LIST OF DRAWINGS

Dwg No.	Drawing Title
G-001	COVER SHEET
G-002	GENERAL NOTES, SYMBOLS AND MAPS
C-001	CIVIL LEGEND, NOTES AND ABBREVIATIONS
CX101	SITE EXISTING CONDITIONS AND REMOVALS PLAN
CS101	SITE AND UTILITIES PLAN
CG101	GRADING, DRAINAGE AND EROSION CONTROL PLAN
C-501	EROSION AND SEDIMENT CONTROL NOTES AND DETAILS
C-502	SITE DETAILS 1
C-503	SITE DETAILS 2

NEW HAMPSHIRE AIR NATIONAL GUARD
NEWINGTON, NEW HAMPSHIRE
SZCQ212251
CONSTRUCT APRON SHOULDER PAVEMENT
24-MAY-2022
TYPE B-3 FINAL SUBMISSION

OAK POINT ASSOCIATES
85 MIDDLE STREET,
PORTSMOUTH, NEW HAMPSHIRE
TEL 603-431-4849 FAX 603-431-1870

ABI's

Group No.	Item No.	Description
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BID OPTIONS

Group No.	Item No.	Description
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BASIS OF DESIGN - SIGNATURES

Approved By:

BASE COMMANDER:		
Col John W. Pogorek	157 ARW	(signature / date)
BASE CIVIL ENGINEER:		
Maj Autumn Ricker	157 CES	(signature / date)
ENVIRONMENTAL MANAGER:		
Mr. Matthew C. Casey	157 CEIM	(signature / date)
FIRE PREVENTION:		
Capt Jonathan Burpee	157 CEF	(signature / date)
ANTI-TERRORISM:		
TSgt Matthew S. Schultz	157 SFS	(signature / date)
BIO-ENVIRONMENTAI:		
MSgt Marc R. Fillion	157 MDG	(signature / date)
SAFETY OFFICER:		
SMSgt Frank J. Perry	157 SE	(signature / date)
INFORMATION PROTECTION:		
SSgt David C. White	157 OG	(signature / date)
REAL PROPERTY MANAGER:		
Maj Autumn Ricker	157 CES	(signature / date)
BASE FACILITY MANAGER:		
MSgt Ian Harper	157 CES	(signature / date)
RESOURCE PROTECTION:		
MSgt Kristopher I. Mauchly	157 SFS	(signature / date)
ELECTRONIC SECURITY SYSTEM:		
MSgt Kristopher I. Mauchly	157 SFS	(signature / date)
COMMUNICATIONS:		
MSgt Derek M. Cote	157 CF	(signature / date)
CONTRACTING OFFICER:		
Mr. Scott Ballweg	NHNG-JCO	(signature / date)
STATE MAINTENANCE SUPERVISOR:		
Mr. Russell G. Bellottie	157 CES	(signature / date)

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STATE OF NEW HAMPSHIRE
DANIEL A. PHILIPPS
No. 12857
LICENSED
PROFESSIONAL ENGINEER
5-27-22

PLACE STAMP HERE

DESCRIPTION	DATE

REVISIONS

PROJECT

NO. SZCQ212251

NAME: CONSTRUCT APRON SHOULDER PAVEMENT

FACILITY: PEASE ANGB

DRAWING

TITLE: COVER SHEET

DATE	DR BY:
05-24-22	DAP
SCALE: AS NOTED	CHKD BY: JLG

NO. G-001

SHEET NO. 1 OF 9

CAD FILE NO. 21906.19-G-001

23 May, 2022 - 3:29pm
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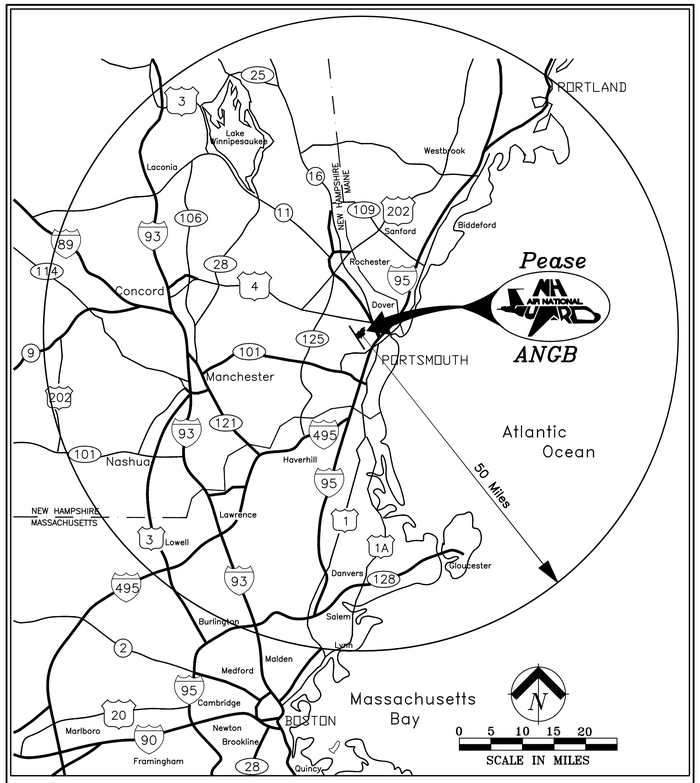
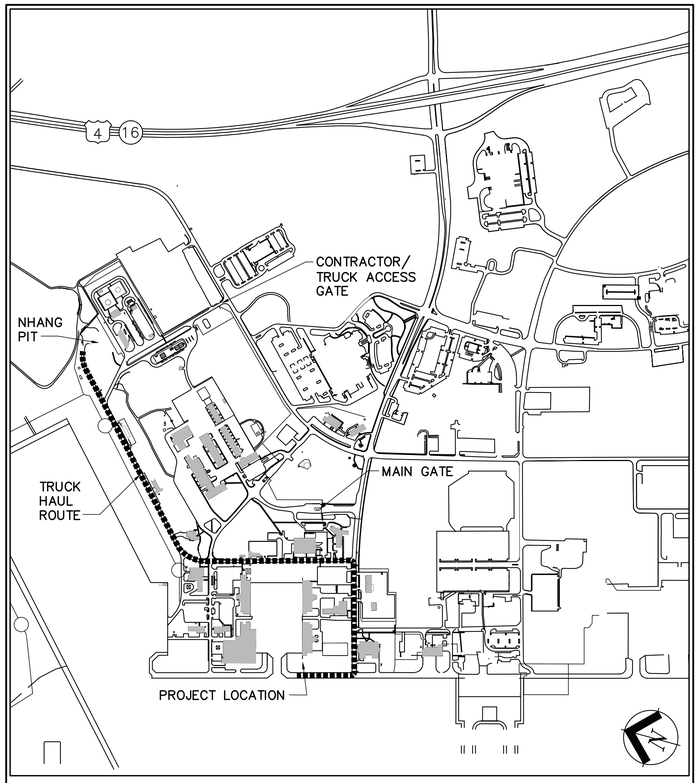


AREA MAP

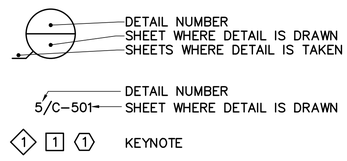


LOCATION MAP – NOT TO SCALE

GENERAL CONSTRUCTION NOTES

1. WORK INCLUDED IN THIS CONTRACT SHALL CONFORM TO IBC, STATE, NATIONAL AND OTHER CODES AND ORDINANCES WHICH APPLY TO THIS PROJECT.
2. ITEMS AND COMPONENTS SHOWN ON THE DRAWINGS SHALL BE PROVIDED BY THE CONTRACTOR UNLESS NOTED AS EXISTING.
3. WORK SHALL BE COMPLETED IN COMPLIANCE WITH INDUSTRY STANDARDS AND PERFORMED IN A WORKMANLIKE PROFESSIONAL MANNER.
4. COORDINATE WITH THE CONTRACTING OFFICER'S REPRESENTATIVE FOR EXISTING GOVERNMENT EQUIPMENT TO BE REMOVED AND RELOCATED.
5. WORK FROM GIVEN DIMENSIONS AND LARGE SCALE DETAILS. DO NOT SCALE DRAWINGS.
6. VERIFY EXISTING CONDITIONS AND DIMENSIONS AND REPORT DISCREPANCIES TO THE CONTRACTING OFFICER'S REPRESENTATIVE. PROCEED WITH THE WORK AFTER THE DISCREPANCIES HAVE BEEN RESOLVED BY THE GOVERNMENT.
7. AT ALL TIMES DURING THE CONSTRUCTION, MAINTAIN CONSTRUCTION SITE IN A NEAT, CLEAN AND SAFE MANNER, PAYING PARTICULAR ATTENTION TO CONTROLLING SMALL, LOOSE DEBRIS THAT MIGHT BE BLOWN AWAY BY THE WIND OR TRACKED IN TIRE TREADS AND CAUSE FOREIGN OBJECT DAMAGE (FOD) TO THE AIRCRAFT. THE COST OF REPAIRING SUCH DAMAGE TO AIRCRAFT WILL BE CHARGED TO THE CONTRACTOR.
8. OBTAIN PERMITS THAT ARE REQUIRED FOR THE SATISFACTORY COMPLETION OF THE WORK. COMPLY WITH PERMIT APPROVAL CONDITIONS.
9. DISPOSE OF AND/OR RECYCLE CONSTRUCTION DEBRIS FROM THE PROJECT SITE AS REQUIRED BY THE STATE OF NEW HAMPSHIRE AND AS REQUIRED BY THE CONTRACT. OBTAIN DISPOSAL PERMITS THAT ARE REQUIRED.
10. CARE SHALL BE TAKEN TO PROTECT EXISTING SYSTEMS AND SURFACES TO REMAIN. DAMAGE RESULTING FROM THE CONTRACTOR'S OPERATIONS SHALL BE REPAIRED OR REPLACED AS APPROVED BY THE CONTRACTING OFFICER AT NO ADDITIONAL COST TO THE GOVERNMENT.
11. NOTIFY THE CONTRACTING OFFICER A MINIMUM OF 48 HOURS PRIOR TO INTERRUPTING UTILITY SERVICE'S.

