MISC. PLANS

for

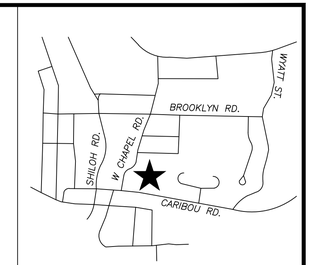
ASHEVILLE AREA HABITAT FOR HUMANITY

TRIED STREET SUBDIVISION

CITY OF ASHEVILLE
BUNCOMBE COUNTY
NORTH CAROLINA

MISC. PLANS

SHEET NO.	DESCRIPTION
C-100	EXISTING CONDITIONS AND DEMOLITION PLAN
C-200	MASTER SITE PLAN
C-901	BUILDING ELEVATIONS



VICINITY MAP
NOT TO SCALE

DEVELOPMENT BLOCK

PROJECT NAME: ASHEVILLE HABITAT FOR HUMANITY – TRIED STREET

PROJECT ADDRESS: 990 W CHAPEL RD
ASHEVILLE, NC 28803

PIN #: 9657-14-2055, 9657-13-2806
9657-14-4041, 9657-14-4174
9657-14-4225, 9657-13-4808

DB: 6373 PG: 1755

OWNER / DEVELOPER: ASHEVILLE HABITAT FOR HUMANITY, INC.
33 MEADOW ROAD
ASHEVILLE, NC 28803
REGINALD JONES
828-251-5702

SURVEYOR: McABEE & ASSOCIATES, PA
3 McABEE TRAIL, FAIRVIEW, NC 28730
828-628-1295

ENGINEER: JARED L. DERIDDER, P.E.
WGLA ENGINEERING, PLLC
724 5TH AVENUE WEST
HENDERSONVILLE, NC 28739
828-687-7177

ACREAGE: 4.5 ACRES ±

CURRENT/PROPOSED ZONING
CITY OF ASHEVILLE – RS8 CZ

LAND USE: PREVIOUS: RESIDENTIAL
CURRENT: VACANT
PROPOSED: RESIDENTIAL

SINGLE FAMILY: 5

TOWNHOMES: 18

DENSITY: 5.11 UNITS/ACRE

WATER SYSTEM: CITY OF ASHEVILLE (PUBLIC)
SEWER SYSTEM: MSD (PUBLIC)

REQUIRED BUILDING SETBACKS:
FRONT 15'
SIDE 6'
REAR 15'

PROPOSED BUILDING SETBACKS:
FRONT 15'
SIDE 0'
REAR 15'

MINIMUM LOT SIZE:
REQUIRED: 4,000 SF
PROVIDED: 3,700 SF

MAX ALLOWABLE BUILDING HEIGHT: 35'
PROPOSED BUILDING HEIGHT: 17'-6" (TWO STORY)

MAXIMUM BUILDING FOOTPRINT
TOWNHOME 1,100 SF
SINGLE FAMILY 1,600 SF

MAXIMUM GROSS FLOOR AREA
TOWNHOME 2,200 SF
SINGLE FAMILY 3,200 SF

PARKING REQUIRED: 46 (2 PER UNIT)
PARKING PROVIDED: 46 (2 PER UNIT)

MAXIMUM ROAD GRADE: 9.18%

OPEN SPACE

SITE AREA: 196,118 SF
R/W AREA: 32,505

REQUIRED OPEN SPACE: 15% OF AREA OUTSIDE OF R/W
15% x 163,613 SF = 24,542 SF

PROVIDED OPEN SPACE: 24,628 SF (15.05%)
NATURAL: 12,314 SF (50%)
PATH REQUIREMENT: 320 LF (TOTAL WIDTH) x 80% = 256 LF
PATH PROVIDED: 260 LF WITH BENCH (MAX SLOPE 14%)
RECREATIONAL: 12,314 SF (50%)

