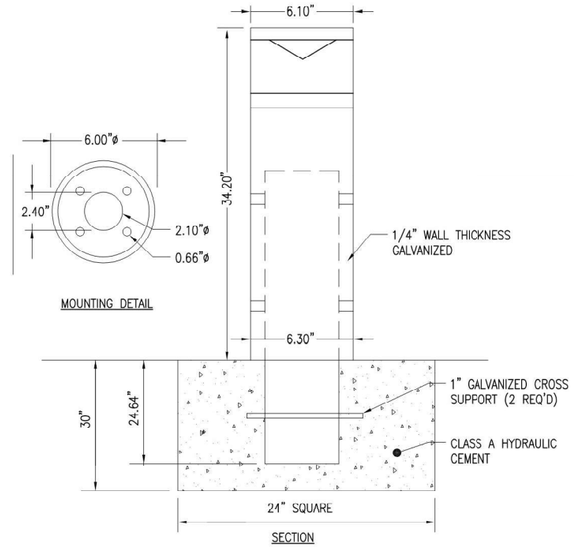


LIGHTING POLE, PEDESTRIAN WAY, FLUTED FIBERGLASS ANCHOR-BOLT BASED AND LED POST TOP PEDESTRIAN WAY LIGHTING FIXTURE POLE DETAIL

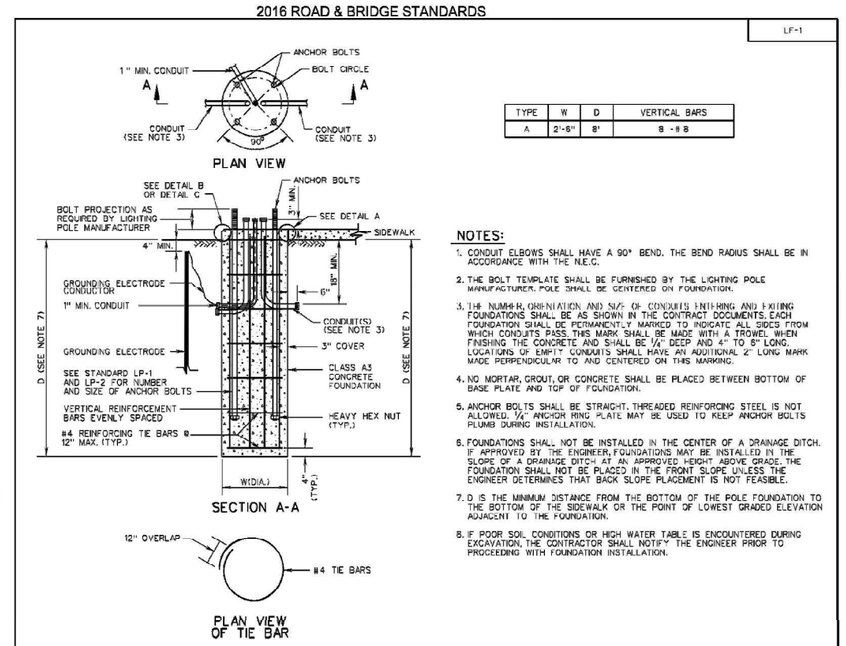
NO SCALE



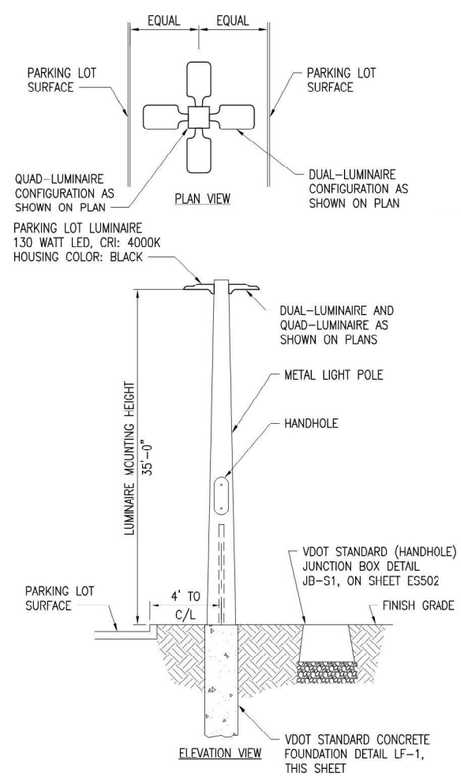
HOUSING COLOR: 04 METALLIC SILVER

SECURITY BOLLARD WITH LUMINAIRE

NO SCALE



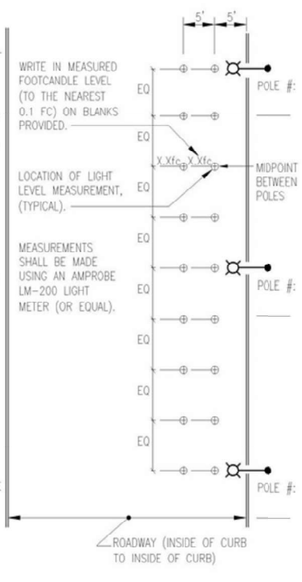
TYPE	W	D	VERTICAL BARS
A	2'-6"	8'	8 - #8



POLE AND HANDHOLE DETAIL

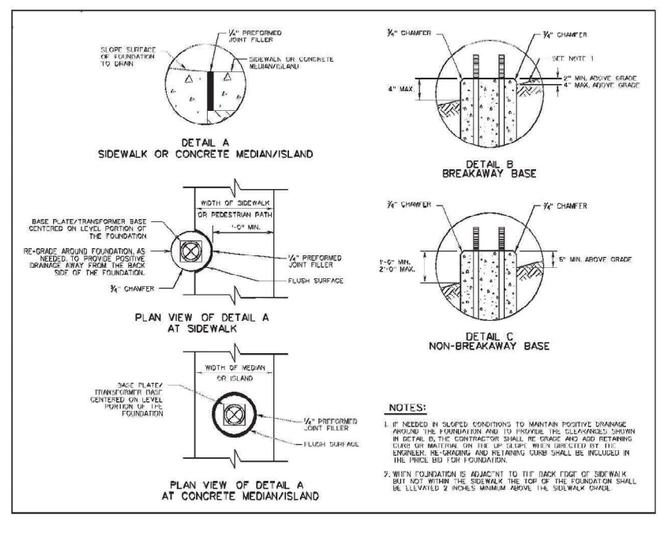
NO SCALE

1. THE CONTRACTOR SHALL TAKE LIGHT LEVEL MEASUREMENTS AT THE COMPLETION OF THE INSTALLATION IN ORDER TO ESTABLISH A BASELINE LIGHT LEVEL FOR SUBSEQUENT MONITORING OF THE LIGHT LEVEL.
2. THE PURPOSE OF THIS EFFORT IS TO AID IN THE UNDERSTANDING OF THE FUTURE LIGHT LOSS CHARACTERISTICS OF THE LIGHTING SYSTEM. (NOT TO VERIFY AVERAGE FOOTCANDLE LEVELS.)
3. SELECT A SECTION OF COMPLETED ROADWAY LIGHTING SYSTEM FOR THE MEASUREMENTS THAT ARE REPRESENTATIVE OF THE LIGHT POLE LAYOUT THROUGHOUT THE PROJECT (ONE SECTION FOR EACH TASK ORDER).
4. NO LESS THAN THE QUANTITY OF MEASUREMENTS INDICATED SHALL BE TAKEN AT THE LOCATIONS INDICATED.
5. SUBMIT A SUMMARY IN GRAPHICAL FORMAT IN SUCH A FASHION THAT THE OWNER CAN EASILY IDENTIFY THE LOCATION OF THE POLES WHERE THE LIGHT LEVEL IS BEING MEASURED AND CAN TAKE ADDITIONAL MEASUREMENTS AT THESE SAME LOCATIONS IN FUTURE YEARS.
6. THE CONTRACTOR SHALL MAKE COPIES OF THIS DIAGRAM AND WRITE IN OR TYPE IN THE LIGHT LEVEL MEASUREMENTS IN THE BLANK PROVIDE AND SUBMIT THIS DIAGRAM TO THE OWNER.



FINAL LIGHT LEVEL TABULATION FORM

VA BEACH STREET LIGHTING



NOTES:

1. IF NEEDED IN SLOPED CONDITIONS TO MAINTAIN POSITIVE DRAINAGE AROUND THE FOUNDATION AND TO PROVIDE THE CLEARANCES SHOWN IN DETAIL B, THE CONTRACTOR SHALL RE-GRADE AND ADD RETAINING CURB OR MATTING ON THE UP SLOPE WHEN DIRECTED BY THE ENGINEER. RE-GRADING AND RETAINING CURB SHALL BE INCLUDED IN THE PRICE BID FOR FOUNDATION.
2. WHEN FOUNDATION IS ADJACENT TO THE BACK EDGE OF SIDEWALK BUT NOT WITHIN THE SIDEWALK THE TOP OF THE FOUNDATION SHALL BE ELEVATED 2 INCHES MINIMUM ABOVE THE SIDEWALK GRADE.

VIRGINIA BEACH SPORTS CENTER

1045 19th Street
Virginia Beach, Virginia

DESIGNER

CLARKNEXSEN
4525 Main Street, Suite 1400
Virginia Beach, VA 23462
757.455.5800

CONSULTANT

SEALS

SUBMITTAL
05/18/18
PROGRESS PRINT

REVISIONS

KEY PLAN

101	103	105	107
102	104	106	108

SHEET
ELECTRICAL SITE DETAILS

ES501

SHEET - OF XX

DESIGN: -
DRAWN: -
REVIEW: -

CN 7142

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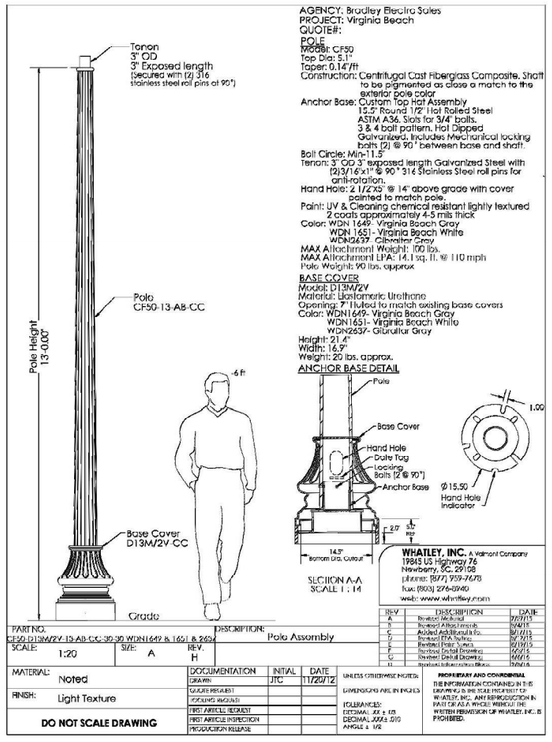
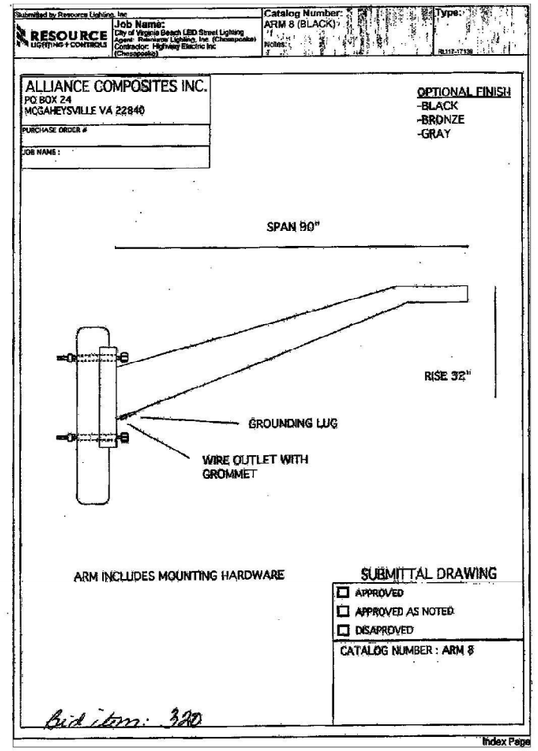
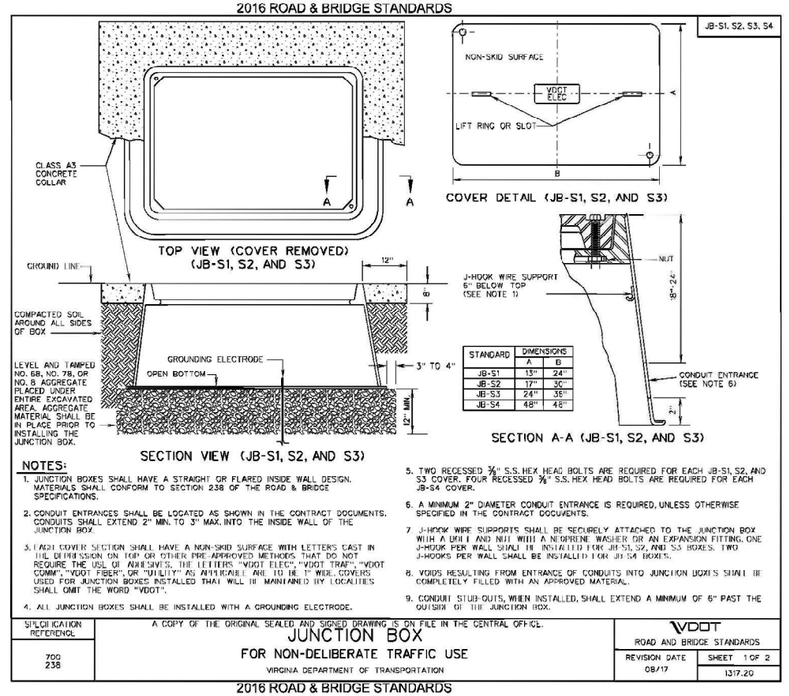
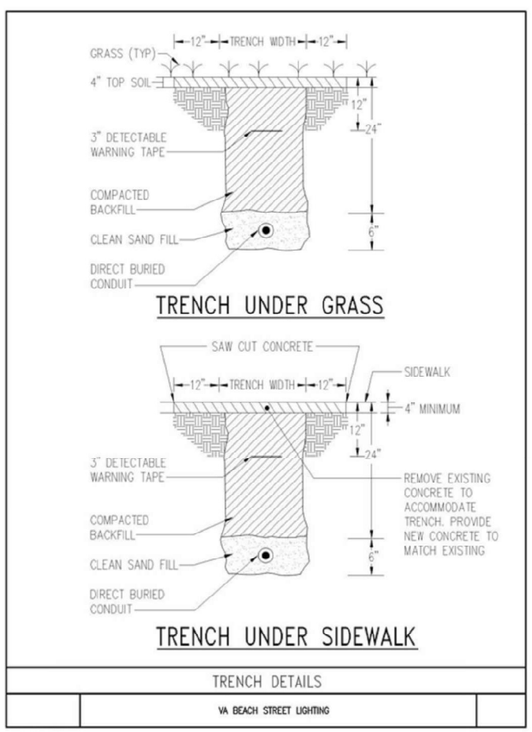