SYMBOLS



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STATE OF NEW HAMPSHIRE
DANIEL A. PHILLIPS
No. 12857
LICENSED PROFESSIONAL ENGINEER
05-27-22

PLACE STAMP HERE

DESCRIPTION	DATE

REVISIONS

PROJECT

NO. SZCQ212251

NAME:
CONSTRUCT APRON SHOULDER PAVEMENT

FACILITY:
PEASE ANGB

DRAWING

TITLE:
GENERAL NOTES, SYMBOLS AND MAPS

DATE	DR BY:
05-24-22	DAP
SCALE: AS NOTED	CHKD BY: JLG

NO. G-002

SHEET NO. 2 OF 9

CAD FILE NO. 21906.19-G-002

11 May, 2022 – 4:07pm
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CIVIL LEGEND

- EXISTING BUILDING
- EEOP — EXISTING EDGE OF PAVEMENT
- EEOC — EXISTING EDGE OF CONCRETE
- EDYL — EXISTING DOUBLE YELLOW LINE
- ESWL — EXISTING SINGLE WHITE LINE
- 90 — EXISTING GRADE CONTOUR LINE
- 90.00'E — EXISTING GRADE SPOT ELEVATION
- ESD(15") — EXISTING STORM DRAIN LINE
- EUTC — EXISTING UNDERGROUND COMMUNICATIONS
- EW(6") — EXISTING WATER LINE
- EGT — EXISTING GEOTHERMAL LINE
- EUE — EXISTING UNDERGROUND ELECTRIC
- EUE(NF) — EXISTING UNDERGROUND ELECTRIC FROM RECORD DRAWINGS (NOT FOUND)
- EUE(ABAN) — EXISTING ABANDONED UNDERGROUND ELECTRIC
- EU(UNKN) — EXISTING UNKNOWN UNDERGROUND UTILITY LINE
- ETMH Ⓣ — EXISTING COMMUNICATIONS MANHOLE
- Ⓔ — EXISTING ELECTRIC HANDHOLE
- EXISTING FIRE HYDRANT
- WV — EXISTING WATER VALVE
- EXISTING POST INDICATING VALVE
- Ⓦ — EXISTING GEOTHERMAL WELL
- EDMH Ⓓ — EXISTING DRAIN MANHOLE
- EXISTING FLARED END SECTION
- EXISTING LIGHT POLE
- EXISTING PIPE BOLLARD
- EXISTING SURVEY CONTROL POINT
- EXISTING EVERGREEN TREE

- EOP — EDGE OF PAVEMENT
- SAWCUT PAVEMENT
- W(6") — WATER LINE
- SD(15") — STORM DRAIN LINE
- UD(4") — UNDERDRAIN
- 90 — FINISH GRADE CONTOUR LINE
- 90.00'F — FINISH GRADE SPOT ELEVATION
- CATCH BASIN
- FIRE HYDRANT
- WV — WATER VALVE
- JOINT RESTRAINT
- BOLLARD
- LOW PROFILE BARRIER
- CFS — COMPOST FILTER SOCK
- CATCH BASIN INLET PROTECTION

CIVIL NOTES

1. EXISTING CONDITIONS ARE BASED ON TOPOGRAPHIC SURVEY AND UTILITY LOCATION PAINT MARKS COMPLETED BY DOUCET SURVEY ON OCTOBER 14, 2021, AND RECORD DRAWINGS. HORIZONTAL DATUM: US STATE PLANE COORDINATE SYSTEM, NORTH AMERICAN DATUM OF 1983 (NAD83)/CORS96 COORDINATE SYSTEM, NEW HAMPSHIRE 2800 ZONE. VERTICAL DATUM: NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD88).
2. THE LOCATION OF UNDERGROUND UTILITIES ARE BASED ON RECORD DRAWINGS AND UTILITY PAINT MARKS COMPLETED BY DOUCET SURVEY ON OCTOBER 14, 2021 AND ARE APPROXIMATE. PROVIDE THE SERVICES OF A PRIVATE UTILITY LOCATING COMPANY TO POSITIVELY IDENTIFY THE LOCATION OF UNDERGROUND UTILITIES IN THE WORK AREA. ESTABLISH THE EXACT LOCATION BY DIRECT OR INDIRECT (ELECTRONIC, MAGNETIC, GPR) MEANS. RECORD THE RESULTS OF THE UTILITY MAPPING ON CIVIL DRAWINGS, HIGHLIGHT CHANGES OR CONFLICTS AND REPORT FINDINGS TO THE CONTRACTING OFFICER'S REPRESENTATIVE (COR). STAKE OR PAINT THE LIMITS OF CONSTRUCTION AND UTILITY LOCATIONS IN ACCORDANCE WITH DIG SAFE STANDARDS AND REQUIREMENTS AND MAINTAIN THE UTILITY LOCATION PAINT MARKS THROUGHOUT CONSTRUCTION. CONTACT THE PEASE 157TH CIVIL ENGINEERING SQUADRON (CES) AT LEAST 10 WORKING DAYS PRIOR TO ANY EXCAVATION AND COMPLETE FORM AF103, "WORK CLEARANCE REQUEST." IN ADDITION, CONTACT "DIGSAFE" AT 1-888-344-7233 AND OBTAIN A "DIGSAFE" PERMIT PRIOR TO EXCAVATION.
3. PHYSICALLY VERIFY UNDERGROUND UTILITY LOCATIONS, INCLUDING UTILITY DEPTH, BY HAND DIGGING USING WOOD OR FIBERGLASS HANDLED TOOLS WHEN ADJACENT CONSTRUCTION WORK IS EXPECTED TO COME WITHIN THREE FEET OF THE UNDERGROUND SYSTEM. PROVIDE HAND DIGGING WITHIN 2 FEET OF A KNOWN UTILITY; USE OF MECHANICAL EQUIPMENT IS NOT ALLOWED.
4. VERIFY EXISTING CONDITIONS AND DIMENSIONS, AND REPORT ANY DISCREPANCIES TO THE COR. PROCEED WITH THE WORK ONLY AFTER THE DISCREPANCY(IES) HAS(HAVE) BEEN RESOLVED BY THE COR.
5. PROTECT EXISTING SYSTEMS AND SURFACES TO REMAIN. REPAIR OR REPLACE DAMAGE RESULTING FROM THE CONTRACTOR'S OPERATIONS AS APPROVED BY THE COR AT NO ADDITIONAL COST TO THE GOVERNMENT.
6. ELEVATIONS AND DIMENSIONS GIVEN ON CIVIL DRAWINGS ARE IN DECIMAL FEET UNLESS OTHERWISE NOTED.
7. GIVEN DIMENSIONS ARE FROM FACE OF CURB, FACE OF WALL, FACE OF BUILDING AND CENTERLINE OF MARKINGS UNLESS INDICATED OR NOTED OTHERWISE.
8. THE PROJECT SHALL MEET THE REQUIREMENTS AND INTENT OF NEW HAMPSHIRE INVASIVE SPECIES REGULATIONS (RSA 430:53 AND AGR 3800).
9. THE TAXIWAY MUST REMAIN IN USE BY AIRCRAFT TO THE MAXIMUM EXTENT POSSIBLE WITHOUT COMPROMISING SAFETY. COORDINATE AND GAIN APPROVAL FROM THE COR FOR PLAN OF CONSTRUCTION SEQUENCING, LOGISTICS AND OPERATIONS.
10. RECORD INFORMATION INDICATES THAT SUBSURFACE CONDITIONS CONSIST OF VARYING DEPTHS OF FILL MATERIALS (SAND AND GRAVEL) BENEATH PAVEMENT AND TOPSOIL.
11. FOR DEWATERING WORK, EXCAVATION, AND OTHER ASPECTS OF THIS PROJECT, PLAN UNDER THE ASSUMPTION THAT GROUNDWATER WILL BE ENCOUNTERED AT 10.0 FEET BELOW THE SURFACE ELEVATION AND BEDROCK WILL NOT BE ENCOUNTERED.
12. COMPLETE A TEST PIT AS DIRECTED BY THE COR PRIOR TO THE START OF CONSTRUCTION TO VERIFY THE DEPTH TO GROUNDWATER AND TO OBTAIN SAMPLES OF THE GROUNDWATER. SUBMIT THE SAMPLES TO AN APPROVED LABORATORY FOR TESTING OF CONTAMINANTS IDENTIFIED IN NHDES ENV-OR 600. RECORD THE RESULTS OF THE TEST PIT AND SUBMIT THE RESULTS TO THE COR. GROUNDWATER GENERATED WITH ANY CONTAMINANTS EXCEEDING NHDES AMBIENT GROUNDWATER QUALITY STANDARDS MUST BE TREATED AND DISPOSED OF ON-SITE IN ACCORDANCE WITH NHDES ENV-OR 600.
13. PEASE ANGB IS LOCATED ON A KNOWN PFAS IMPACTED AQUIFER WITH HISTORICALLY HIGH LEVELS OF PFOA AND PFOS. PLAN UNDER THE ASSUMPTION THAT GROUNDWATER ENCOUNTERED DURING CONSTRUCTION WILL CONTAIN CONCENTRATIONS OF PFAS GREATER THAN THE AMBIENT LEVEL IDENTIFIED IN ENV-OR 600 AND MUST BE TREATED AND DISPOSED OF ON-SITE.
14. OBTAIN A TEMPORARY GROUNDWATER DISCHARGE PERMIT FROM NHDES TO ALLOW FOR TREATMENT AND DISPOSAL OF GROUNDWATER.
15. EXCESS EXCAVATED SOILS MAY BE DISPOSED OF AT THE NHANG ON-BASE PIT AS APPROVED BY THE COR. SOILS DISPOSED OF AT THE ON-BASE PIT MUST MEET NHDES SOIL REMEDIATION STANDARDS (ENV-OR 600) FOR TESTING. ANALYTICAL SOIL TESTING MUST BE COMPLETED BASED ON THE QUANTITY OF SOIL BEING REMOVED FROM THE SITE. THE GOVERNMENT HAS COMPLETED EIGHT INITIAL TEST PITS AND OBTAINED ANALYTICAL TESTS. THE CONTRACTOR WILL BE RESPONSIBLE FOR COMPLETING THE REMAINING TEST PITS, RETRIEVE SAMPLES, AND OBTAIN ANALYTICAL TEST RESULTS BASED ON THE QUANTITY OF SOIL MATERIALS THAT WILL NEED TO BE REMOVED FROM THE SITE. PROVIDE THE TEST RESULTS TO THE COR FOR REPORTING TO NHDES. COORDINATE TEST PIT AND TESTING REQUIREMENTS WITH THE COR. RESULTS FROM THE INITIAL TEST PITS PERFORMED BY THE GOVERNMENT INDICATED THAT SEVERAL CONTAMINANTS WERE FOUND THAT EXCEEDED THE NHDES SOIL REMEDIATION STANDARDS INCLUDING ARSENIC, BENZO(A) ANTHRACENE, BENZO (1) PYRENE, BENZO(B) FLOURANTHENE AND IDENO (1,2,3-CD) PYRENE.
16. CONTRACTOR'S WHO WILL BE DRIVING ON FLIGHT LINE ROAD MUST COMPLETE AIRFIELD DRIVING CLASS. DURATION OF CLASS IS APPROXIMATELY 60 MINUTES AND MUST BE COMPLETED PRIOR TO COMMENCING WORK.