IMPERVIOUS AREA SUMMARY
PRE DEV. IMP. AREA: 23,578 SF (0.541 AC ±)
TO REMAIN: 0 SF (0.00 AC ±)
TO BE REMOVED: 23,578 SF (0.541 AC ±)

POST DEV. IMP. AREA: 63,809 SF (1.465 AC ±)
POST DEV. IMP. PERCENTAGE: 32.54%

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ASHEVILLE HABITAT FOR HUMANITY
TRIED ST

ASHEVILLE
BUNCOMBE COUNTY
NORTH CAROLINA

Asheville Area Habitat for Humanity®
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NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 041349 JARED L. DERIDDER
Preliminary Not For Construction

REVISIONS

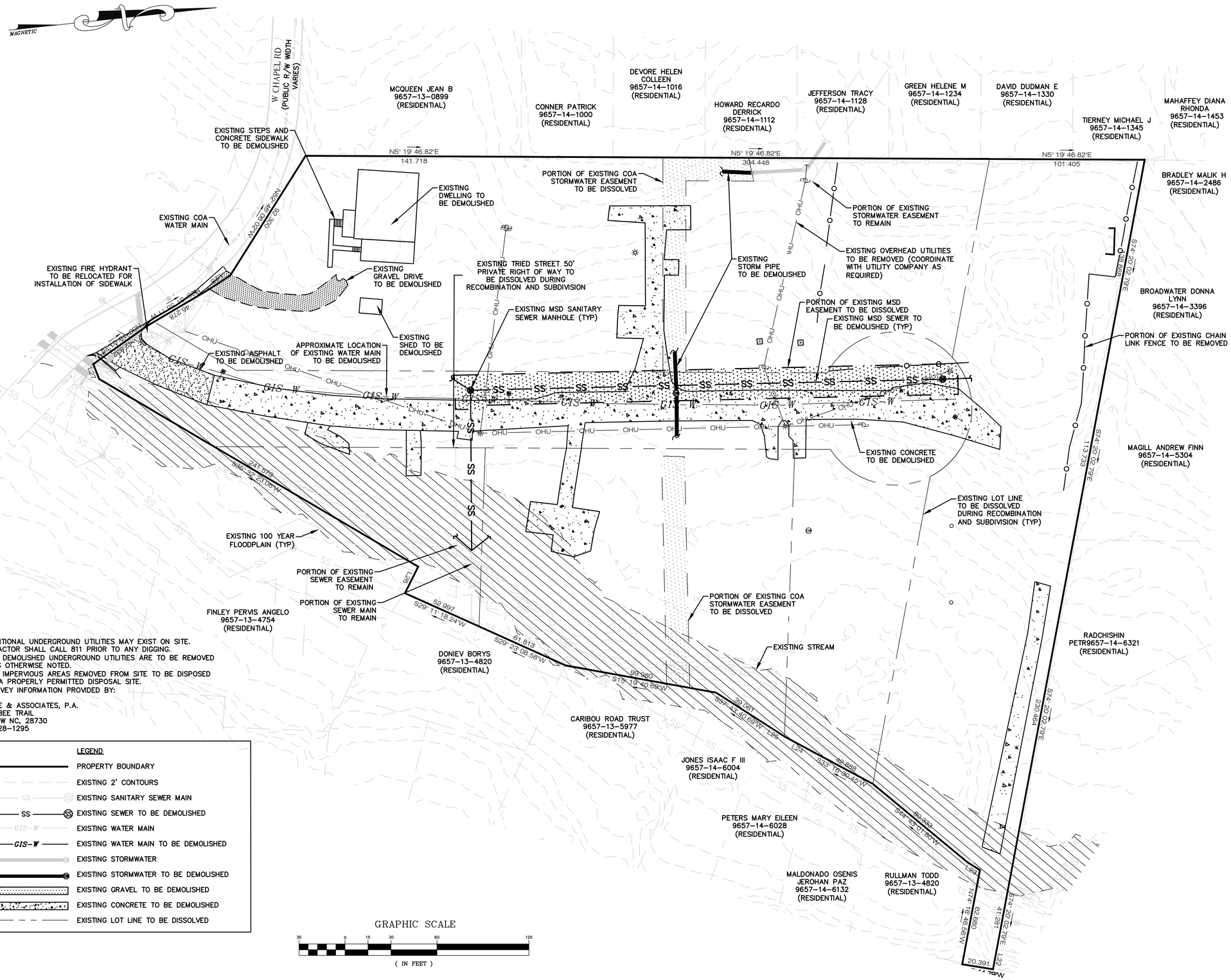
DATE	DESCRIPTION

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PROJECT NUMBER: 25113
DATE: 8-5-26

COVER

SCALE: AS NOTED


MAGNETIC
W CHAPEL RD
(PUBLIC R/W WIDTH VARIES)
MCQUEEN JEAN B
9657-13-0899
(RESIDENTIAL)
CONNER PATRICK
9657-14-1000
(RESIDENTIAL)
DEVORE HELEN COLLEEN
9657-14-1016
(RESIDENTIAL)
HOWARD RECARDO DERRICK
9657-14-1112
(RESIDENTIAL)
JEFFERSON TRACY
9657-14-1128
(RESIDENTIAL)
GREEN HELENE M
9657-14-1234
(RESIDENTIAL)
DAVID DUDMAN E
9657-14-1330
(RESIDENTIAL)
TIERNEY MICHAEL J
9657-14-1345
(RESIDENTIAL)
MAHAFFEY DIANA RHONDA
9657-14-1453
(RESIDENTIAL)
BRADLEY MALIK H
9657-14-2486
(RESIDENTIAL)
BROADWATER DONNA LYNN
9657-14-3396
(RESIDENTIAL)
MAGILL ANDREW FINN
9657-14-5304
(RESIDENTIAL)
RADCHISHIN PETR9657-14-6321
(RESIDENTIAL)
FINLEY PERVIS ANGELO
9657-13-4754
(RESIDENTIAL)
DONIEV BORYS
9657-13-4820
(RESIDENTIAL)
CARIBOU ROAD TRUST
9657-13-5977
(RESIDENTIAL)
JONES ISAAC F III
9657-14-6004