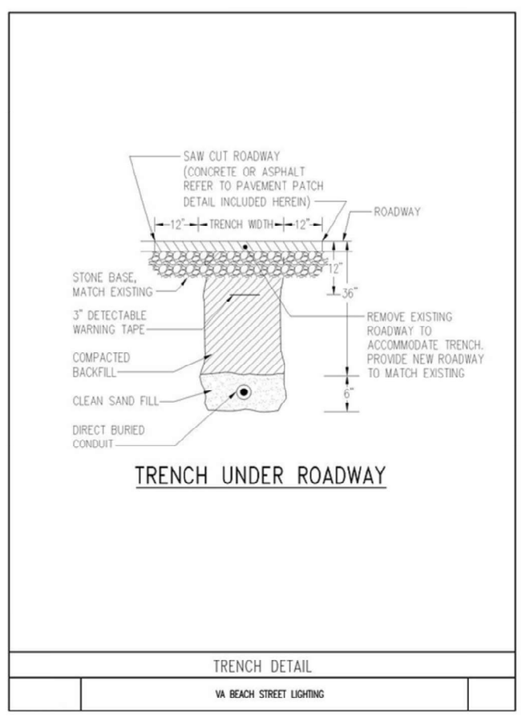


2016 ROAD & BRIDGE STANDARDS

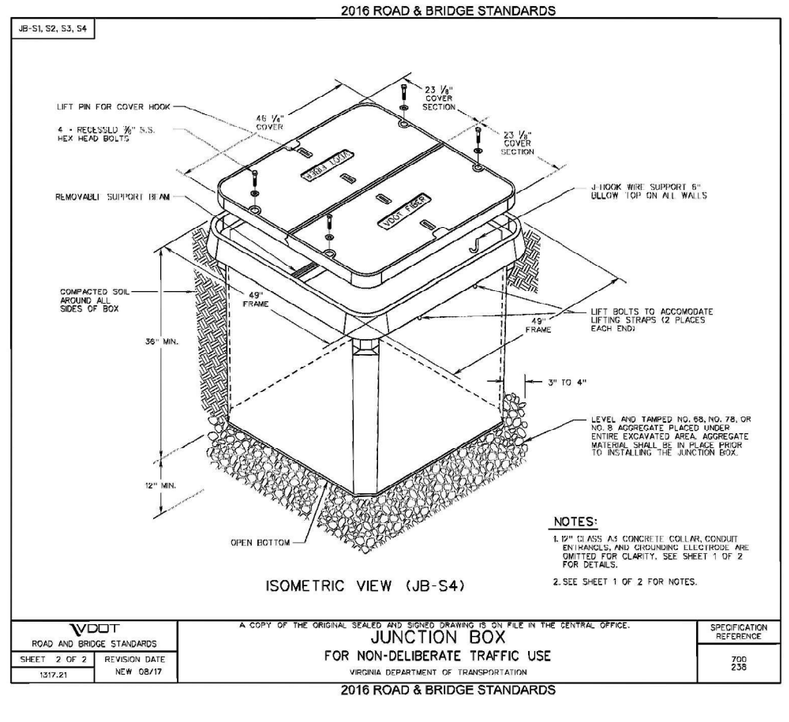


2016 ROAD & BRIDGE STANDARDS





2016 ROAD & BRIDGE STANDARDS



2016 ROAD & BRIDGE STANDARDS

VB Virginia Beach | MEB General Contractors

VIRGINIA BEACH SPORTS CENTER

1045 19th Street
Virginia Beach, Virginia

DESIGNER

CLARKNEXSEN

4525 Main Street, Suite 1400
Virginia Beach, VA 23462
757.455.5800

CONSULTANT

SEALS

SUBMITTAL

05/18/18

PROGRESS PRINT

REVISIONS

KEY PLAN

101	103	105	107
102	104	106	108

SHEET

ELECTRICAL SITE DETAILS

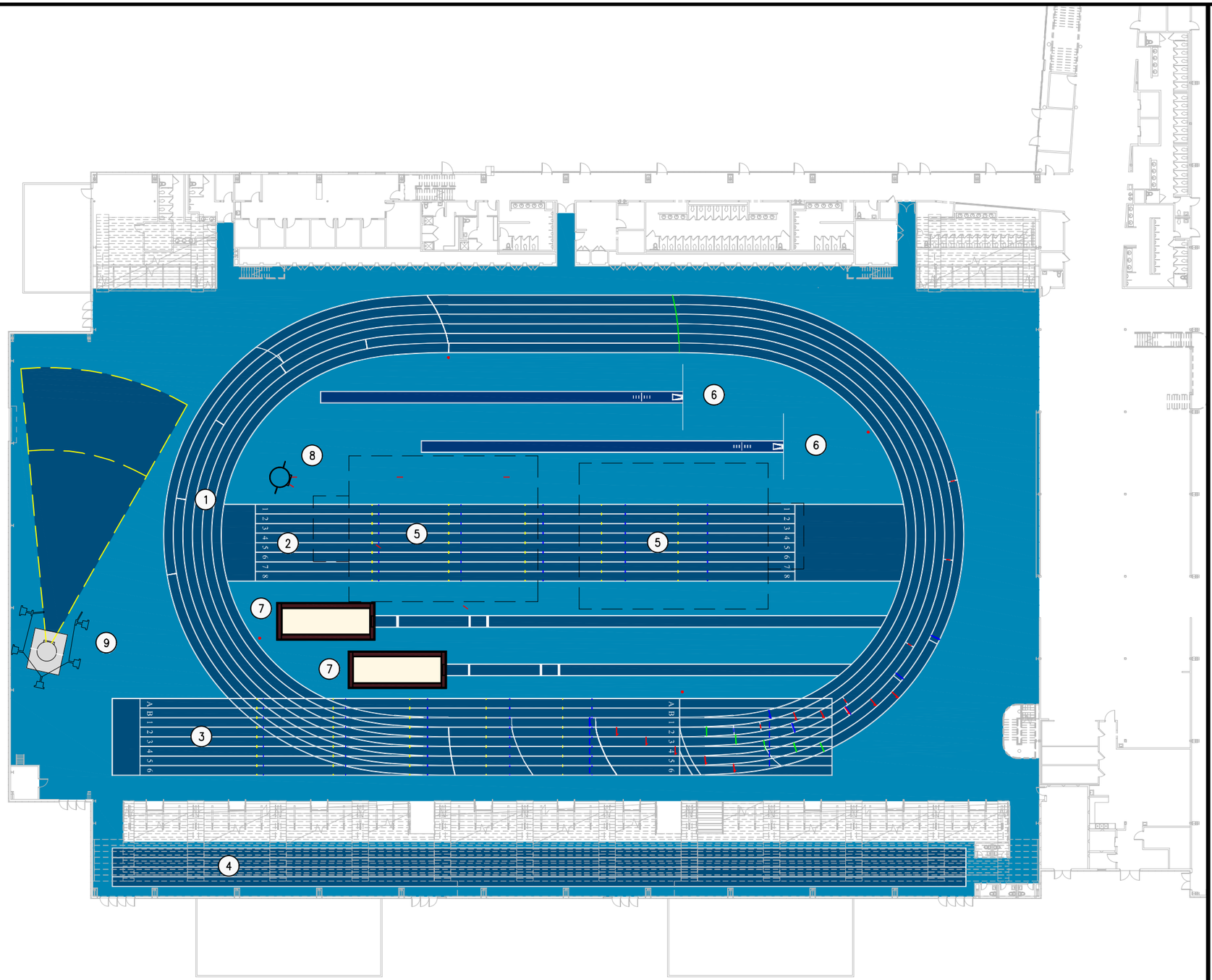
ES502

SHEET - OF XX

DESIGN -
DRAWN -
REVIEW -

CN 7142

E:\Projects\1000\7142-HR Regional Sports Pavilion\CAD\Sheets\E\ES502.dwg Fri, 18 May 2018 - 4:50pm smturner



FACILITY COMPONENTS

1. 200m Oval
   6x42" Lanes
2. Sprint Straight 1
   8x42" Lanes
3. Sprint Straight 2
   8x42" Lanes
4. Practice Sprint Straight
   4x42" Lanes
5. High Jump Area
6. Pole Vault
7. Long/Triple Jump
8. Throw Circle
   Shot Put
9. Throw Circle
   Weight

KEY

- Track Surface Southern Blue
- Track Surface Light Blue

Plan North

20 0 40

Graphic Scale: 1" = 40'

City of Virginia Beach

Virginia Beach Sports Center

Virginia Beach, VA

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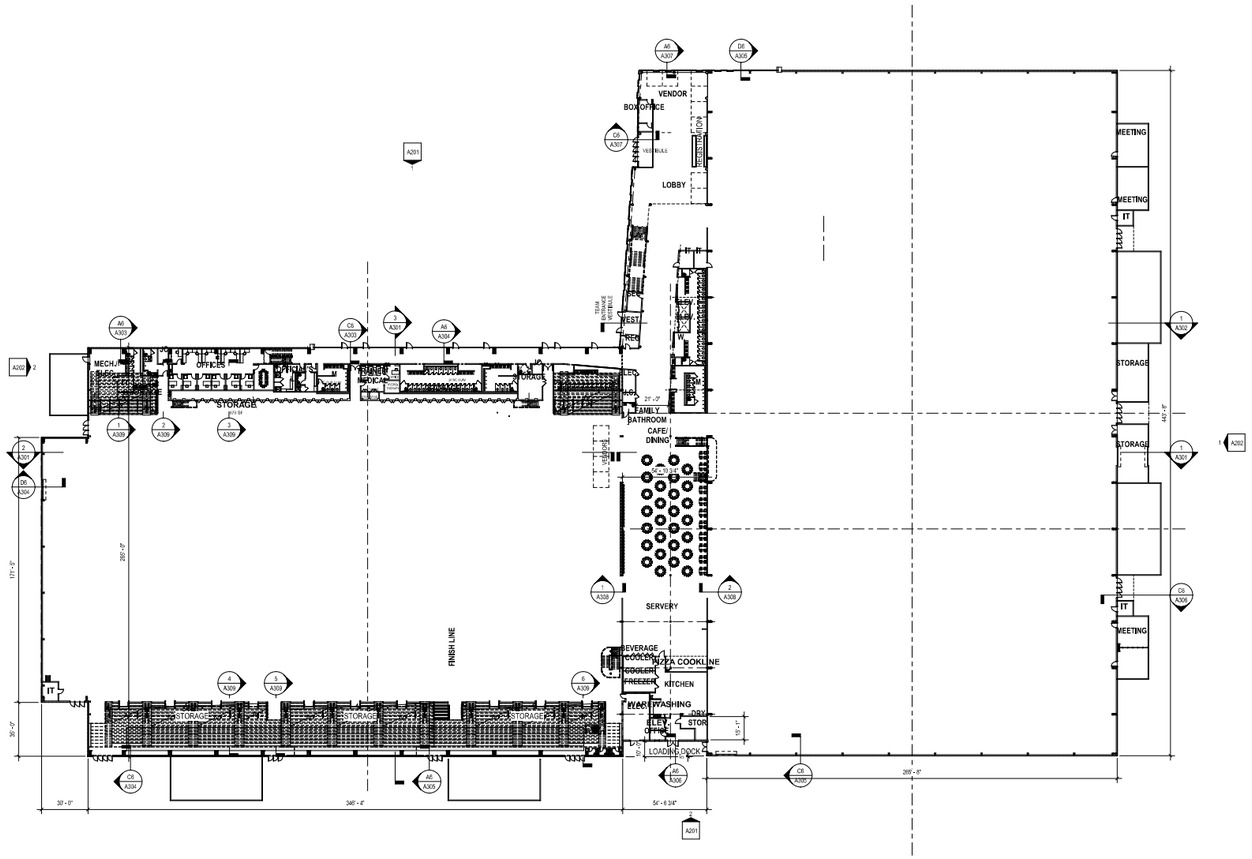
Indoor Track Components

Date:
June 6, 2018

Drawing:
Layout 1



FIRST FLOOR PLAN

1" = 30'-0"

0' 30' 60' 90'