CIVIL ABBREVIATIONS

ABAN	ABANDONED
ANGB	AIR NATIONAL GUARD BASE
AASHTO	AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS
ASTM	AMERICAN SOCIETY FOR TESTING AND MATERIALS
AWWA	AMERICAN WATER WORK ASSOCIATION
BMPs	BEST MANAGEMENT PRACTICES
CES	CIVIL ENGINEERING SQUADRON
CONC	CONCRETE
COR	CONTRACTING OFFICER'S REPRESENTATIVE
CY	CUBIC YARD
DI	DUCTILE IRON
DIA	DIAMETER
E	EASTING
ECB	EXISTING CATCH BASIN
ELEV	ELEVATION
EQ	EQUAL
EW	EACH WAY
EXIST	EXISTING
FES	FLARED END SECTION
FFE	FINISH FLOOR ELEVATION
FOD	FORIEGN OBJECT DAMAGE
GAL	GALLON
GPR	GROUND-PENETRATING RADAR
HDPE	HIGH DENSITY POLYETHYLENE
IBC	INTERNATIONAL BUILDING CODE
INV	INVERT
LBS	POUNDS
MAG	MAGNETIC
MAX	MAXIMUM
MIN	MINIMUM OR MINUTE
N	NORTHING
NAD83	NORTH AMERICAN DATUM 1983
NAVD88	NORTH AMERICAN VERTICAL DATUM 1988
NFPA	NATIONAL FIRE PROTECTION ASSOCIATION
NH	NEW HAMPSHIRE
NHANG	NEW HAMPSHIRE AIR NATIONAL GUARD
NHDES	NEW HAMPSHIRE DEPARTMENT OF ENVIRONMENTAL SERVICES
NHDOT	NEW HAMPSHIRE DEPARTMENT OF TRANSPORTATION
NPDES	NATIONL POLLUTION ELIMINATION SYSTEM
NW	NORTHWEST
OC	ON CENTER
OSHA	OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION
PFAS	POLYFLUOROALKYL SUBSTANCES
PFOA	PERFLUOROOCTANONIC ACID
PFOS	PERFLUOROOCTANESULFONIC ACID
PSI	POUNDS PER SQUARE INCH
PVC	POLYVINYL CHLORIDE
RCP	REINFORCED CONCRETE PIPE
SCH	SCHEDULE
SF	SQUARE FOOT
STR	STRUCTURE
SVOC	SEMI VOLATILE ORGANIC COMPOUND
TBM	TEMPORARY BENCH MARK
TYP	TYPICAL
VOC	VOLATILE ORGANIC COMPOUND

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STATE OF NEW HAMPSHIRE DANIEL A. PHILLIPS No. 12857 LICENSED PROFESSIONAL ENGINEER 5-27-22

PLACE STAMP HERE

DESCRIPTION	DATE
REVISIONS	

PROJECT

NO. SZCQ212251

NAME: CONSTRUCT APRON SHOULDER PAVEMENT

FACILITY: PEASE ANGB

DRAWING

TITLE: CIVIL LEGEND, NOTES AND ABBREVIATIONS

DATE	DR BY:
05-24-22	DAP
SCALE: AS NOTED	CHKD BY: JLG

NO. C-001

SHEET NO. 3 OF 9

CAD FILE NO. 21906.19-C-001

16 May, 2022 - 11:53am
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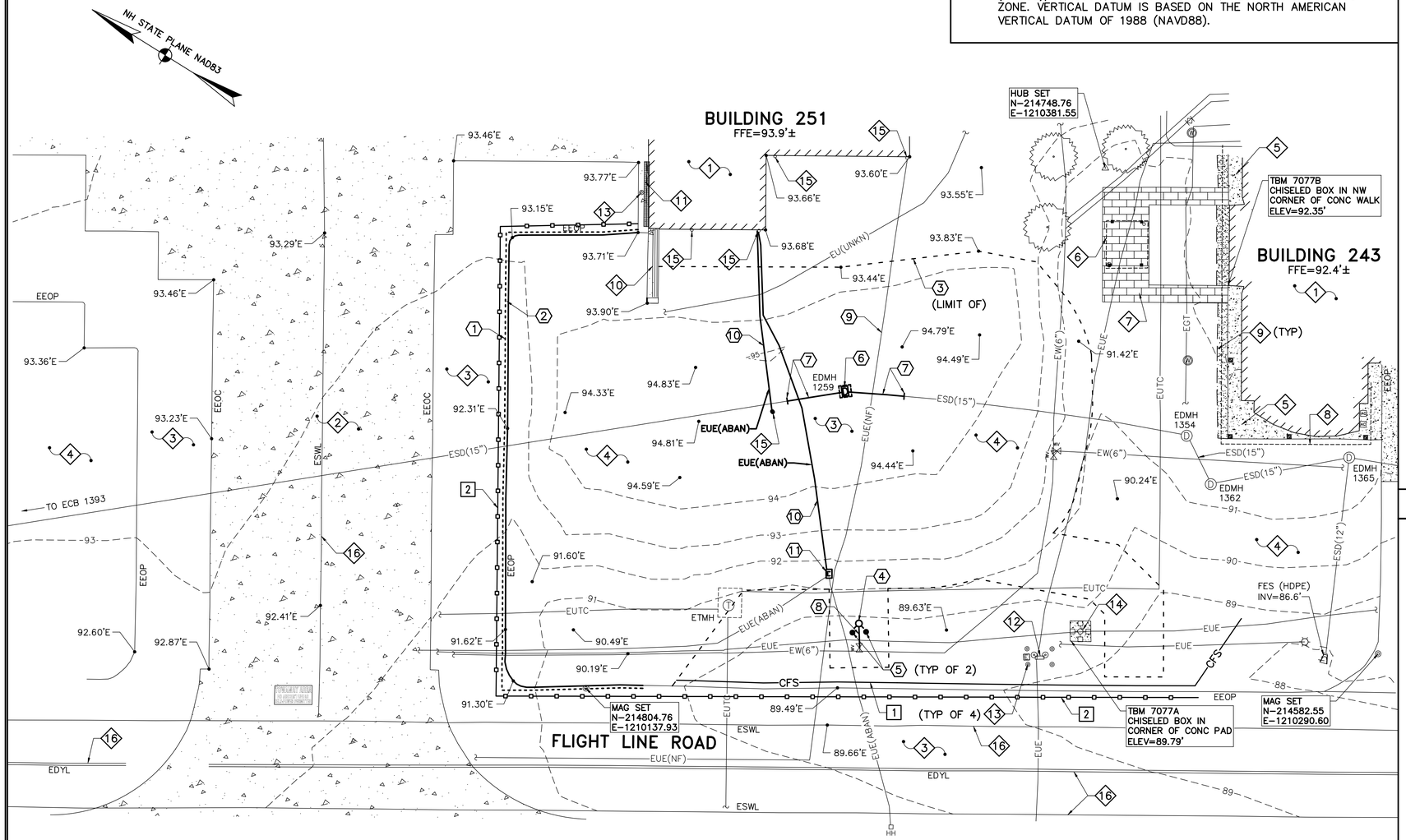
GENERAL SHEET NOTES

1. EXISTING CONDITIONS ARE BASED ON GROUND SURVEY AND UTILITY LOCATION PAINT MARKS COMPLETED BY DOUCET SURVEY ON OCTOBER 14, 2021, AND RECORD DRAWINGS.
2. HORIZONTAL CONTROL IS BASED ON US STATE PLANE COORDINATE SYSTEM, NORTH AMERICAN DATUM OF 1983 (NAD83)/CORS96 COORDINATE SYSTEM, NEW HAMPSHIRE 2800 ZONE. VERTICAL DATUM IS BASED ON THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD88).



1 CX101 **SITE EXISTING CONDITIONS AND REMOVALS PLAN**
SCALE: 1"=20'

EXISTING DRAIN STRUCTURE SCHEDULE

STR	RIM ELEV	INVERT IN	INVERT OUT	NOTES
EDMH 1365	91.4	(1362) 15"HDPE INV=85.6	(1423) 15"RCP INV=85.4	SUMP ELEV=85.0
		(FES) 12"HDPE INV=85.6		
EDMH 1362	91.4	(1365) 15"HDPE INV=85.6	(1354) 15"HDPE INV=85.5	SUMP ELEV=85.2
EDMH 1354	91.4	(1259) 15"RCP INV=85.8	(1362) 15"HDPE INV=85.6	SUMP ELEV=85.3
EDMH 1259	95.2	(1393) 15"RCP INV=86.4	(1354) 15"RCP INV=86.4	SUMP ELEV=86.2
EDMH 1393	92.0		(1354) 15"RCP INV=86.7	SUMP ELEV=86.7

16 May, 2022 – 9:31am
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EXISTING KEYNOTES (THIS SHEET ONLY)

1. EXISTING BUILDING.
2. EXISTING CONCRETE PAVEMENT.
3. EXISTING ASPHALT CONCRETE PAVEMENT.
4. EXISTING GRASS.
5. EXISTING CONCRETE WALK.
6. EXISTING GAZEBO.
7. EXISTING GRANITE PAVERS.
8. EXISTING BUILDING CANOPY.
9. EXISTING STONE DRIP EDGE.
10. EXISTING ABANDONED RAIL FOUNDATION FOR DISCONTINUED HANGER DOOR.
11. EXISTING TRENCH DRAIN.
12. EXISTING ELECTRICAL PANEL ON CONCRETE FOUNDATIONS.
13. EXISTING METAL PIPE BOLLARD WITH CONCRETE FOUNDATION AND PLASTIC COVER.
14. EXISTING AIRCRAFT PARKING APRON LIGHTING ON CONCRETE FOUNDATION.
15. EXISTING CONDUIT RISING ABOVE GRADE.
16. EXISTING PAINTED PAVEMENT MARKING (TYPE AS INDICATED).