(RESIDENTIAL)
PETERS MARY EILEEN
9657-14-6028
(RESIDENTIAL)
MALDONADO OSENIS JEROHAN PAZ
9657-14-6132
(RESIDENTIAL)
RULLMAN TODD
9657-13-4820
(RESIDENTIAL)
EXISTING STEPS AND CONCRETE SIDEWALK TO BE DEMOLISHED
EXISTING COA WATER MAIN
EXISTING FIRE HYDRANT TO BE RELOCATED FOR INSTALLATION OF SIDEWALK
EXISTING DWELLING TO BE DEMOLISHED
EXISTING GRAVEL DRIVE TO BE DEMOLISHED
EXISTING SHED TO BE DEMOLISHED
EXISTING ASPHALT TO BE DEMOLISHED
APPROXIMATE LOCATION OF EXISTING WATER MAIN TO BE DEMOLISHED
EXISTING TRIED STREET 50' PRIVATE RIGHT OF WAY TO BE DISSOLVED DURING RECOMBINATION AND SUBDIVISION
EXISTING MSD SANITARY SEWER MANHOLE (TYP)
PORTION OF EXISTING COA STORMWATER EASEMENT TO BE DISSOLVED
EXISTING STORM PIPE TO BE DEMOLISHED
PORTION OF EXISTING STORMWATER EASEMENT TO REMAIN
EXISTING OVERHEAD UTILITIES TO BE REMOVED (COORDINATE WITH UTILITY COMPANY AS REQUIRED)
PORTION OF EXISTING MSD EASEMENT TO BE DISSOLVED
EXISTING MSD SEWER TO BE DEMOLISHED (TYP)
PORTION OF EXISTING CHAIN LINK FENCE TO BE REMOVED
EXISTING CONCRETE TO BE DEMOLISHED
EXISTING LOT LINE TO BE DISSOLVED DURING RECOMBINATION AND SUBDIVISION (TYP)
EXISTING 100 YEAR FLOODPLAIN (TYP)
PORTION OF EXISTING SEWER EASEMENT TO REMAIN
PORTION OF EXISTING SEWER MAIN TO REMAIN
PORTION OF EXISTING COA STORMWATER EASEMENT TO BE DISSOLVED
EXISTING STREAM
N5° 19' 46.82"E
141.718
N5° 19' 46.82"E
304.448
N5° 19' 46.82"E
101.405
N20° 46' 59.02"W
92.200
S74° 20' 02.79"E
S74° 20' 02.79"E
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DEVELOPMENT BLOCK