HANBURY

CONSULTANT

VIRGINIA BEACH, VA

VBSC

CITY OF VIRGINIA BEACH

Date 5/31/2018

REV/PLAN

MARK	DATE	DESCRIPTION
0	DD MMM YYYY	ISSUED FOR PERMIT

PROJECT NO: 00000.000

DATE: Issue Date

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SHEET TITLE:

FIRST FLOOR PLAN

SHEET NUMBER:

A101

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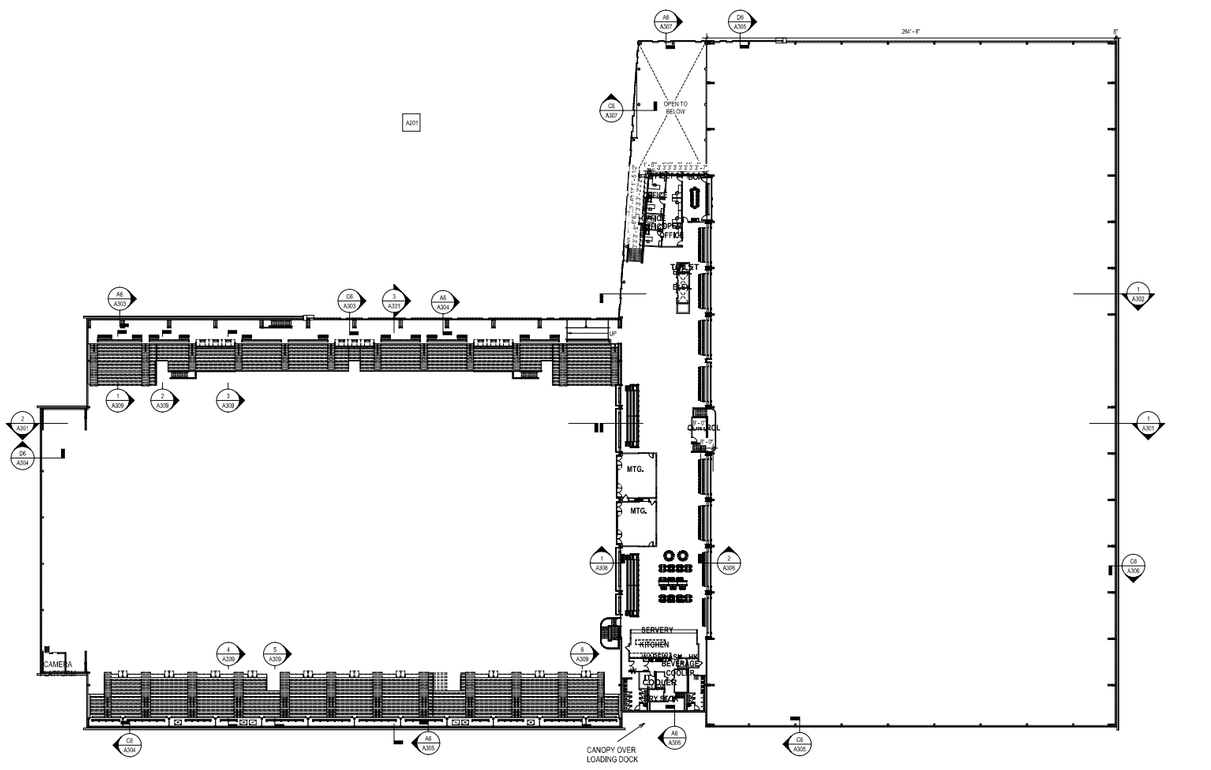

1 MEZZANINE FLOOR PLAN
1" = 30'-0"

HANBURY

CONSULTANT

CITY OF VIRGINIA BEACH

VIRGINIA BEACH, VA

VBSC

Date 5/31/2018

ISSUE/PLAN

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SHEET TITLE:
MEZZANINE FLOOR PLAN

SHEET NUMBER:
A102

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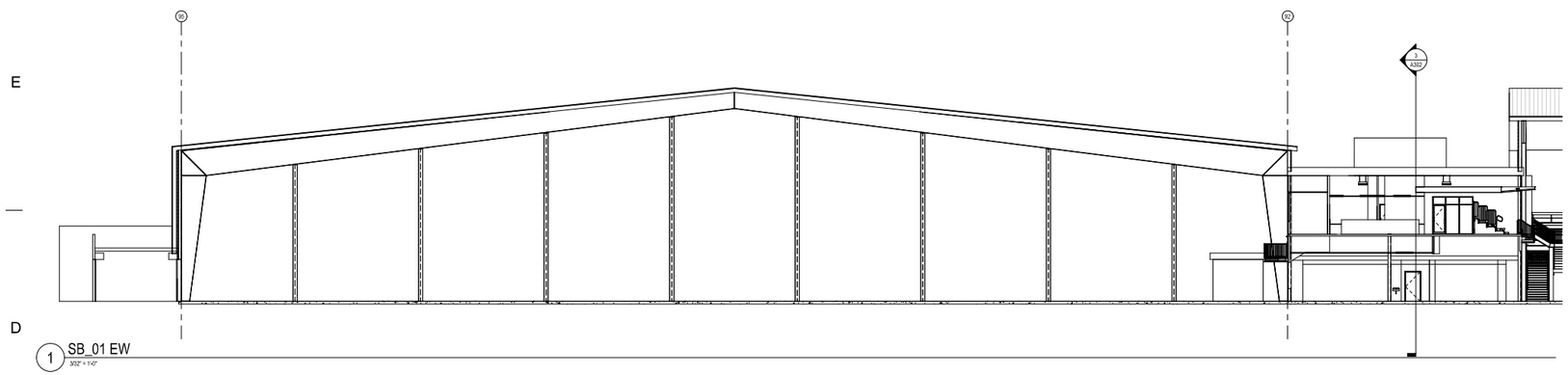
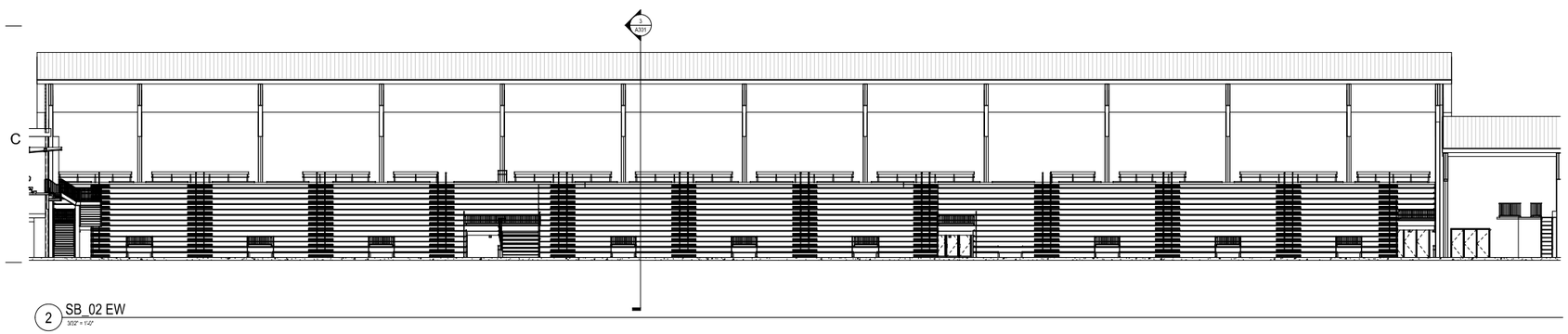
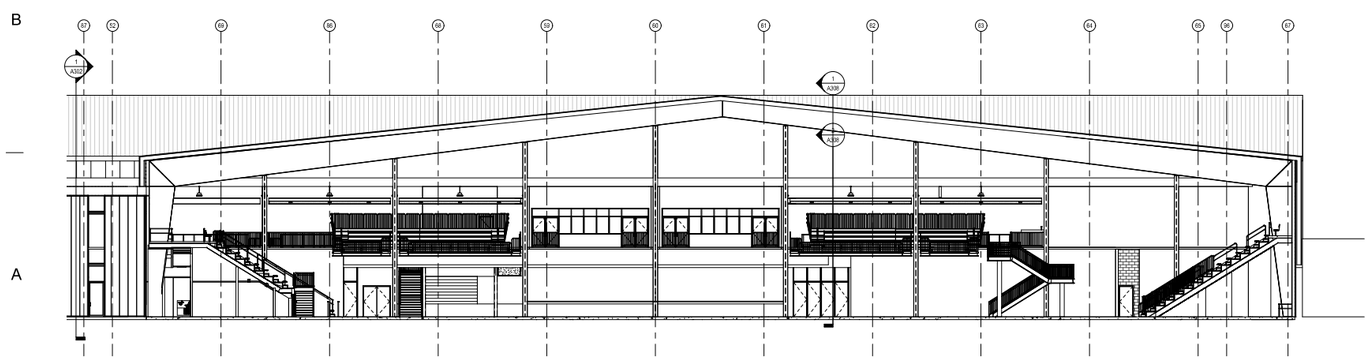


1 SB_01 EW
3/32" = 1'-0"



2 SB_02 EW
3/32" = 1'-0"



3 SB_03 Track NS
3/32" = 1'-0"

HANBURY

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CITY OF VIRGINIA BEACH

VIRGINIA BEACH, VA

VBSC

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BUILDING SECTIONS

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A301

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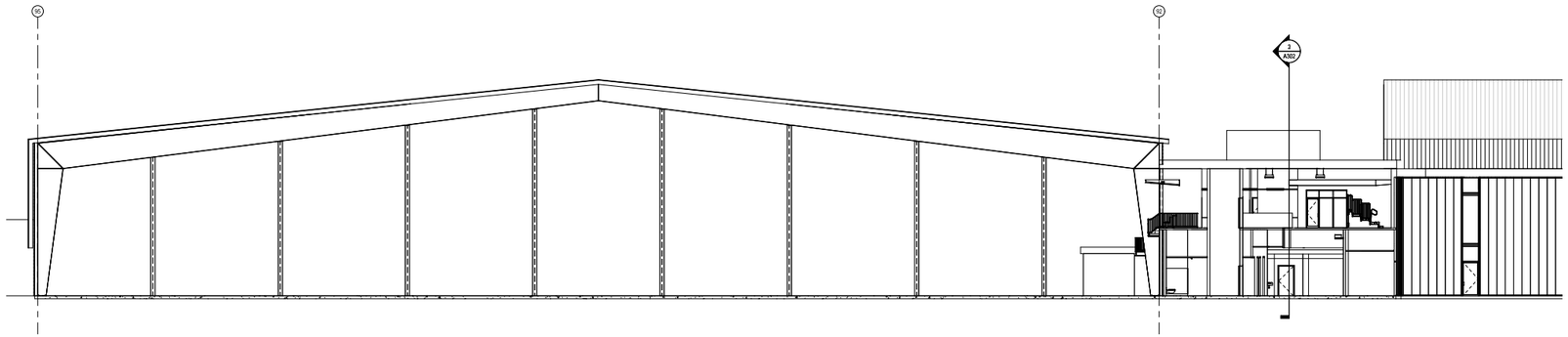
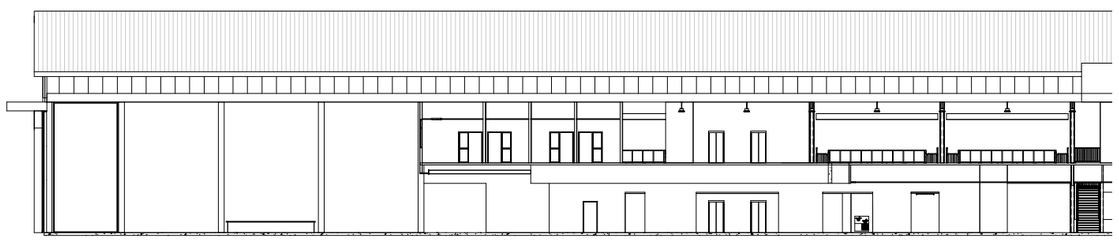
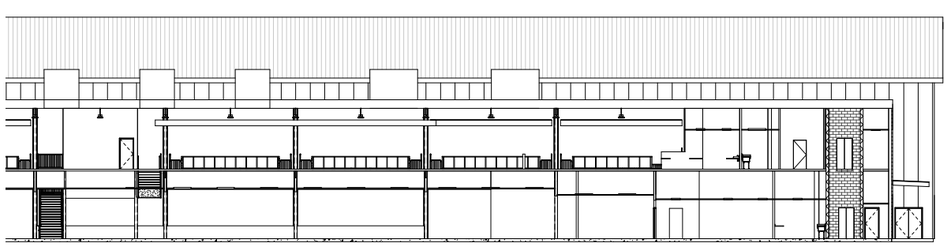


1 SB_04 Court EW
3/32" = 1'-0"



2 SB_05 Mech Roof NS
3/32" = 1'-0"



3 SB_06 Mech Roof SN
3/32" = 1'-0"

HANBURY

CITY OF VIRGINIA BEACH

VBSC

VIRGINIA BEACH, VA

CONSULTANT

Date 5/31/2018

ISS/PLAN

MARK	DATE	DESCRIPTION

PROJECT NO: 00000.000

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A302

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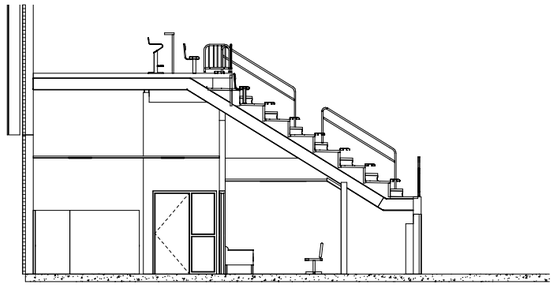
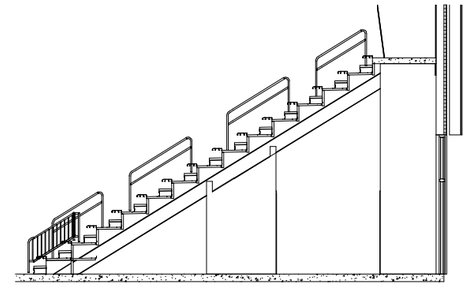
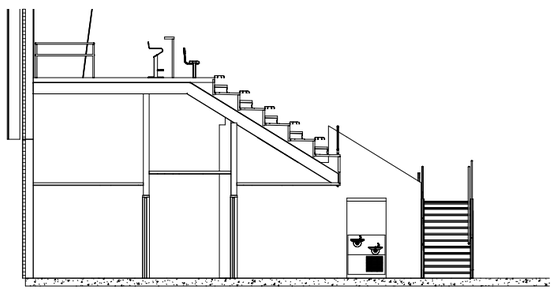