REMOVALS KEYNOTES (THIS SHEET ONLY)

1. SAWCUT EXISTING 4"± THICK ASPHALT CONCRETE PAVEMENT.
2. REMOVE EXISTING 4"± THICK ASPHALT CONCRETE PAVEMENT.
3. STRIP AND STOCKPILE TOPSOIL (COORDINATE ON-SITE STORAGE LOCATION WITH COR).
4. REMOVE EXISTING FIRE HYDRANT.
5. REMOVE EXISTING BOLLARD AND FOUNDATION.
6. REMOVE EXISTING DRAINAGE MANHOLE.
7. CUT AND REMOVE PORTION OF EXISTING STORM DRAIN PIPE.
8. CUT, REMOVE AND CAP EXISTING WATER LINE WITH MECHANICAL JOINT END CAP.
9. EUE(NF) SHOWN IS BASED ON RECORD DRAWINGS AND WAS NOT FOUND DURING UTILITY INVESTIGATIONS. VERIFY EXISTENCE OF UTILITY AND REPORT POTENTIAL CONFLICTS TO THE COR. GAIN APPROVAL FROM COR PRIOR TO PROCEEDING WITH WORK.
10. REMOVE EXISTING ABANDONED ELECTRIC/COMMUNICATIONS CONDUIT AND WIRING.
11. REMOVE EXISTING ABANDONED ELECTRIC/COMMUNICATIONS HAND HOLE.

KEYNOTES (THIS SHEET ONLY)

1. COMPOST FILTER SOCK. SEE DETAIL 2/C-501.
2. LOW PROFILE BARRIER.

GRAPHIC SCALE

1"=20' (20' 10' 0 20' 40')

CHECK GRAPHIC SCALE BEFORE USING

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STATE OF NEW HAMPSHIRE
DANIEL A. PHILIPPS
No. 12857
LICENSED
PROFESSIONAL ENGINEER
05-27-22
PLACE STAMP HERE

DESCRIPTION	DATE
REVISIONS	

PROJECT

NO. SZCQ212251

NAME: CONSTRUCT APRON SHOULDER PAVEMENT

FACILITY: PEASE ANGB

DRAWING

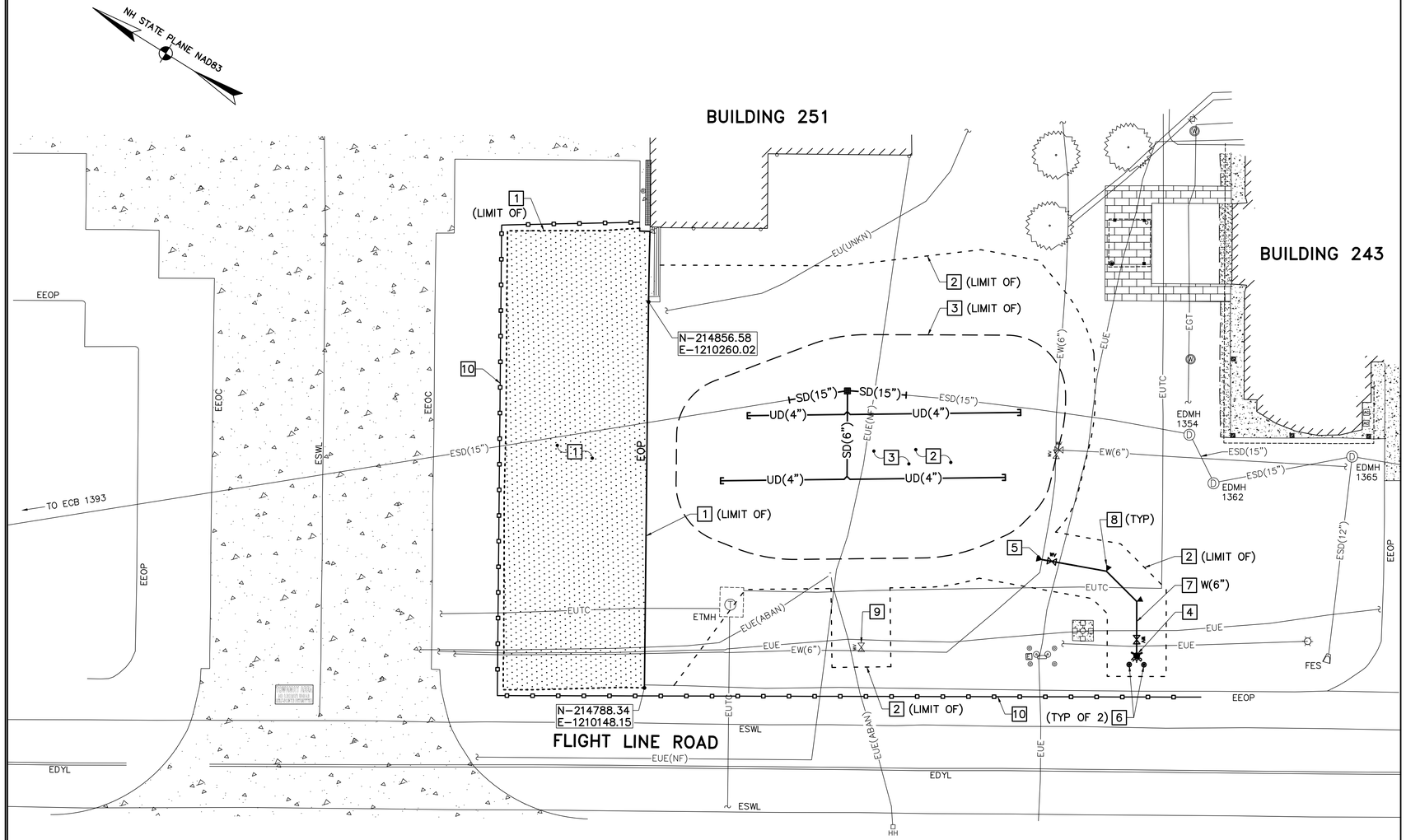
TITLE: SITE EXISTING CONDITIONS AND REMOVALS PLAN

DATE	DR BY:
05-24-22	DAP
SCALE: AS NOTED	CHKD BY: JLG

NO. CX101

SHEET NO. 4 OF 9

CAD FILE NO. 21906.19-CX101



1 CS101 **SITE AND UTILITIES PLAN**
SCALE: 1"=20'

KEYNOTES (THIS SHEET ONLY)

1. ASPHALT CONCRETE PAVEMENT. SEE DETAIL 1/C-502.
2. TURF – 6" TOPSOIL AND SEED.
3. SNOW STORAGE AREA.
4. FIRE HYDRANT AND GATE VALVE. SEE DETAIL 3/C-503.
5. WATER SERVICE CONNECTION. SEE DETAIL 2/C-503.
6. BOLLARD. SEE DETAIL 1/C-503.
7. PIPE TRENCH. SEE DETAIL 2/C-502.
8. JOINT RESTRAINT. SEE DETAIL 4/C-503.
9. CAP EXISTING WATER LINE WITH MECHANICAL JOINT END CAP AND PROVIDE JOINT RESTRAINT. SEE DETAIL 4/C-503.
10. LOW PROFILE BARRIER.

GRAPHIC SCALE

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

CHECK GRAPHIC SCALE BEFORE USING

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PROJECT

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NAME:
CONSTRUCT APRON SHOULDER PAVEMENT

FACILITY:
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TITLE:
SITE AND UTILITIES PLAN