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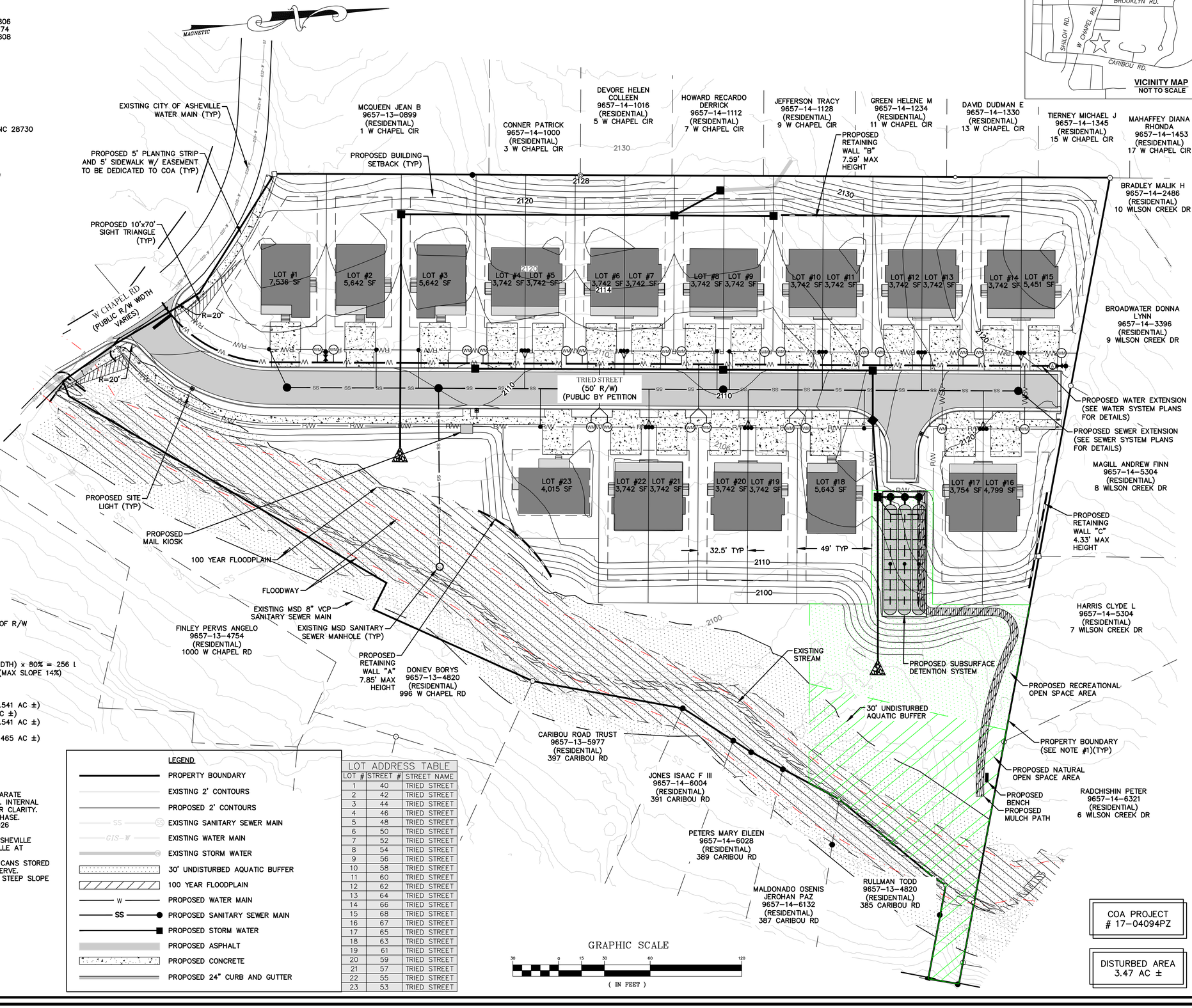
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POST DEV. IMP. AREA: 63,809 SF (1.465 AC ±)
POST DEV. IMP. PERCENTAGE: 32.54%