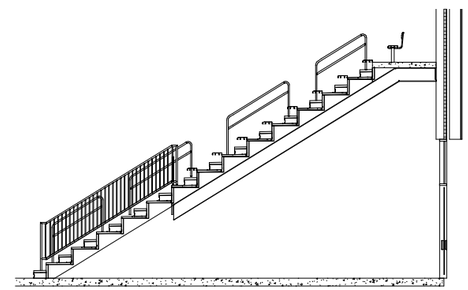
3 SW_03 Bleacher North at ADA
1/4" = 1'-0"



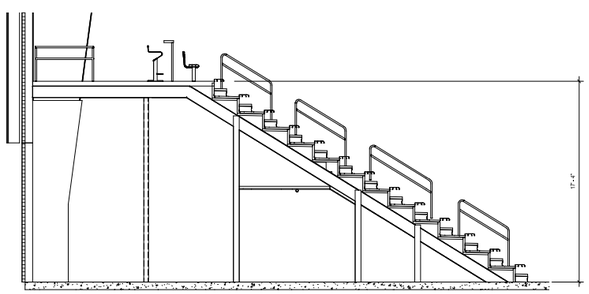
6 SW_06 Bleacher South At ADA
1/4" = 1'-0"



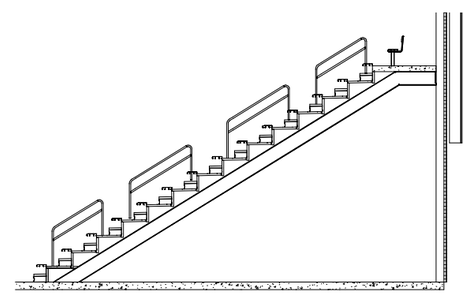
2 SW_02 Bleacher North at Vomitory
1/4" = 1'-0"



5 SW_05 Bleacher South At Vomitory
1/4" = 1'-0"



1 SW_01 Bleacher North
1/4" = 1'-0"



4 SW_04 Bleacher South Typ
1/4" = 1'-0"

HANBURY

CONSULTANT

VIRGINIA BEACH, VA

VBSC

CITY OF VIRGINIA BEACH

Date 5/31/2018

KEYPLAN

MARK	DATE	DESCRIPTION

PROJECT NO: 00000.000

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BLEACHER SECTIONS

SHEET NUMBER:

A309

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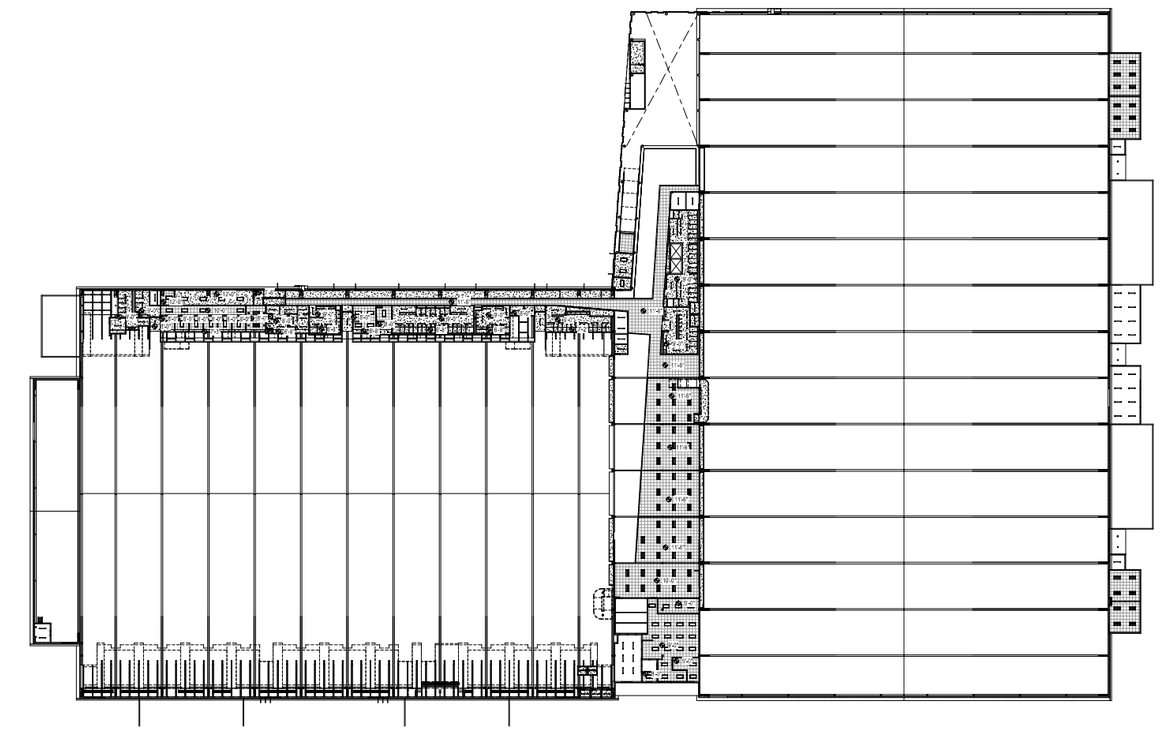

1 FIRST FLOOR REFLECTED CEILING PLAN
1" = 30'-0"

HANBURY

CONSULTANT

VIRGINIA BEACH, VA

CITY OF VIRGINIA BEACH

VBSC

Date 5/31/2018

KEYPLAN

MARK	DATE	DESCRIPTION

PROJECT NO: 00000.000

DATE: Issue Date

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FIRST FLOOR REFLECTED CEILING PLAN

SHEET NUMBER:

A701

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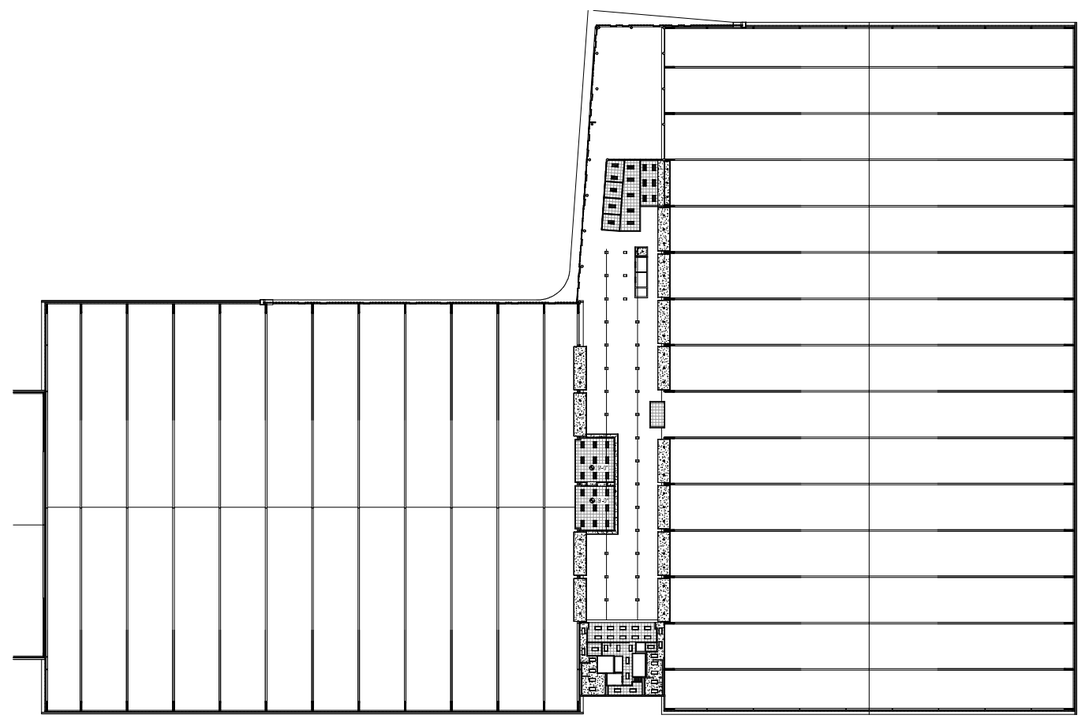

1 SECOND FLOOR REFLECTED CEILING PLAN
1" = 30'-0"

0' 30' 60' 90'

PRINTED: 5/31/2018 10:11:55 AM

HANBURY

CONSULTANT

VIRGINIA BEACH, VA

CITY OF VIRGINIA BEACH

VBSC

Date 5/31/2018

KEYPLAN

MARK	DATE	DESCRIPTION

PROJECT NO: 00000.000

DATE: Issue Date

DRAWN BY: Author

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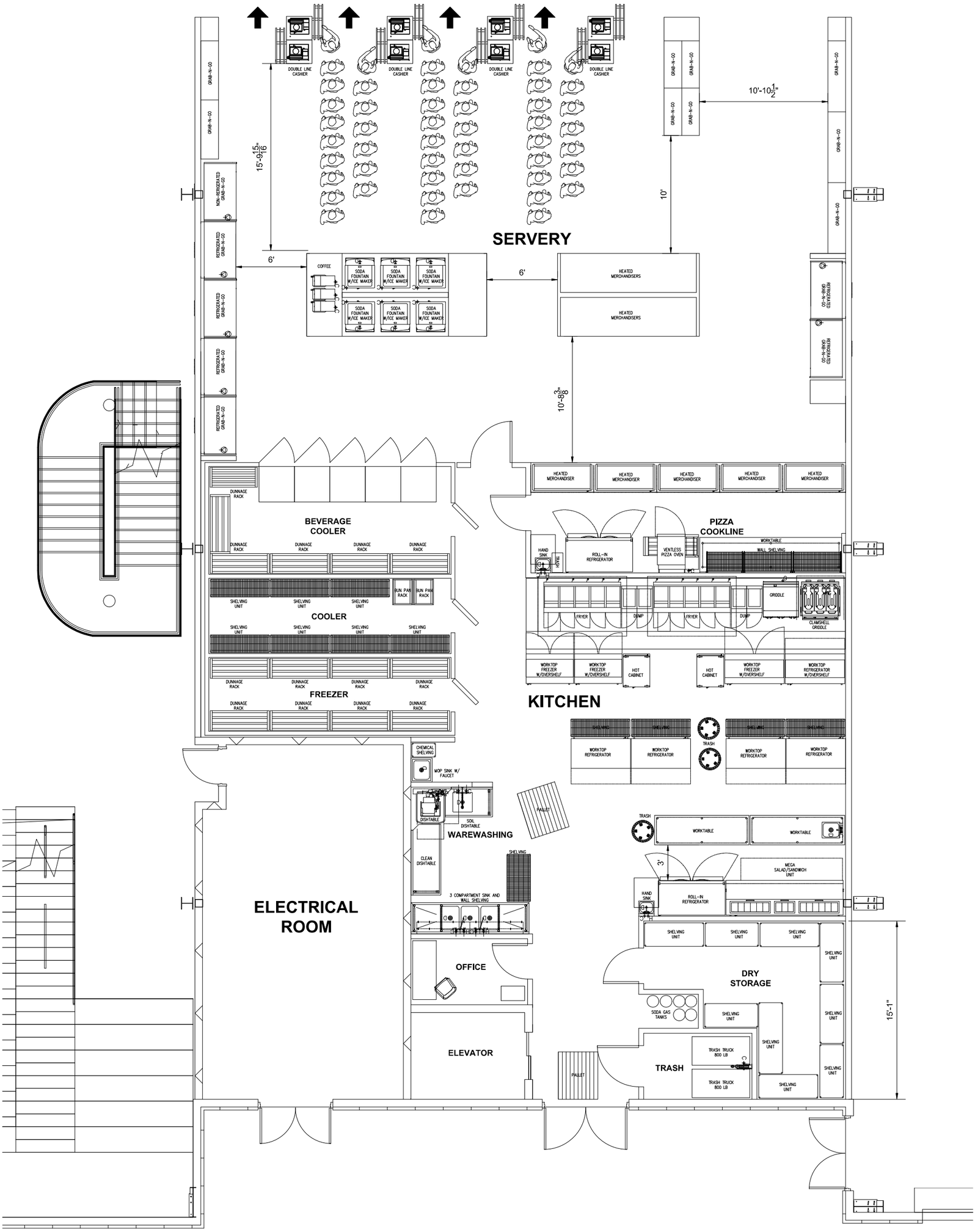
SHEET TITLE:

MEZZANINE REFLECTED CEILING PLAN

SHEET NUMBER:

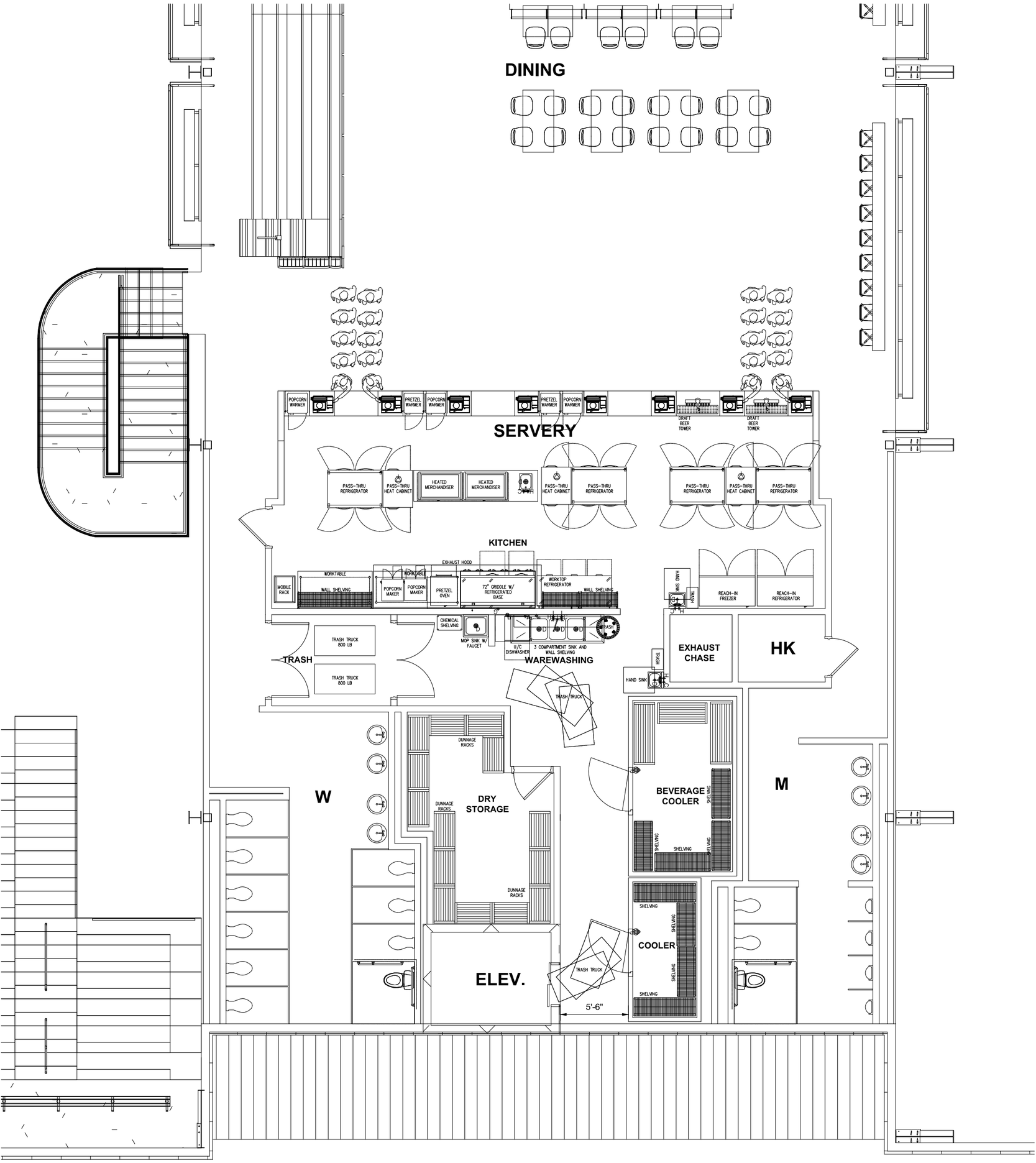
A702



VIRGINIA BEACH SPORTS COMPLEX -GROUND FLOOR

FOODSERVICE SOLUTIONS DESIGN CONSULTANTS

5-15-18



VIRGINIA BEACH SPORTS COMPLEX - MEZZANINE

FOODSERVICE SOLUTIONS DESIGN CONSULTANTS

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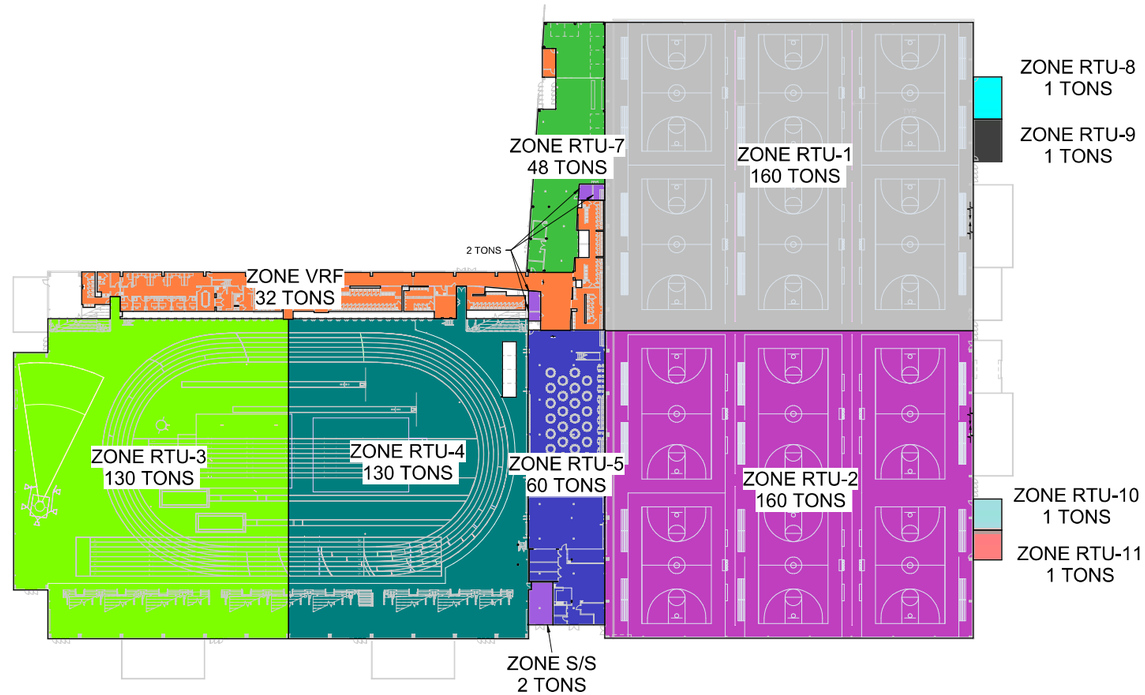
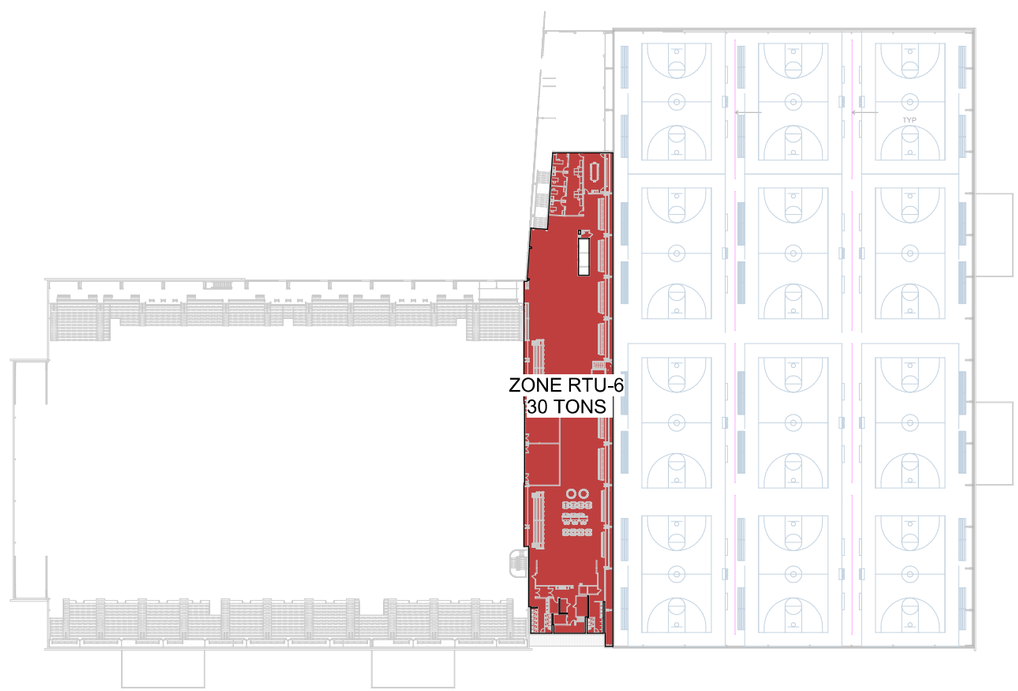


1 ZONE PLAN - FIRST FLOOR
NO SCALE

FIRST FLOOR ZONES

- RTU-1
- RTU-2
- RTU-3
- RTU-4
- RTU-5
- RTU-7
- RTU-8
- RTU-9
- RTU-10
- RTU-11
- S/S
- VRF



2 ZONE PLAN - SECOND FLOOR
NO SCALE

SECOND FLOOR ZONES

- RTU-6
- S/S

GENERAL NOTES

GRAPHIC SCALE(S)

CITY OF VIRGINIA BEACH

VIRGINIA BEACH SPORTS CENTER

Enter address here

DESIGNER

CLARKNEXSEN

4525 Main Street, Suite 1400
Virginia Beach, Virginia 23462
757-455-5800
www.clarknexsen.com

SEALS

SUBMITTAL

Issue Date

Project Status

REVISIONS

Date 5/23/2018

SHEET

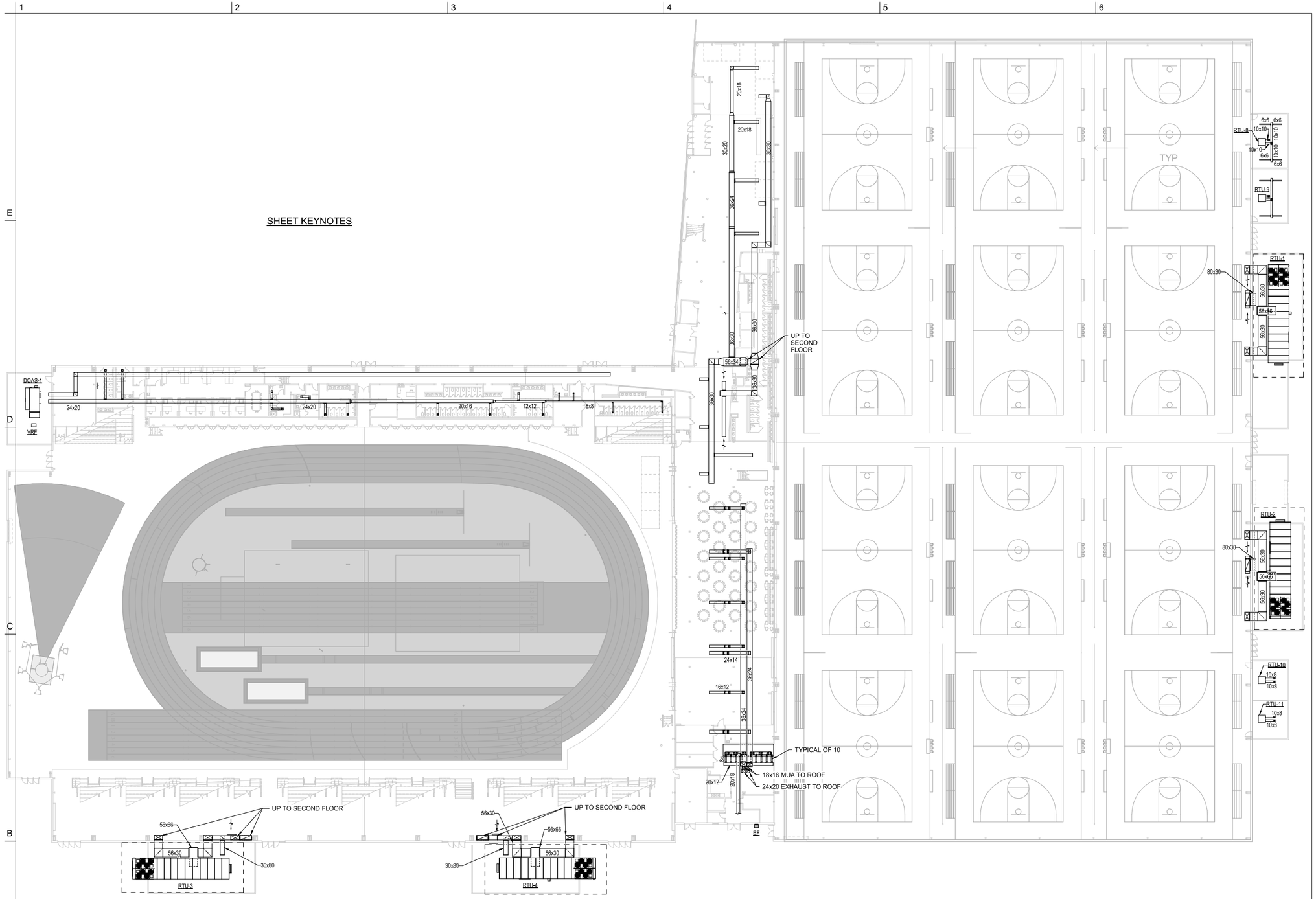
ZONING PLANS

MH100

DESIGN: MRK
DRAWN: MKJ
REVIEW: Checker

CN 7142

5/23/2018 2:50:32 PM
BIM 360://Virginia Beach Sports Center/7142_VB Sports Center M18.rvt



DUCT PLAN - FIRST FLOOR

1" = 20'-0"

GENERAL NOTES

GRAPHIC SCALE(S)

1" = 20' 0 10' 20' 40' 80'

CITY OF VIRGINIA BEACH

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DESIGNER

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Virginia Beach, Virginia 23462
757 455 6800
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SEALS