DATE	DR BY:
05-24-22	DAP
SCALE	CHKD BY:
AS NOTED	JLG

NO.
CS101

SHEET
NO. 5 OF 9

CAD FILE NO.
21906.19-CS101

11 May, 2022 – 4:15pm
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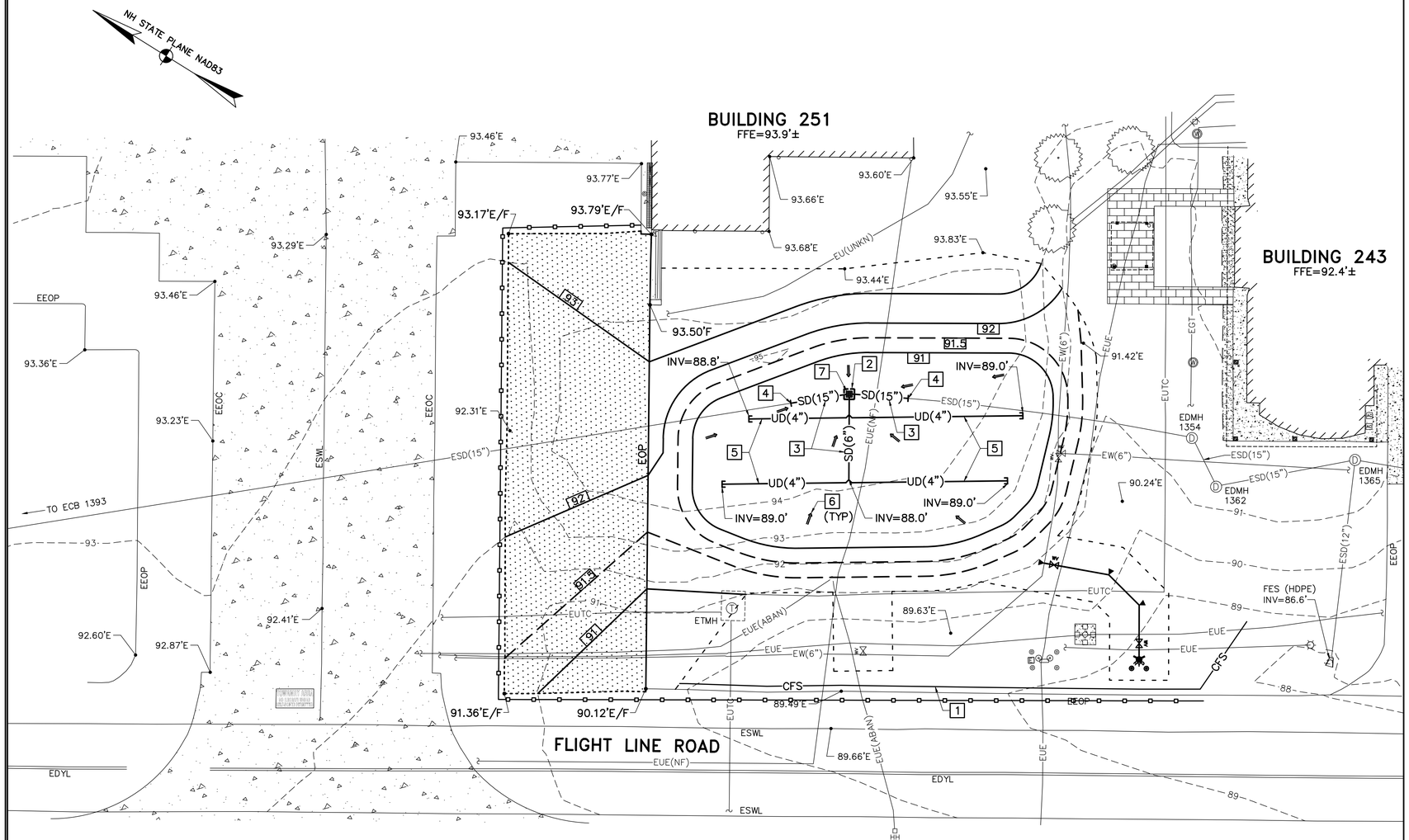

1 CG101 GRADING, DRAINAGE AND EROSION CONTROL PLAN
SCALE: 1"=20'

KEYNOTES (THIS SHEET ONLY)

1. COMPOST FILTER SOCK. SEE DETAIL 2/C-501.
2. CATCH BASIN INLET PROTECTION. SEE DETAIL 1/C-501.
3. PIPE TRENCH. SEE DETAIL 2/C-502.
4. CONNECT TO EXISTING DRAIN LINE. SEE DETAIL 5/C-503.
5. UNDERDRAIN. SEE DETAIL 3/C-502.
6. GRADE SNOW STORAGE AREA TO PROVIDE CONSTANT POSITIVE PITCH (1.5% MINIMUM SLOPE) TOWARD THE CATCH BASIN TO PROMOTE DRAINAGE OF THE ENTIRE SNOW STORAGE AREA WITHOUT ANY AREAS OF PONDING.
7. CATCH BASIN
   RIM=90.0'
   INV IN(15")=86.4
   INV IN(6")=87.5
   INV OUT(15")=86.4.
   SEE DETAIL 4/C-502.

GRAPHIC SCALE
20' 10' 0 20' 40'
1"=20'
CHECK GRAPHIC SCALE BEFORE USING

16 May, 2022 – 4:02pm
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STATE OF NEW HAMPSHIRE
DANIEL A. PHILIPPS
No. 12857
LICENSED
PROFESSIONAL ENGINEER
05-27-22
PLACE STAMP HERE

DESCRIPTION	DATE
REVISIONS	

PROJECT
NO. SZCQ212251
NAME: CONSTRUCT APRON SHOULDER PAVEMENT
FACILITY: PEASE ANGB

DRAWING
TITLE: GRADING, DRAINAGE AND EROSION CONTROL PLAN

DATE	DR BY:
05-24-22	DAP
SCALE: AS NOTED	CHKD BY: JLG

NO. CG101

SHEET NO. 6 OF 9

CAD FILE NO. 21906.19-CG101

EROSION AND SEDIMENT CONTROL NOTES

A. GENERAL NOTES

1. DURING CONSTRUCTION AND THEREAFTER, PROVIDE EROSION CONTROL MEASURES AS INDICATED AND SPECIFIED. EROSION CONTROL MEASURES SHALL BE IN ACCORDANCE WITH THE "NEW HAMPSHIRE STORM WATER MANUAL".

2. TEMPORARY EROSION CONTROL MEASURES INCLUDE THE USE OF EROSION CONTROL DEVICES, TEMPORARY SEEDING, AND PROVISIONS FOR STABILIZING INACTIVE AREAS. PERMANENT EROSION CONTROL MEASURES INCLUDE PERMANENT SEEDING.

3. PERIMETER EROSION CONTROLS SHALL BE INSTALLED PRIOR TO BEGINNING EARTH MOVING OPERATIONS.

4. PROVIDE INLET PROTECTION FOR EACH CATCH BASIN ON THE SAME DAY THAT BACKFILL IS PLACED AROUND THE CATCH BASIN.

5. PROVIDE 6–INCHES PLANTING SOIL AND SEED ON DISTURBED AREAS NOT OTHERWISE SPECIFIED. PERMANENT SEEDING SHALL BE COMPLETED BETWEEN THE DATES OF APRIL 1 AND OCTOBER 14. WATER VEGETATED AREAS AS NECESSARY TO ESTABLISH A VIGOROUS TURF.

6. PROVIDE EROSION CONTROL MEASURES TO CONTROL EROSION AND SEDIMENTATION FROM THE PROJECT SITE. THE MEASURES INDICATED ON THE DRAWINGS ARE A MINIMUM TO BE PROVIDED. THE CONTRACTOR SHALL PROVIDE ADDITIONAL MEASURES AS NECESSARY AND APPLICABLE TO CONTROL EROSION AND SEDIMENTATION FROM LEAVING THE PROJECT AREA.

7. LIMIT AREAS OF EXPOSED SOILS TO THOSE AREAS THAT WILL ACTIVELY BE WORKED. TEMPORARILY STABILIZE AREAS OF DISTURBED SOIL THAT REMAIN UNWORKED FOR MORE THAN 14 DAYS USING TEMPORARY (IF THE SOIL WILL BE PERMANENTLY STABILIZED WITHIN 30 DAYS) OR TEMPORARY SEEDING (IF THE SOIL WILL NOT BE PERMANENTLY STABILIZED WITHIN 30 DAYS). PERMANENTLY STABILIZE ANY AREA OF DISTURBED SOIL BROUGHT TO FINAL GRADE WITHIN 7 DAYS. DISTURBED SOILS DO NOT INCLUDE COMPACTED BASE COURSES OR STRUCTURAL FILLS USED FOR ROADS AND PARKING LOTS. UNSTABILIZED AREA SHALL NOT EXCEED 5 ACRES AT ANY ONE TIME.

8. AN AREA SHALL BE CONSIDERED STABLE IF ONE OF THE FOLLOWING HAS OCCURRED:
   A. BASE COURSE GRAVELS HAVE BEEN INSTALLED IN AREAS TO BE PAVED.
   B. A MINIMUM OF 85 PERCENT VEGETATED GROWTH HAS BEEN ESTABLISHED.
   C. A MINIMUM OF 3 INCHES OF NON–EROSIVE MATERIAL SUCH STONE OR RIPRAP HAS BEEN INSTALLED.

9. ROADWAYS SHALL BE STABILIZED WITHIN 72 HOURS OF ACHIEVING FINISHED GRADE. CUT AND FILL SLOPES SHALL BE SEEDED/LOAMED WITHIN 72 HOURS OF ACHIEVING FINISHED GRADE.

10. SWALES SHALL BE INSTALLED EARLY IN THE CONSTRUCTION SEQUENCE. SWALES SHALL BE STABILIZED PRIOR TO DIRECTING FLOW TO THEM.

B. INSPECTION AND MAINTENANCE

1. INSPECT DISTURBED AND IMPERVIOUS AREAS, EROSION CONTROL MEASURES, AREAS USED FOR STORAGE THAT ARE EXPOSED TO PRECIPITATION, AND LOCATIONS WHERE VEHICLES ENTER OR EXIT THE PROJECT AREA AT LEAST ONCE A WEEK AND BEFORE AND AFTER EACH STORM EVENT, GREATER THAN 0.1", PRIOR TO COMPLETION OF PERMANENT STABILIZATION. A PERSON WITH KNOWLEDGE OF EROSION AND STORMWATER CONTROL, INCLUDING THE NPDES STANDARDS MUST CONDUCT THE INSPECTION. THIS PERSON MUST BE IDENTIFIED IN THE INSPECTION LOG. IF BEST MANAGEMENT PRACTICES (BMPs) NEED TO BE MODIFIED OR IF ADDITIONAL BMPs ARE NECESSARY, IMPLEMENTATION MUST BE COMPLETED WITHIN 7 CALENDAR DAYS AND PRIOR TO ANY STORM EVENT (RAINFALL). MEASURES MUST BE MAINTAINED IN EFFECTIVE OPERATING CONDITION UNTIL AREAS ARE PERMANENTLY STABILIZED.

2. KEEP AND MAINTAIN A LOG (REPORT) SUMMARIZING THE SCOPE OF THE INSPECTION, NAME(S) AND QUALIFICATIONS OF THE PERSONNEL MAKING THE INSPECTION, THE DATE(S) OF THE INSPECTION, AND MAJOR OBSERVATIONS RELATING TO OPERATION OF EROSION AND SEDIMENTATION CONTROLS AND POLLUTION PREVENTION MEASURES. MAJOR OBSERVATIONS MUST INCLUDE: BMPs THAT NEED TO BE MAINTAINED; LOCATION(S) OF BMPs THAT FAILED TO OPERATE AS DESIGNED OR PROVED INADEQUATE FOR A PARTICULAR LOCATION; AND LOCATION(S) WHERE ADDITIONAL BMPs ARE NEEDED THAT DID NOT EXIST AT THE TIME OF INSPECTION. FOLLOW–UP TO CORRECT DEFICIENCIES OR ENHANCE CONTROLS MUST ALSO BE INDICATED IN THE LOG AND DATED, INCLUDING WHAT ACTION WAS TAKEN AND WHEN.