SUBMITTAL

Issue Date

Project Status

REVISIONS

Date 5/23/2018

SHEET

DUCT PLAN - FIRST FLOOR

MH101

DESIGN: MRK
DRAWN: MKJ
REVIEW: Checker

CN 7142

5/23/2018 2:49:33 PM
BIM 360://Virginia Beach Sports Center/7142_VB Sports Center M18.rvt

SHEET KEYNOTES

DUCT PLAN - SECOND FLOOR

1" = 20'-0"

GENERAL NOTES

GRAPHIC SCALE(S)

1" = 20' 0 10' 20' 40' 80'

CITY OF VIRGINIA BEACH

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DESIGNER

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SEALS

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Project Status

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Date 5/23/2018

SHEET

DUCT PLAN - SECOND FLOOR

MH102

DESIGN: MRK
DRAWN: MKJ
REVIEW: Checker

CN 7142

5/23/2018 2:49:37 PM
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ELECTRICAL LEGEND

SYMBOL EXISTING	SYMBOL PROVIDE	DESCRIPTION
		LIGHTING
	A	LIGHTING FIXTURE TYPE, SEE LIGHTING FIXTURE SCHEDULE ON SHEET EL501.
		HIGH INTENSITY DISCHARGE (H.I.D.) OR COMPACT FLUORESCENT LIGHTING FIXTURE. (⊣ INDICATES BRACKET, WALL MOUNTED FIXTURES).
		FLUORESCENT LIGHTING FIXTURE (⊣ INDICATES BRACKET, WALL MOUNTED FIXTURES).
		FLUORESCENT LIGHTING FIXTURE (⊣ INDICATES BRACKET, WALL MOUNTED FIXTURES).
		EXIT LIGHTING FIXTURE. ARROW, WHEN USED, INDICATES DIRECTION. (⊣ INDICATES BRACKET, WALL MOUNTED FIXTURES). FILLED IN QUADRANT(s) OF SYMBOL INDICATES NUMBER AND ORIENTATION OF ILLUMINATED FACES. (SEE LEGEND NOTE 4)
		EMERGENCY BATTERY POWERED LIGHTING UNIT, TYPE ___ U.O.N. SEE LEGEND NOTE 4.
		REMOTE EMERGENCY LIGHTING HEAD. FIXTURE TYPE __ U.O.N.
S	S	SINGLE POLE SWITCH, 20 A, 120/277 V. MOUNT 48" AFF UON.
S2	S2	DOUBLE POLE SWITCH, 20 A, 120/277 V. MOUNT 48" AFF UON.
S3	S3	THREE-WAY SWITCH, 20 A, 120/277 V. MOUNT 48" AFF UON.
S4	S4	FOUR-WAY SWITCH, 20 A, 120/277 V. MOUNT 48" AFF UON.
SD	SD	DIMMER SWITCH. (WATTAGE AS REQUIRED TO CONTROL THE FIXTURE(S) CONNECTED UON.). MOUNT 48" AFF UON.
SK	SK	KEY OPERATED SWITCH. MOUNT 48" AFF UON.
$	$	OCCUPANCY SENSOR CONTROLLER WALL MOUNTED 48" AFF UON.
OS 'IR' OR 'US'	OS 'IR' OR 'US'	OCCUPANCY SENSOR CONTROLLER, CEILING MOUNTED (IR INDICATES INFRARED, US INDICATES ULTRA SONIC).
P	P	PHOTO-ELECTRIC SWITCH
C	C	LIGHTING CONTACTOR
T/S	T/S	TIME SWITCH
		POWER DEVICES
		SINGLE OUTLET - 30A, 2P, 3W, 250VAC, NEMA 6-30 WITH MATCHING PLUG.
		DUPLEX CONVENIENCE RECEPTACLE, 20 A, 125 VAC, MOUNT + 18" AFF UON. "WP" INDICATES WEATHERPROOF OUTLET. "GFI" INDICATES RECEPTACLE WITH INTERNAL GROUND FAULT PROTECTION.
OR	OR	RECEPTACLE AS NOTED ABOVE BUT, MOUNT 48" AFF OR 6" ABOVE BACKSPLASH OR COUNTER TOP WHERE COUNTER IS INDICATED.
		QUADRUPLEX CONVENIENCE RECEPTACLE MOUNTED IN TWO-GANG OUTLET BOX - EACH RATED 20A, 125 VOLTS WITH SINGLE COVER PLATE. MOUNT 18" AFF, UON.
		FLUSH FLOOR DUPLEX RECEPTACLE, 15 A, 125 VAC
		FLUSH FLOOR SINGLE RECEPTACLE, 20 A, 125 VAC
		SPECIAL PURPOSE RECEPTACLE. (__ A, __ POLE, __ WIRE, __ VAC. MOUNT __ AFF UON) OR (NEMA CONFIGURATION AS NOTED)
		TELEPHONE AND DATA SYSTEMS
		EQUIPMENT CONNECTIONS
E	E	EQUIPMENT CONNECTION AS NOTED
J	J	JUNCTION BOX. "WAP" INDICATES JUNCTION BOX AND 1/2" C TO NEAREST TELECOM ROOM FOR WIRELESS ACCESS POINT. "C" INDICATES JUNCTION BOX AND 1/2" C TO NEAREST TELECOM ROOM FOR CAMERA.
M	M	MOTOR CONNECTION AS NOTED.
	XXX	EQUIPMENT TAG - SEE EQUIPMENT SCHEDULE SHEET EP601.
3P 60/40	3P 60/40	DISCONNECT SWITCH. 600 V IN NEMA 1 ENCLOSURE UON 3P = NO. OF POLES. 60 = SWITCH RATING. 40 = FUSE RATING (NF INDICATES NON-FUSIBLE) (SEE LEGEND NOTE 5)
3P 60/40	3P 60/40	ENCLOSED CIRCUIT BREAKER 480V IN NEMA 1 ENCLOSURE 14 KAIC UON 3P = NO. OF POLES. 100 = FRAME RATING. 40 = TRIP RATING (SEE LEGEND NOTE 5)
		DISCONNECT SWITCH PROVIDED INTEGRAL WITH EQUIPMENT.
		MAGNETIC MOTOR CONTROLLER (CONTROLLER FURNISHED WITH EQUIPMENT).
		MANUAL MOTOR CONTROLLER (CONTROLLER FURNISHED WITH EQUIPMENT).
T	T	LINE VOLTAGE THERMOSTAT CONNECTION (THERMOSTAT FURNISHED WITH EQUIPMENT)
VFC	VFC	VARIABLE FREQUENCY CONTROLLER CONNECTION (DRIVE FURNISHED WITH EQUIPMENT)
SM	SM	MOTOR RATED SWITCH
SP	SP	SWITCH WITH PILOT LIGHT, MOUNT 48" AFF UON.
		PUSH BUTTON

SYMBOL EXISTING	SYMBOL PROVIDE	DESCRIPTION
		DISTRIBUTION
		PANELBOARD - 208Y/120V
		PANELBOARD - 480Y/277V
	T	DRY TYPE TRANSFORMER, SIZE AS INDICATED.
		WIRE, CONDUIT AND RACEWAY
OR	OR	BRANCH CIRCUIT OR FEEDER WIRING IN CONDUIT. NO TICK MARKS INDICATE 2 #12 CONDUCTORS & 1 #12 GND. IN 1/2" CONDUIT UON. TICK MARKS, WHEN SHOWN, INDICATE NUMBER OF #12 CONDUCTORS IF OTHER THAN THREE. ( ) INDICATES GROUND. CONDUIT LARGER THAN 1/2" & WIRE LARGER THAN #12 SHALL BE AS INDICATED. (SEE LEGEND NOTE 1)
L2A-1,3	L2A-1,3	HOMERUNS TO PANEL. PANEL AND CIRCUIT DESIGNATIONS AS INDICATED.
		INDICATES A CONDUIT RUN CONCEALED IN CEILING, WALL, FLOOR, OR ABOVE SUSPENDED CEILING UON.
		CONDUIT TURNED UP
		CONDUIT TURNED DOWN
		CONDUIT SEAL
LV	LV	LOW VOLTAGE EMERGENCY LIGHT CIRCUIT 2 #12 AWG 1/2" C. U.O.N.
		CABLE TRAY, SIZE AND TYPE AS INDICATED.
LE	LE	LIMITED ENERGY CONTROL CIRCUIT, PROVIDE BETWEEN LOW VOLTAGE CONTROL STATION AND SYSTEM CONTROL EQUIPMENT INDICATED.
		GENERAL
	1	NOTE REFERENCE - TYPICALLY LOCATED ON SAME SHEET WHERE SYMBOL IS USED.
	101	ROOM NUMBER.
	XXX	FEEDER DESIGNATION. FOR FEEDER SCHEDULE, SEE SHEET EP701.
		CROSS HATCHING INDICATES REMOVE INDICATED DEVICE OR CIRCUIT. (SEE LEGEND NOTE 6)
		POINT OF CONNECTION NEW-TO-EXISTING (SEE LEGEND NOTE 3).
		POINT OF DEMOLITION

ELECTRICAL ABBREVIATIONS

A	AMPER
A/C	AIR
AF	AMPERE FRAME
AFF	ABOVE FINISHED FLOOR
AF	ABOVE FINISHED GRADE
AHU	AIR HANDLING UNIT
AT	AMPERE TRIP
ATC	AUTOMATIC TEMPERATURE CONTROL
AWG	AMERICAN WIRE GAUGE
BG	BELOW GRADE
BLDG	BUILDING
BRKR	BREAKER
C	CONDUIT
CB	CIRCUIT BREAKER
CCT	CIRCUIT
DISC	DISCONNECT SWITCH
DT	DRY TYPE
DVP	DOMINION VIRGINIA POWER COMPANY
DWG	
EC	EMPTY CONDUIT
EF	EXHAUST FAN
EMT	ELECTRICAL METALLIC TUBING
EQUIP	EQUIPMENT
ETR	EXISTING TO REMAIN
EWC	ELECTRIC WATER COOLER
EWH	ELECTRIC WATER HEATER
EXIST	EXISTING
FACP	FIRE ALARM CONTROL PANEL
FC	FOOTCANDLE
FCU	FAN COIL UNIT
FLA	FULL LOAD AMPS
FLUOR	FLUORESCENT
GFI	GROUND FAULT INTERRUPTER
GND	GROUND
GR	GALVANIZED RIGID STEEL
HID	HIGH INTENSITY DISCHARGE
HH	HANDHOLE
HP	HORSEPOWER
HPS	HIGH PRESSURE SODIUM
KAIC	THOUSAND AMP CAPACITY, RMS SYMMETRICAL
KCMIL	THOUSAND CIRCULAR MILS
KWH	KILOWATT HOUR
KVA	KILOVOLT AMPERE
LAN	LOCAL AREA NETWORK
LTG	LIGHTING
MCB	MAIN CIRCUIT BREAKER
MH	MANHOLE
MLO	MAIN LUG ONLY
MSB	MAIN SWITCHBOARD
MT	MOUNT
MTD	MOUNTED
MTG HT	MOUNTING HEIGHT
N/C	NORMALLY CLOSED
NEC	NATIONAL ELECTRICAL CODE
NF	NON-FUSED
N/O	NORMALLY OPEN
NESC	NATIONAL ELECTRICAL SAFETY CODE
NEU	NEUTRAL
NIC	NOT IN CONTRACT
P	POLE
PH	PHASE
PNL	PANEL
PVC	POLY VINYL CHLORIDE
QTY	QUANTITY
RECEPT	RECEPTACLE
RFI	RADIO FREQUENCY
REQ'D	REQUIREDENCE
SC	SPLIT CIRCUIT (SEE LEGEND NOTE 2)
SF	SUPPLY FAN
S/N	SOLID NEUTRAL
SPD	SURGE PROTECTIVE DEVICE
SW	SWITCH
TEL	TELEPHONE
TG	TELECOMMUNICATIONS GROUND BUS
TMGB	TELECOMMUNICATIONS MAIN GROUND BUS
TTB	TELEPHONE TERMINAL
TV	TELEVISION
UH	UNIT HEATER
UG	UNDERGROUND
UON	UNLESS OTHERWISE
UP	UNDERGROUND POWER
V	VOLTS
VAC	VOLTS ALTERNATING
VDC	VOLTS DIRECT CURRENT
W	WIRE
WH	WATER HEATER
WP	INDICATES WEATHERPROOF
XFMR	TRANSFORMER