3. MAINTAIN EROSION CONTROL MEASURES FOR THE LIFE OF THE PROJECT AND UNTIL PERMANENT STABILIZATION OF THE ENTIRE SITE IS ESTABLISHED. PERMANENT STABILIZATION SHALL CONSIST OF AT LEAST 90–PERCENT VEGETATION OR PAVEMENT.

4. PROTECT STABILIZED AREAS FROM EROSION AND IMMEDIATELY REPAIR/REVEGETATE ERODED AREAS.

5. REMOVE TEMPORARY EROSION CONTROL MEASURES WITHIN 30 DAYS AFTER THE TRIBUTARY AREA HAS BEEN PERMANENTLY STABILIZED. REMOVE ANY ACCUMULATED SEDIMENTS AND STABILIZE.

C. SEQUENCE OF CONSTRUCTION

1. INITIAL OPERATIONS INCLUDE INSTALLATION OF EROSION CONTROL DEVICES.

2. COMMENCE EARTH EXCAVATION MOVING OPERATIONS. PROVIDE SEDIMENT BARRIER DOWN–GRADIENT OF SOIL STOCKPILES.

3. CONTINUE WITH OTHER UTILITY AND PAVEMENT CONSTRUCTION.

4. COMPLETE PAVEMENT CONSTRUCTION. PROVIDE PERMANENT SEEDING OR OTHER SURFACE TREATMENTS AS INDICATED IMMEDIATELY UPON ESTABLISHMENT OF FINISH GRADES.

D. SOIL STOCKPILE STABILIZATION

1. SOIL AND FILL STOCKPILES EXPECTED TO REMAIN IN PLACE FOR LESS THAN 30 DAYS SHALL BE COVERED WITH HYDROMULCHED WITHIN 7 DAYS OR PRIOR TO ANY RAINFALL.

2. SOIL AND FILL STOCKPILES EXPECTED TO REMAIN LONGER THAN 30 DAYS SHALL BE SEEDED WITH A CONSERVATION MIX OF ANNUAL RYE GRASS (0.9 LB/1000 SF) AND HYDROSEEDED WITH TACKIFIER WITHIN 7 DAYS OR PRIOR TO ANY RAINFALL.

3. SOIL AND FILL STOCKPILES SHALL HAVE A SEDIMENT BARRIER (e.g. COMPOST FILTER SOCK) INSTALLED AROUND THE DOWNHILL EDGE OF THE STOCKPILE TO TRAP SEDIMENTS.

E. TEMPORARY SEEDING

1. BEDDING – REMOVE STONES AND TRASH THAT WILL INTERFERE WITH SEEDING THE AREA. WHERE FEASIBLE, TILL THE SOIL TO A DEPTH OF ABOUT 4" TO PREPARE SEED BED AND MIX THE FERTILIZER INTO THE SOIL.

2. FERTILIZER – FERTILIZER SHALL BE UNIFORMLY SPREAD OVER THE AREA PRIOR TO BEING TILLED INTO THE SOIL. A 10–10–10 MIX OF FERTILIZER SHOULD BE APPLIED AT A RATE OF 300 LBS PER ACRE.

3. SEED MIXTURE – USE ANY OF THE FOLLOWING IN UPLAND AREAS:

		SEEDING RATES		
SPECIES	ACRE	1,000 SF	DATES	DEPTH
WINTER RYE	112 LBS	2.5 LBS	8/15 – 9/15	1 INCH
OATS	80 LBS	2.0 LBS	SPRING – 5/15	1 INCH
ANNUAL RYEGRASS	40 LBS	1.0 LBS	4/15 – 9/15	0.25 INCH

4. WHEN HYDROSEEDING, PREPARE THE SEEDBED BY HAND RAKING TO LOOSEN AND SMOOTH THE SOIL AND TO REMOVE SURFACE STONES LARGER THAN 2 INCHES IN DIAMETER.

5. SLOPES MUST BE NO STEEPER THAN 2 TO 1 (2 FEET HORIZONTALLY TO 1 FOOT VERTICALLY).

6. LIME AND FERTILIZER MAY BE APPLIED SIMULTANEOUSLY WITH THE SEED.

7. APPLY SEED UNIFORMLY BY HYDROSEEDER (SLURRY INCLUDING SEED, MULCH TACKIFIER AND FERTILIZER). NORMAL SEEDING DEPTH IS FROM ¼ TO ½ INCH. SEEDING RATES MUST BE INCREASED 10% WHEN HYDROSEEDING.

8. REMOVE TEMPORARY GROWTH FROM TEMPORARY SEEDING PRIOR TO PERMANENT SEEDING.

F. HYDROSEEDING

PROVIDE TEMPORARY HYDROSEEDING WITH (SLURRY INCLUDING SEED, CELLULOSE FIBER MULCH, TACKIFIER AND FERTILIZER) ON SLOPES, CHANNELS, OTHER EROSION PRONE AREAS, AND EXPOSED SOILS THAT CANNOT RECEIVE PERMANENT COVER WITHIN 14 DAYS OF DISTURBANCE. ALSO PROVIDE HYDROSEEDING FOLLOWING TEMPORARY AND PERMANENT SEEDING IN ACCORDANCE WITH NEW HAMPSHIRE STROMWATER MANUAL AND MUNAFACTURERS WRITTEN RECOMMENDATIONS BASED ON SOIL CONDITIONS AND AND SITE CHARACTERISTICS.

G. WINTER STABILIZATION

THE WINTER CONSTRUCTION PERIOD IS FROM OCTOBER 15 THROUGH MAY 15. IF THE SITE IS NOT STABILIZED WITH PAVEMENT, A ROAD GRAVEL BASE, 85% MATURE VEGETATION COVER OR RIPRAP BY OCTOBER 15 THEN THE SITE SHALL BE PROTECTED WITH OVER–WINTER STABILIZATION.

1. PROVIDE STABILIZATION AS FOLLOWS WITHIN A DAY OF ESTABLISHING THE GRADE THAT IS FINAL OR THAT OTHERWISE WILL EXIST FOR MORE THAN 5 DAYS:
   A. PROPOSED VEGETATED AREAS HAVING A SLOPE OF LESS THAN 15% WHICH DO NOT EXHIBIT A MINIMUM OF 85% VEGETATIVE GROWTH BY OCTOBER 15TH, OR WHICH ARE DISTURBED AFTER OCTOBER 15TH SHALL BE HYDROSEED.
   B. PROPOSED VEGETATED AREAS HAVING A SLOPE OF GREATER THAN 15% WHICH DO NOT EXHIBIT A MINIMUM OF 85% VEGETATIVE GROWTH BY OCTOBER 15TH, OR WHICH ARE DISTURBED AFTER OCTOBER 15TH, SHOULD BE HYDROSEEDED.

2. HYDROSEEDING SHALL NOT OCCUR OVER ACCUMULATED SNOW OR FROZEN GROUND AND SHALL BE COMPLETED IN ADVANCE OF THAW OR SPRING MELT EVENTS..

3. STOCKPILES OF SOIL MATERIALS SHALL BE HYDROSEEDED FOR OVER WINTER PROTECTION AND SHALL BE DONE WITHIN 24 HOURS OF STOCKING, AND RE–ESTABLISHED PRIOR TO ANY RAINFALL OR SNOWFALL. NO SOIL STOCKPILE SHALL BE PLACED WITHIN 100 FEET FROM ANY WETLAND OR OTHER WATER RESOURCE AREA.

4. GRASS LINED DITCHES AND CHANNELS SHALL BE CONSTRUCTED AND STABILIZED BY SEPTEMBER 1. ALL DITCHES OR SWALES WHICH DO NOT EXHIBIT A MINIMUM OF 85% VEGETATIVE GROWTH BY OCTOBER 15TH SHALL BE STABILIZED TEMPORARILY WITH HYDROSEEDING.

5. AFTER NOVEMBER 15TH, INCOMPLETE PAVED AREAS WHERE ACTIVE CONSTRUCTION OF THE PAVED AREA HAS STOPPED FOR THE WINTER SEASON SHALL BE PROTECTED WITH A MINIMUM 3 INCH LAYER OF BASE COURSE (NHDOT ITEM 304.3).

6. NO MORE THAN ONE ACRE OF THE SITE SHALL BE EXPOSED (WITHOUT STABILIZATION) AT ANY ONE TIME. GENERALLY THE EXPOSED AREA SHOULD BE LIMITED TO ONLY THOSE AREAS IN WHICH WORK WILL OCCUR DURING THE FOLLOWING 15 DAYS AND THAT CAN BE HYDROMULCHED IN ONE DAY PRIOR TO ANY SNOW OR RAINFALL EVENT.

H. PERMANENT SEEDING

1. REFER TO TURF AND GRASSES SPECIFICATION.

I. OFF–SITE VEHICLE TRACKING

1. SWEEP ADJACENT PAVED AREAS AND ROADS AS NECESSARY AND AS DIRECTED BY THE CONTRACTING OFFICER TO KEEP THEM FREE OF SEDIMENTS RESULTING FROM CONSTRUCTION ACTIVITIES.

J. HOUSEKEEPING

1. WASTE MATERIALS SHALL BE COLLECTED AND STORED IN SECURELY LIDDED RECEPTACLES. TRASH AND CONSTRUCTION DEBRIS FROM THE SITE WILL BE DEPOSITED IN A DUMPSTER PROVIDED BY THE CONTRACTOR. CONSTRUCTION WASTE MATERIALS SHALL NOT BE BURIED ON SITE.

2. HAZARDOUS WASTE MATERIALS SHALL BE DISPOSED OF IN THE MANNER SPECIFIED BY LOCAL AND STATE REGULATIONS OR BY THE MANUFACTURER.

3. MATERIALS STORED ON SITE SHALL BE STORED IN A NEAT, ORDERLY MANNER IN THEIR PROPER (ORIGINAL IF POSSIBLE) CONTAINER AND IF POSSIBLE UNDER A ROOF OR OTHER ENCLOSURE. STORE ONLY SUFFICIENT AMOUNTS OF MATERIALS TO COMPLETE THE JOB.

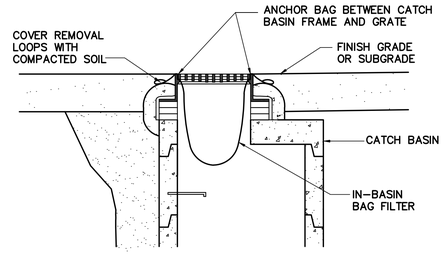
4. DISPOSE OF SURPLUS MATERIALS IN ACCORDANCE WITH THE MANUFACTURERS RECOMMENDATIONS, STATE AND FEDERAL CODES.

5. CONSTRUCTION RELATED EQUIPMENT AND VEHICLES SHALL BE MONITORED FOR LEAKS AND RECEIVE REGULAR PREVENTATIVE MAINTENANCE TO AVOID LEAKAGE.

K. DUST CONTROL

1. CONTROL DUST WITH PERIODIC WATERING OF THE EXPOSED SOIL SURFACES WITH ADEQUATE WATER TO CONTROL DUST FROM BECOMING AIRBORNE. REPETITIVE TREATMENTS SHALL BE APPLIED AS NEEDED TO CONTROL DUST THROUGHOUT CONSTRUCTION UNTIL AREAS HAVE BEEN STABILIZED.

2. OTHER METHODS TO CONTROL DUST SHALL BE ALLOWED WITH APPROVAL BY THE COR.



NOTES:
1. INSTALL ACCORDING TO THE MANUFACTURER'S INSTRUCTIONS.
2. REMOVE ACCUMULATED SEDIMENTS IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS.

1 CATCH BASIN INLET PROTECTION

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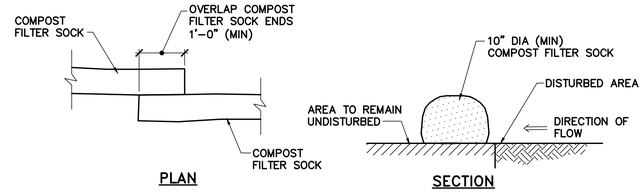

NOTES:
1. REMOVE ACCUMULATED SEDIMENT WHEN IT REACHES ONE–HALF THE SOCK HEIGHT.
2. COMPOST FILTER SOCKS SHALL REMAIN IN PLACE UNTIL TRIBUTARY AREAS ARE STABILIZED.
3. SECURE COMPOST FILTER SOCKS IN PLACE WITH 1 INCH BY 1 INCH HARDWOOD STAKES, EVERY 10 FEET OR LESS.
4. COMPOST FILTER SOCKS SHALL BE A WOVEN OR NONWOVEN POLYPROPYLENE TUBE WITH A MINIMUM TENSILE STRENGTH OF 200 PSI, MESH OPENING OF 1/8 INCH MAX AND MINIMUM FLOW RATE OF 0.2 GAL/MIN/SF, FILLED WITH ORGANIC MATERIALS DERIVED FROM A WELL DECOMPOSED SOURCE OF ORGANIC MATTER. THE ORGANIC MATERIAL CONTENT SHALL BE BETWEEN 95 AND 100 PERCENT, 95 PERCENT SHALL PASS A 2–INCH SIEVE AND A MAXIMUM OF 40 PERCENT SHALL PASS A #40 SIEVE. THE PH SHALL BE BETWEEN 5.0 AND 8.0 AND THE SOLUBLE SALT CONTENT SHALL BE LESS THAN 4.0 mmhos/cm.

2 COMPOST FILTER SOCK

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STATE OF NEW HAMPSHIRE
DANIEL A. PHILLIPS
No. 12857
LICENSED
PROFESSIONAL ENGINEER
05-27-22

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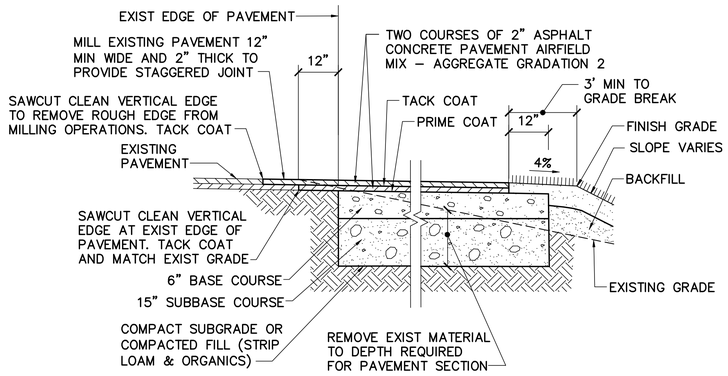
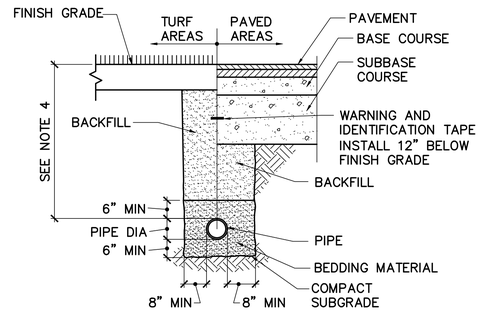
DESCRIPTION	DATE
REVISIONS	

PROJECT
NO. SZCQ212251
NAME: CONSTRUCT APRON SHOULDER PAVEMENT
FACILITY: PEASE ANGB

DRAWING
TITLE: EROSION AND SEDIMENT CONTROL NOTES AND DETAILS
DATE 05-24-22 | DR BY: DAP
SCALE AS NOTED | CHKD BY: JLG
NO. C-501
SHEET NO. 7 OF 9
CAD FILE NO. 21906.19-C-501



1 ASPHALT CONCRETE PAVEMENT
CS101 C–502 NOT TO SCALE

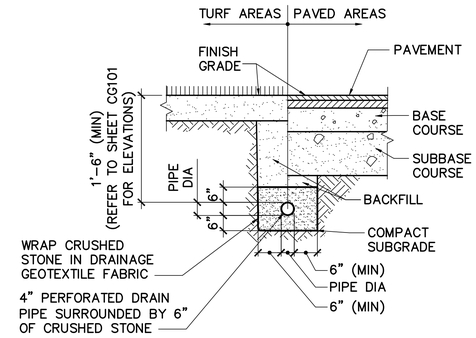


NOTES:
1. INSTALL THERMOPLASTIC (HDPE AND PVC) GRAVITY PIPING IN ACCORDANCE WITH ASTM D 2321 (CLASS II BEDDING/BLANKET UNLESS INDICATED OTHERWISE).
2. EXCAVATION WORK SHALL COMPLY WITH OSHA STANDARDS. TRENCH SIDEWALLS SHALL BE VERTICAL FROM TRENCH BOTTOM TO 12" ABOVE TOP OF PIPE.
3. PROVIDE A MINIMUM OF 6" VERTICAL CLEARANCE BETWEEN CROSSING PIPES.
4. MAINTAIN THE FOLLOWING DEPTH OF COVER FOR EACH SERVICE:

SERVICE	DEPTH OF COVER
WATER SUPPLY	6'–0"
STORM DRAIN	AS INDICATED

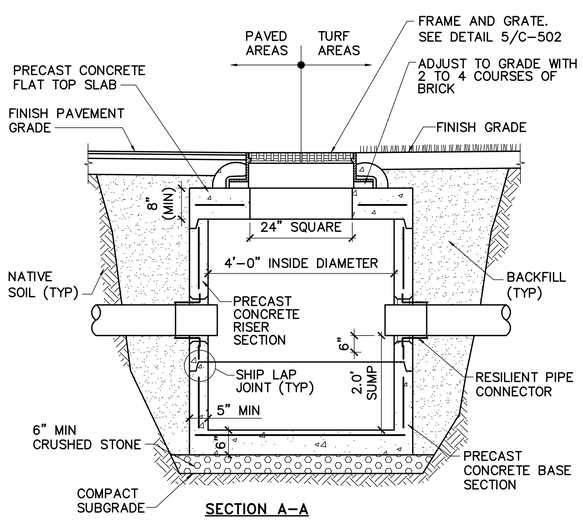
5. INSTALL WATER LINE IN ACCORDANCE WITH AWWA 600 (TYPE 5 BEDDING/BLANKET UNLESS INDICATED OTHERWISE).

2 PIPE TRENCH
CS101,CG101 C–502 NOT TO SCALE



3 UNDERDRAIN
CG101 C–502 NOT TO SCALE

NOTES:
1. PIPES SHALL PROJECT 1" TO 3" BEYOND INSIDE WALL OF STRUCTURE.
2. PRECAST SECTIONS SHALL HAVE A TONGUE AND GROOVE JOINT 4" HIGH AT AN 11° ANGLE CENTERED IN THE WIDTH OF THE WALL AND SHALL BE ASSEMBLED USING 2 STRIPS OF 1" DIA BUTYL RUBBER SEALANT IN THE JOINT.
3. STRUCTURES WITH MULTIPLE PIPES SHALL HAVE A MINIMUM OF 12" OF INSIDE SURFACE BETWEEN HOLES, NO MORE THAN 75% OF A HORIZONTAL CROSS–SECTION SHALL BE HOLES, AND THERE SHALL BE NO HOLES CLOSER THAN 3" TO JOINTS.
4. CONCRETE 5,000 PSI AFTER 28 DAYS.
5. PROVIDE REINFORCING TO ACHIEVE AASHTO HS–20 LOADING CLASSIFICATION.
6. CATCH BASIN SHALL CONFORM TO ASTM C478.
7. PROVIDE PIPE PENETRATIONS AS INDICATED ON SHEET CG101.