LEGEND NOTES

1. WIRE AND CONDUIT FOR MOTOR AND EQUIPMENT LOADS SHALL BE CONTINUOUS IN SIZE AND COUNT FROM SOURCE TO FINAL CONNECTION. SIZE AND COUNT SHALL BE AS INDICATED ON THE CIRCUIT HOMERUN UNLESS OTHERWISE NOTED.
2. WHERE BRANCH CIRCUIT HOMERUNS ARE LABELED "SPLIT CIRCUIT" (SC), THE BRANCH CIRCUIT NUMBER INDICATED HAS BEEN USED ON MORE THAN ONE HOMERUN INDICATOR. INSTALL ONLY ONE CONDUCTOR PER CIRCUIT BREAKER POLE WITHIN THE PANELBOARD ENCLOSURE. SPLICES NECESSARY TO COMPLY WITH THIS REQUIREMENT SHALL BE MADE IN A SEPARATE SPLICE BOX OUTSIDE THE PANELBOARD ENCLOSURE.
3. WHERE A NEW-TO-EXISTING CONNECTION IS INDICATED, PROVIDE MATERIALS AND LABOR REQUIRED TO MAKE THE CONNECTION.
4. BRANCH CIRCUIT WIRING TO EXIT LIGHT FIXTURES AND TO THE BATTERY INVERTERS WITHIN FIXTURES WITH INTEGRAL BATTERY UNITS SHALL BE UNSWITCHED, CONNECTED AHEAD OF ANY CONTROL SWITCHES.
5. A (*) IN THE FUSE RATING OR TRIP RATING POSITION FOR THIS SYMBOL INDICATES PROVIDE FUSE OR BREAKER TRIP RATING IN ACCORDANCE WITH MANUFACTURERS RECOMMENDATION.
6. WHERE EQUIPMENT OR DEVICES ARE NOTED AS "REMOVE", REMOVE CONDUCTORS ASSOCIATED WITH THESE ITEMS TO THE LAST ACTIVE ITEM ON THE CIRCUIT, OR TO THE BRANCH CIRCUIT BREAKER IF ALL ITEMS ON THE CIRCUIT ARE REMOVED. REMOVE CONDUITS FOR THESE CIRCUITS WHERE THEY RUN EXPOSED OR IN CEILING OR FLOOR PLENUMS. CONDUITS RUN CONCEALED IN WALLS OR FLOOR SLABS SHALL BE CUT OFF FLUSH WITH SURFACE AND ABANDONED. VOIDS IN WALLS OR FLOOR SLABS LEFT BY THE REMOVAL OF ELECTRICAL EQUIPMENT OR CONDUITS SHALL BE FILLED WITH NON-SHRINK GROUT AND FINISHED TO MATCH EXISTING ADJACENT SURFACES

GENERAL NOTES

A. WIRING SHALL BE IN CONDUIT. MINIMUM SIZE ONE-HALF (1/2) INCH WITH LARGER SIZES AS INDICATED OR REQUIRED BY NEC.
B. WIRE AND CABLE SHALL BE #12 AWG MINIMUM.
C. FOR PURPOSES OF MOUNTING ELECTRICAL EQUIPMENT OR DEVICES IN AREAS WITH RAISED FLOORING, OR RAISED PLATFORMS, THE TOP OF THE RAISED FLOOR SURFACE SHALL BE CONSIDERED THE FINISHED FLOOR LEVEL.
D. OPENINGS CREATED IN A FIRE OR SMOKE RATED WALL OR FLOOR BY PROVISION OF ANY ELECTRICAL DEVICE OR CONDUIT, SHALL BE SEALED AFTER THE WORK IS COMPLETED WITH A UL APPROVED FIRE/SMOKE SEALANT APPROPRIATE TO RE-ESTABLISH THE PREVIOUS RATING OF THE WALL OR FLOOR. SEE ARCHITECTURAL PLANS FOR FIRE RATED WALLS/FLOORS AND THEIR RATING.
E. COORDINATE EXACT LOCATION OF CEILING MOUNTED LIGHTING FIXTURES AND SPEAKERS WITH ARCHITECTURAL REFLECTED CEILING PLANS, SEE SHEET XXXXX.

NOTES TO DESIGNERS

THIS DRAWING IS PROVIDED AS A TEMPLATE TO STORE OUR STANDARD ELECTRICAL ABBREVIATIONS, SYMBOLS AND LEGENDS FOR EASY USE AND REFERENCE. THE DESIGNER SHOULD CONSIDER THE FOLLOWING IN USING THIS DOCUMENT FOR A SPECIFIC PROJECT:

- SPECIFIC LEGENDS CAN BE RETAINED ON THIS SHEET OR MOVED TO APPROPRIATE DRAWINGS SUCH AS SITE PLANS AT THE DISCRETION OF THE DESIGNER.
- LEGENDS SHOULD BE EDITED FOR JOB SPECIFIC CONTENT. DELETION OR ADDITION OF LEGEND ELEMENTS IS EXPECTED TO REFLECT THE PROJECT COMPONENTS. IF YOUR PROJECT DOES NOT CONTAIN LIGHTNING PROTECTION, INTRUSION DECTION, ETC. DELETE THESE ITEMS FROM THE LEGEND. IF YOUR PROJECT CONTAINS ELECTRICAL ELEMENTS SUCH AS CEILING FANS THAT ARE NOT CURRENTLY SHOWN THIS INFORMATION SHOULD BE ADDED TO THE LEGEND.
- COORDINATE GRAPHIC SYMBOLS FOR THE REFLECTED CEILING PLAN WITH ARCHITECTURE.

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SHEET

ELECTRICAL LEGEND

E-001

DESIGN: Designer
DRAWN: Author
REVIEW: Checker

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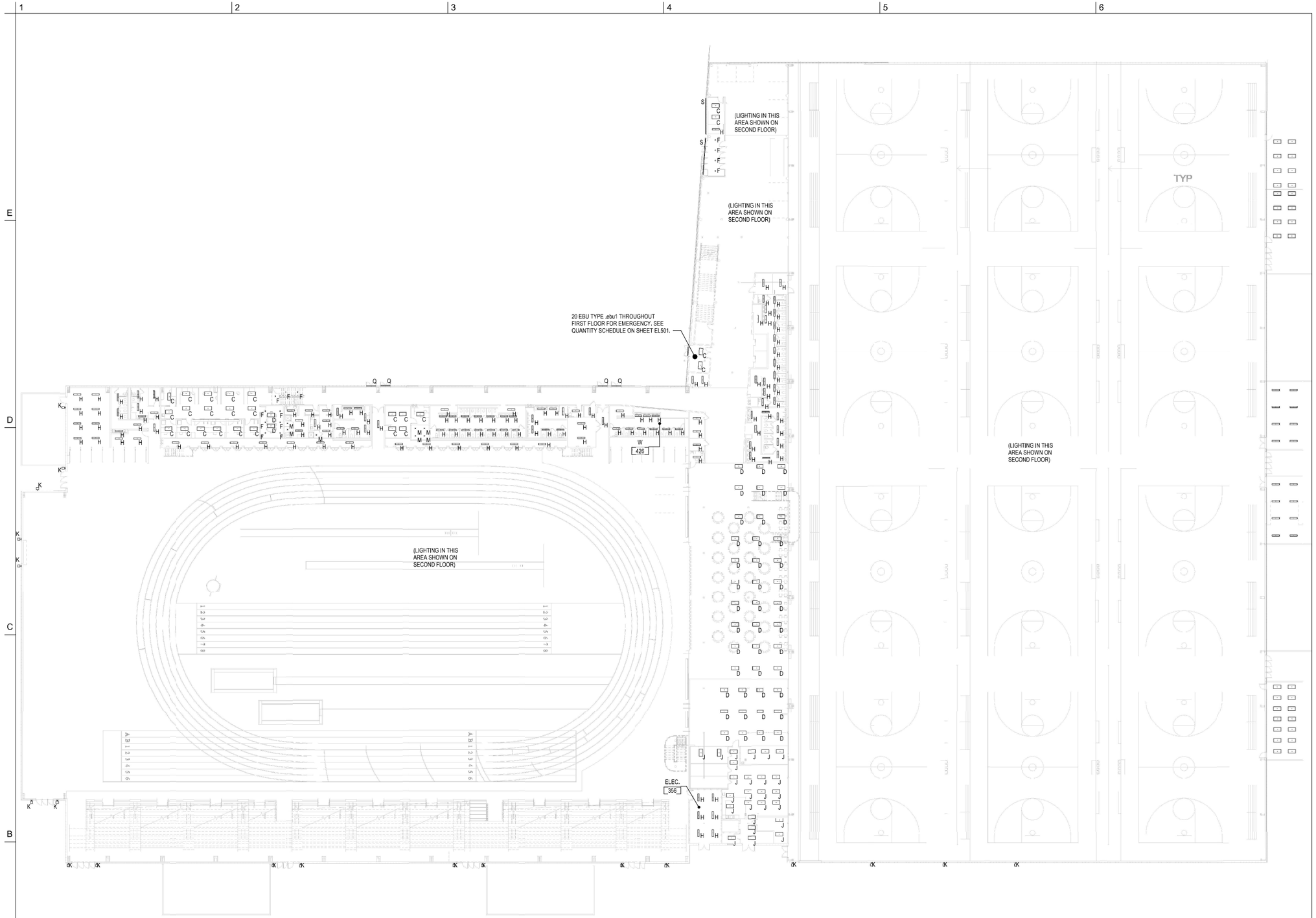

LIGHTING PLAN - FIRST FLOOR

1" = 20'-0"

1" = 20' 0 10' 20' 40' 80'

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LIGHTING PLAN - FIRST FLOOR

EL101

DESIGN: Designer
DRAWN: Author
REVIEW: Checker

CN Project Number

LIGHTING PLAN - SECOND FLOOR

1" = 20'-0"

1" = 20' 0 10' 20' 40' 80'

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LIGHTING PLAN - SECOND FLOOR

EL102

DESIGN: Designer
DRAWN: Author
REVIEW: Checker

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LIGHTING FIXTURE SCHEDULE

TYPE	MANUFACTURER	MODEL NO.	LAMPS TYPE	VOLTAGE	MOUNTING	NOTES
A	Columbia	LLHV4-40U-WST-EU-CA	LED	277 V	SURFACE	HI-BAY FOR BASKETBALL (44,000 LUMENS) - 75FC
B	Lumax	HBRLED-629L-4K-48-9-CA	LED	277 V	SURFACE	HI-BAY FOR TRACK (60,000 LUMENS) - 125FC
C	Columbia	CFP24-5540	LED	277 V		2x4 LED PANEL (BACK OF HOUSE)
D	Columbia	LCAT24-40-MLG-EDU	LED	277 V		2x4 LED TROFFER (PUBLIC SPACES WITH ACT CEILINGS)
E	Columbia	LWS-40ML-W-EDU-SFA	LED	277 V	LOW-BAY PENDANT	LED LOW-BAY (MEZZANINE) (12,000 LUMENS)
EBU1	LightArms	QLXN500RN Self-Powered, Red	LED	277 V	WALL MOUNT	EXIT SIGN
EBU2	Dual-Lite	EV2R-2L	LED	277 V	WALL MOUNT	HIGH OUTPUT EBU - CENTRAL CORE AREA
F	Vantage	A6VOCLED-2-20-40K-C600-SGC-MD-WH T-SDM-NCF	LED	277 V		6" RECESSED DOWNLIGHT
G	Hubbell	SAV-LX-40-8-WA16-U-CDL	LED	277 V		HIGH OUTPUT PENDANTS - LOBBY/ACTIVITY ZONE
H	Columbia	CSL4-4040	LED	277 V		LED STRIP LIGHT - UTILITY SPACES/RESTROOMS
J	Columbia	LLT24-40VLG-FAA19F-EDU-G3	LED	277 V		2x4 RECESSED KITCHEN/SERVERY LED FIXTURES
K				277 V		
M	Prescolite	6LBP-15L-40K-WH	LED	277 V		WET RATED RECESSED SHOWER LIGHT
Q				277 V		
S				277 V		

NOTE:
1. EMERGENCY FOR SPACES OTHER THAN TRACK AREA AND BASKETBALL AREA TYPE ,ebu1, QUANTITY (40).

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SHEET

LIGHTING FIXTURE SCHEDULE

EL501

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POWER PLAN - FIRST FLOOR

1" = 20'-0"

1" = 20' 0 10' 20' 40' 80'

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POWER PLAN - FIRST FLOOR

EP101

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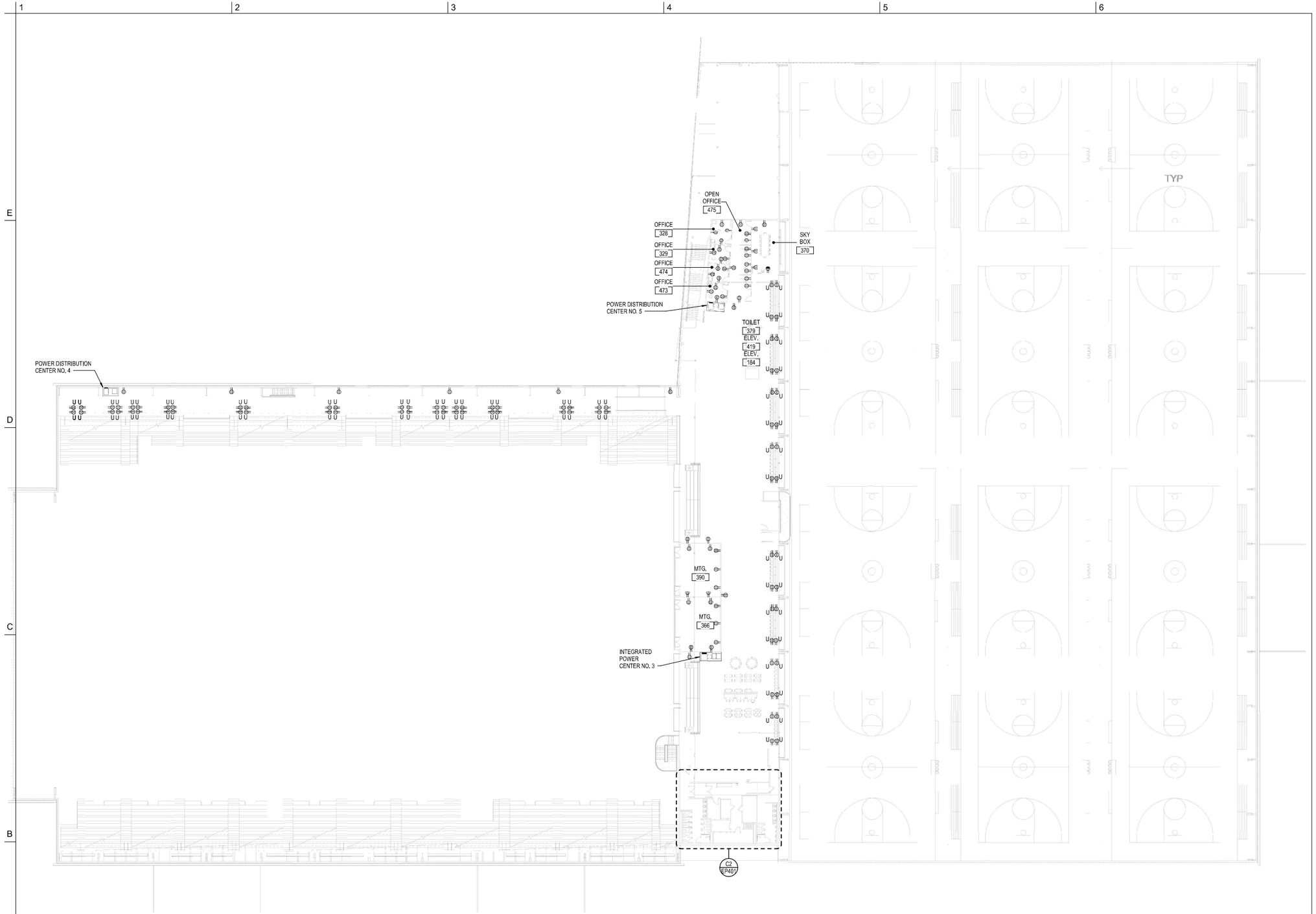

POWER PLAN - SECOND FLOOR

1" = 20'-0"

1" = 20' 0 10" 20' 40' 80'

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POWER PLAN - SECOND FLOOR

EP102

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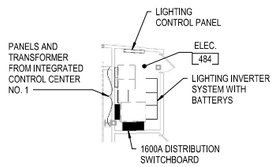
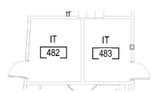
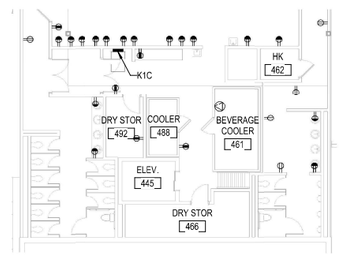


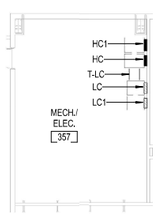
E1 ELECTRICAL ROOM 484
1" = 10'-0"



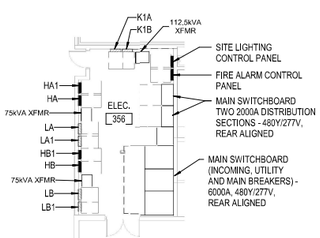
D1 TELECOM ROOMS 482 AND 483
1" = 10'-0"



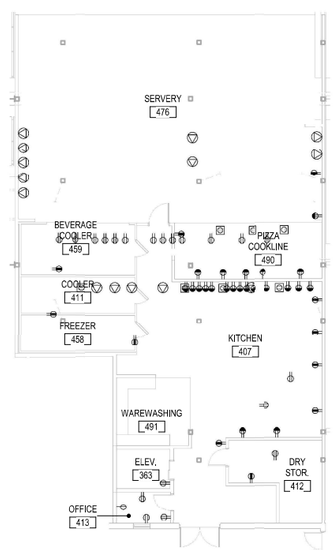
C2 SECOND FLOOR KITCHEN AREA
1" = 10'-0"



MECHANICAL AND ELECTRICAL ROOM 357
B1 1" = 10'-0"



A1 MAIN ELECTRICAL ROOM 356
1" = 10'-0"



A2 FIRST FLOOR KITCHEN AREA
1" = 10'-0"

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SEALS

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Issue Date

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REVISIONS

Date 5/25/2018

SHEET

POWER ENLARGED PLANS

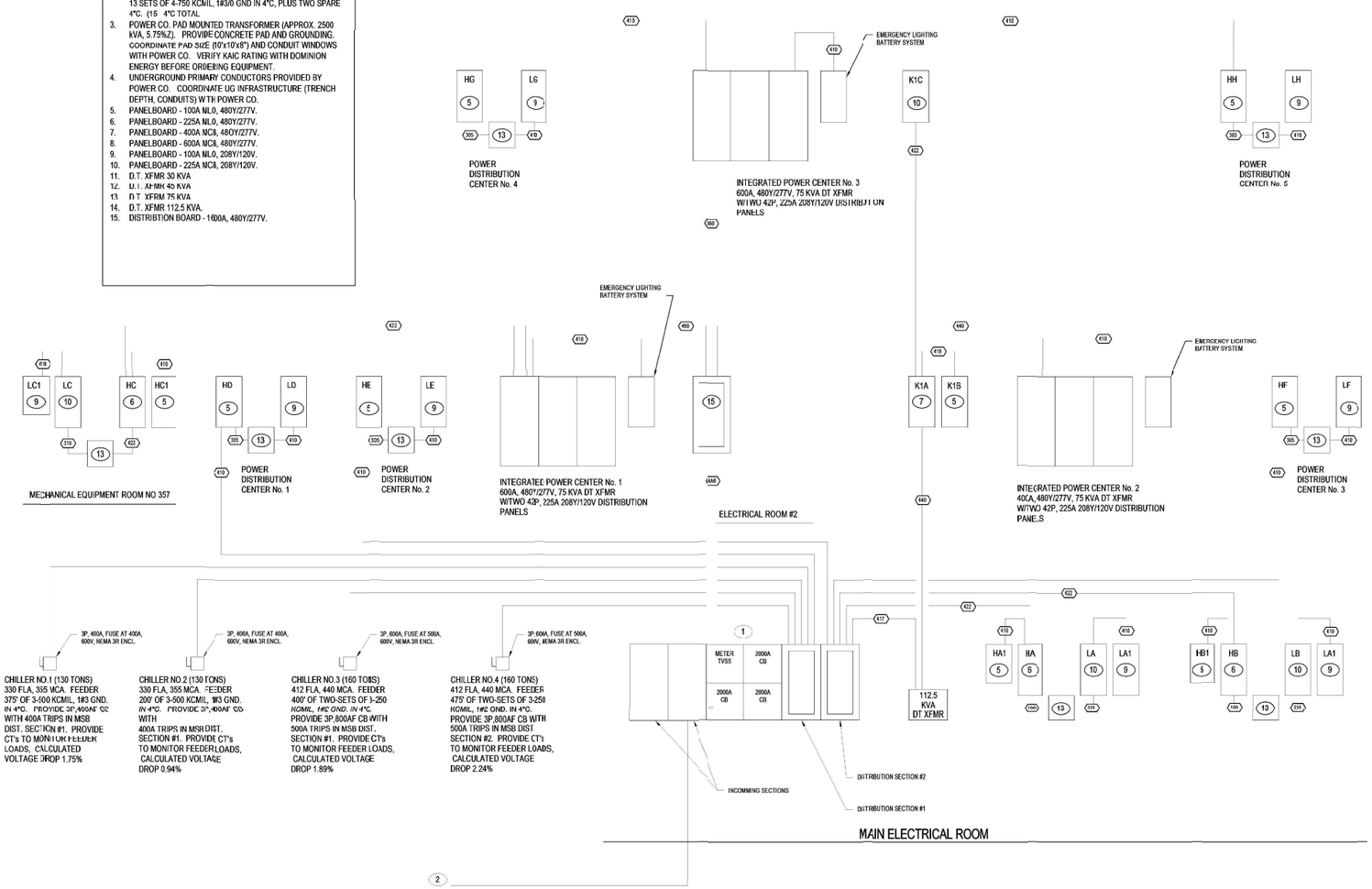
EP401

DESIGN: Designer
DRAWN: Author
REVIEW: Checker

CN Project Number

GENERAL NOTES

1. MAIN SWITCHBOARD MS3 - TWO INCOMING SECTIONS, TWO MAIN BREAKER SECTIONS WITH THREE 2000A MAIN CIRCUIT BREAKERS AND A UTILITY/CT COMPARTMENT - 6000A, 480Y/277V, 3 PHASE, 4 WIRE, 65 KAIC, SOLID NEUTRAL, INTEGRAL SURGE PROTECTION DEVICE, 4" CONCRETE HOUSEKEEPING PAD.
2. SERVICE LATERAL - 6000A BY DOMINION ENERGY. ASSUME 13 SETS OF 4-750 KCMIL, 1#3/0 GND IN 4"C, PLUS TWO SPARE 4"C. (15 4"C TOTAL
3. POWER CO. PAD MOUNTED TRANSFORMER (APPROX. 2500 KVA, 5.75%Z). PROVIDE CONCRETE PAD AND GROUNDING. COORDINATE PAD SIZE (10'x10'x8") AND CONDUIT WINDOWS WITH POWER CO. VERIFY KAIC RATING WITH DOMINION ENERGY BEFORE ORDERING EQUIPMENT.
4. UNDERGROUND PRIMARY CONDUCTORS PROVIDED BY POWER CO. COORDINATE UG INFRASTRUCTURE (TRENCH DEPTH, CONDUITS) WITH POWER CO.
5. PANELBOARD - 100A MLO, 480Y/277V.
6. PANELBOARD - 225A MLO, 480Y/277V.
7. PANELBOARD - 400A MCB, 480Y/277V.
8. PANELBOARD - 600A MCB, 480Y/277V.
9. PANELBOARD - 100A MLO, 208Y/120V.
10. PANELBOARD - 225A MCB, 208Y/120V.
11. D.T. XFMR 30 KVA
12. D.T. XFMR 45 KVA
13. D.T. XFMR 75 KVA
14. D.T. XFMR 112.5 KVA.
15. DISTRIBUTION BOARD - 1600A, 480Y/277V.



3PH 3W FEEDER SCHEDULE

FEEDER DESIG.	PHASE QTY.	PHASE SIZE	NEUTRAL QTY.	NEUTRAL SIZE	GROUND SIZE	CONDUIT SETS	CONDUIT SIZE	NOTES
302	3	12	-	-	12	1	1/2"	
303	3	10	-	-	10	1	1/2"	
304	3	8	-	-	10	1	3/4"	
305	3	8	-	-	10	1	3/4"	
306	3	6	-	-	10	1	3/4"	
307	3	6	-	-	8	1	3/4"	
308	3	4	-	-	8	1	1"	
309	3	4	-	-	8	1	1"	
310	3	2	-	-	8	1	1.25"	
312	3	1	-	-	6	1	1.25"	
315	3	1/0	-	-	6	1	1.5"	
317	3	2/0	-	-	6	1	1.5"	
320	3	3/0	-	-	6	1	2"	
322	3	4/0	-	-	4	1	2"	
325	3	250	-	-	4	1	2"	
330	3	300	-	-	4	1	2.5"	
335	3	400	-	-	3	1	2.5"	
340	3	500	-	-	3	1	3"	
341	3	3/0	-	-	3	2	2"	
350	3	250	-	-	2	2	2"	
360	3	350	-	-	1	2	2.5"	
380	3	500	-	-	1/0	2	3"	
381	3	300	-	-	1/0	3	2.5"	
390	3	350	-	-	2/0	3	2.5"	
3A0	3	350	-	-	2/0	4	2.5"	
3A2	3	350	-	-	3/0	4	2.5"	
3A6	3	500	-	-	4/0	5	3"	
3B0	3	500	-	-	250	6	3"	
3B5	3	750	-	-	350	6	3.5"	
3C0	3	750	-	-	400	7	3.5"	
3D0	3	750	-	-	500	9	3.5"	
3L0	3	750	-	-	750	11	4"	
3	3							
3	3							

3PH 4W FEEDER SCHEDULE

FEEDER DESIG.	PHASE QTY.	PHASE SIZE	NEUTRAL QTY.	NEUTRAL SIZE	GROUND SIZE	CONDUIT SETS	CONDUIT SIZE	NOTES
402	3	12	1	12	12	1	1/2"	
403	3	10	1	10	10	1	1/2"	
404	3	8	1	8	10	1	3/4"	
405	3	8	1	8	10	1	3/4"	
406	3	6	1	6	10	1	1"	
407	3	6	1	6	8	1	1"	
409	3	4	1	4	8	1	1.25"	
410	3	2	1	2	8	1	1.25"	
412	3	1	1	1	6	1	1.5"	
415	3	1/0	1	1/0	6	1	1.5"	
417	3	2/0	1	2/0	6	1	2"	
420	3	3/0	1	3/0	6	1	2"	
422	3	4/0	1	4/0	4	1	2.5"	
425	3	250	1	250	4	1	2.5"	
430	3	300	1	300	4	1	3"	
435	3	400	1	400	3	1	3"	
440	3	500	1	500	3	1	3.5"	
441	3	3/0	1	3/0	3	2	2"	
450	3	250	1	250	2	2	2.5"	
460	3	350	1	350	1	2	3"	
480	3	500	1	500	1/0	2	3.5"	
481	3	300	1	300	1/0	3	2.5"	
490	3	350	1	350	2/0	3	3"	
4A0	3	250	1	250	2/0	4	2.5"	
4A2	3	350	1	350	3/0	4	3"	
4A6	3	500	1	500	4/0	5	3.5"	
4B0	3	500	1	500	250	6	3.5"	
4B4	3	500	1	500	250	7	3.5"	
4C0	3	750	1	750	400	7	4"	
4D0	3	750	1	750	500	9	4"	
4F0	3	750	1	750	700	11	4"	
4F0	3	750	1	750	800	13	4"	
X	3							
X	3							
X	3							

CITY OF VIRGINIA BEACH

VIRGINIA BEACH SPORTS CENTER

Enter address here

DESIGNER

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SEALS

SUBMITTAL

Issue Date

Project Status

REVISIONS

Date 5/25/2018

SHEET

POWER RISER DIAGRAM

EP501

DESIGN: Designer
DRAWN: Author
REVIEW: Checker

CN Project Number

5/25/2018 11:36:48 AM
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