4 CATCH BASIN
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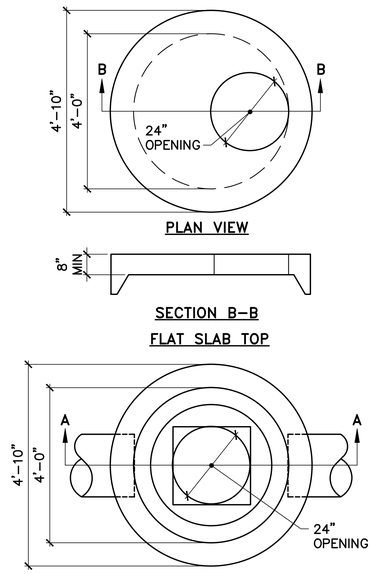

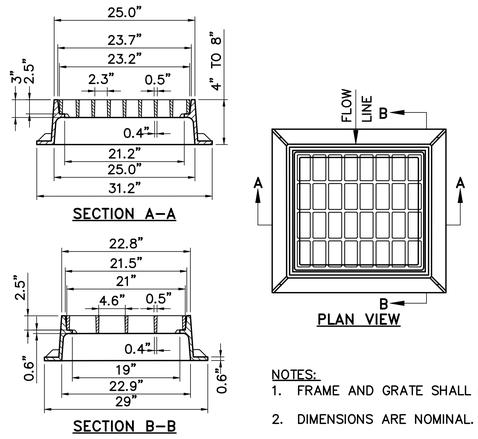

NOTES:
1. FRAME AND GRATE SHALL BE NHDOT TYPE "B".
2. DIMENSIONS ARE NOMINAL.

5 FRAME AND GRATE
C–502 C–502 NOT TO SCALE

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STATE OF NEW HAMPSHIRE – DANIEL A. PHILLIPS No. 12857 LICENSED PROFESSIONAL ENGINEER – 05-27-22

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DESCRIPTION	DATE
REVISIONS	

PROJECT
NO. SZCQ212251
NAME: CONSTRUCT APRON SHOULDER PAVEMENT
FACILITY: PEASE ANGB

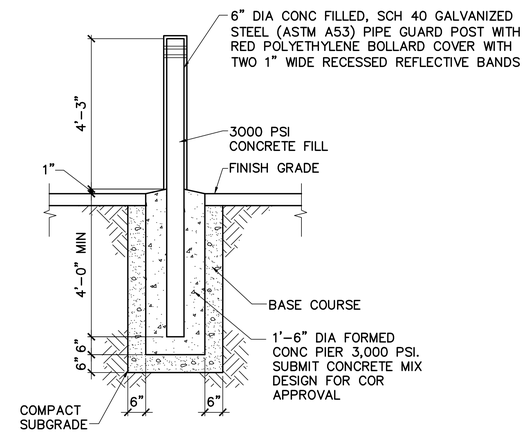
DRAWING
TITLE: SITE DETAILS 1

DATE	DR BY:
05-24-22	DAP
SCALE: AS NOTED	CHKD BY: JLG

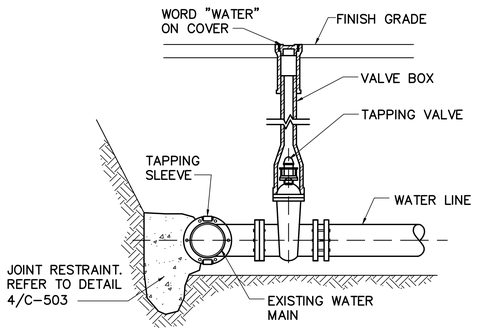
NO. C-502

SHEET NO. 8 OF 9

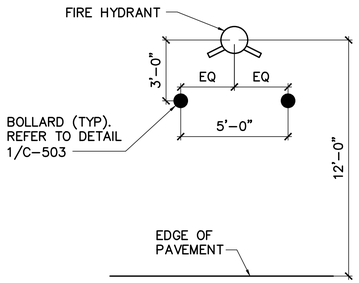
CAD FILE NO. 21906.19-C-502



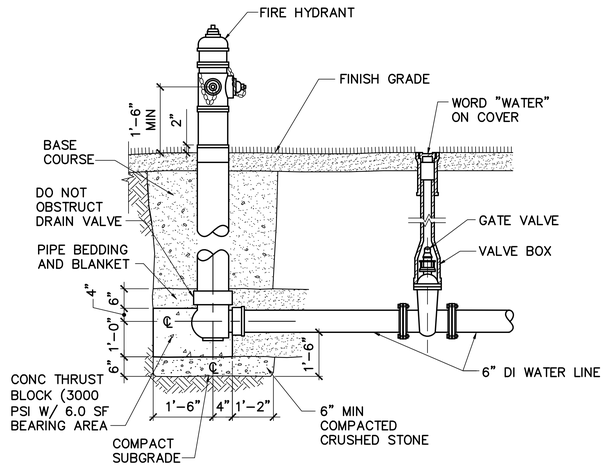
1 BOLLARD
CS101,C-503 / C-503 NOT TO SCALE



2 WATER SERVICE CONNECTION
CS101 / C-503 NOT TO SCALE

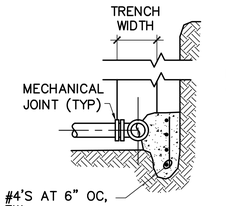


PLAN

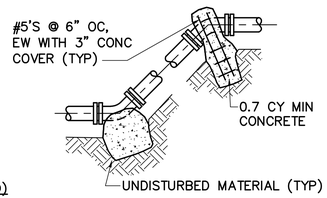


3 FIRE HYDRANT AND GATE VALVE
CS101 / C-503 NOT TO SCALE

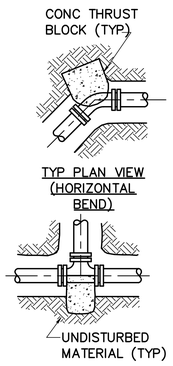
NOTES:
1. PROVIDE JOINT RESTRAINT FOR TEES, BENDS, AND PLUGS. FOR DUCTILE IRON PIPE PROVIDE CONCRETE THRUST BLOCKS AND WEDGE-ACTION TYPE RETAINER GLANDS. FOR POLYETHYLENE PIPE PROVIDE CONCRETE THRUST BLOCKS.
2. WRAP DI PIPE FITTINGS IN POLYETHYLENE OR BUILDING PAPER PRIOR TO INSTALLATION OF CONCRETE THRUST BLOCKING.
3. PLACE CONCRETE PAVERS OR BRICKS IN FRONT OF PLUGS BEFORE PLACING THRUST BLOCKS.
4. PLACE THRUST BLOCKS AGAINST UNDISTURBED MATERIAL. WHERE TRENCH WALL HAS BEEN DISTURBED, EXCAVATE LOOSE MATERIAL AND EXTEND CONCRETE THRUST BLOCK TO UNDISTURBED MATERIAL. AREA OF THRUST BLOCKS SHOWN ARE BASED ON A MINIMUM SOIL BEARING CAPACITY OF 1,500 POUNDS PER SQUARE FOOT AND 1.5 SAFETY FACTOR. BEARING CAPACITY MAY BE ALTERED BASED ON CONDITIONS ENCOUNTERED WITH APPROVAL BY THE CONTRACTING OFFICER.
5. EXTEND CONCRETE THRUST BLOCKING THE ENTIRE LENGTH OF THE FITTING. DO NOT COVER ANY PART OF THE JOINT WITH CONCRETE.
6. PROVIDE LIFT HOOKS INTO THRUST BLOCKS AT END CAPS AND PLUGS.
7. CONCRETE THRUST BLOCKS SHALL BE 3,000 PSI (MIN) PORTLAND CEMENT CONCRETE. SUBMIT CONCRETE MIX DESIGN FOR COR APPROVAL.
8. PROVIDE CONCRETE THRUST BLOCKING IN ACCORDANCE WITH NFPA 24.
9. PROVIDE WEDGE-ACTION TYPE RETAINER GLANDS ACCORDING TO THE MANUFACTURERS INSTRUCTIONS.



TYP SECTION (TEE OR BEND)



TYP SECTION (VERTICAL BEND)



TYP PLAN VIEW (HORIZONTAL BEND)

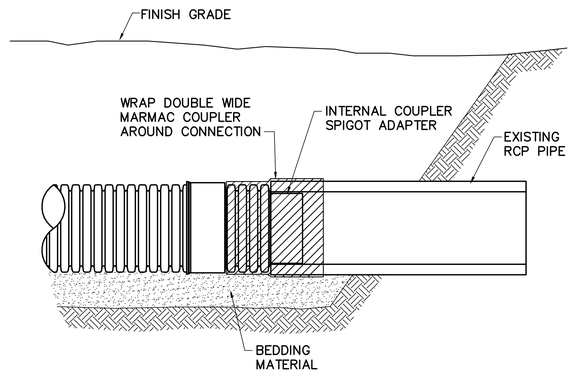
TYP PLAN VIEW (TEE)

THRUST BLOCK SCHEDULE
SQUARE FEET OF CONCRETE THRUST BLOCKING BEARING ON UNDISTURBED MATERIAL (BASED ON 100 PSI WORKING PRESSURE)

REACTION TYPE	PIPE SIZE (INCHES)				
	4"	6"	8"	10"	12"
TEE	1.4	2.8	4.8	7.3	10.3
90° BEND	1.9	4.0	6.8	10.3	14.5
45° BEND	1.0	2.2	3.7	5.6	7.9
22.5° BEND	0.5	1.1	1.9	2.8	4.0
11.25° BEND	0.3	0.6	1.0	1.4	2.0

NOTE: FOR OTHER PRESSURES, AREA OF CONCRETE THRUST BLOCKING IS DIRECTLY PROPORTIONAL TO AREAS SHOWN IN ABOVE TABLE. THE WORKING PRESSURE IS 60 PSI.

4 JOINT RESTRAINT
CS101, C-503 / C-503 NOT TO SCALE



NOTES:
1. INSTALL HDPE TO RCP PIPE CONNECTION IN ACCORDANCE WITH HDPE PIPE MANUFACTURERS RECOMMENDATIONS.

5 HDPE TO RCP PIPE CONNECTION
CG101 / C-503 NOT TO SCALE

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DESCRIPTION	DATE
REVISIONS	

PROJECT
NO. SZCQ212251
NAME: CONSTRUCT APRON SHOULDER PAVEMENT
FACILITY: PEASE ANGB

DRAWING
TITLE: SITE DETAILS 2

DATE	DR BY:
05-24-22	DAP
SCALE: AS NOTED	CHKD BY: JLG

NO. C-503

SHEET NO. 9 OF 9

CAD FILE NO. 21906.19-C-503