NOTES:
1–SUBJECT PROPERTY IS COMPOSED OF SIX (6) SEPARATE PARCELS AS IDENTIFIED IN THE DEVELOPMENT BLOCK. INTERNAL PROPERTY LINES ARE NOT SHOWN ON THIS PLAN FOR CLARITY.
2–THIS PROJECT WILL BE COMPLETED IN A SINGLE PHASE.
BEGIN COMMUNAL INFRASTRUCTURE: OCTOBER 2026
END COMMUNAL INFRASTRUCTURE: MAY 2027
3–TRIED STREET TO BE CONSTRUCTED TO CITY OF ASHEVILLE STANDARDS AND CONVEYED TO THE CITY OF ASHEVILLE AT PROJECT COMPLETION.
4–SOLID WASTE SERVICE WILL BE INDIVIDUAL TRASH CANS STORED TO THE REAR OF THE INDIVIDUAL UNIT THAT THEY SERVE.
5–NO PORTION OF THIS PROJECT IS DESIGNATED AS STEEP SLOPE ZONE A OR B.



VICINITY MAP
NOT TO SCALE

LEGEND

- PROPERTY BOUNDARY
- EXISTING 2' CONTOURS
- PROPOSED 2' CONTOURS
- SS — EXISTING SANITARY SEWER MAIN
- GIS–W — EXISTING WATER MAIN
- EXISTING STORM WATER
- 30' UNDISTURBED AQUATIC BUFFER
- 100 YEAR FLOODPLAIN
- W — PROPOSED WATER MAIN
- SS — PROPOSED SANITARY SEWER MAIN
- PROPOSED STORM WATER
- PROPOSED ASPHALT
- PROPOSED CONCRETE
- PROPOSED 24" CURB AND GUTTER

LOT ADDRESS TABLE

LOT #	STREET #	STREET NAME
1	40	TRIED STREET
2	42	TRIED STREET
3	44	TRIED STREET
4	46	TRIED STREET
5	48	TRIED STREET
6	50	TRIED STREET
7	52	TRIED STREET
8	54	TRIED STREET
9	56	TRIED STREET
10	58	TRIED STREET
11	60	TRIED STREET
12	62	TRIED STREET
13	64	TRIED STREET
14	66	TRIED STREET
15	68	TRIED STREET
16	67	TRIED STREET
17	65	TRIED STREET
18	63	TRIED STREET
19	61	TRIED STREET
20	59	TRIED STREET
21	57	TRIED STREET
22	55	TRIED STREET
23	53	TRIED STREET

GRAPHIC SCALE
30 0 15 30 60 120
(IN FEET)

COA PROJECT # 17–04094PZ

DISTURBED AREA 3.47 AC ±

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NORTH CAROLINA PROFESSIONAL SEAL 049102 ENGINEER JARED L. DERIDDER

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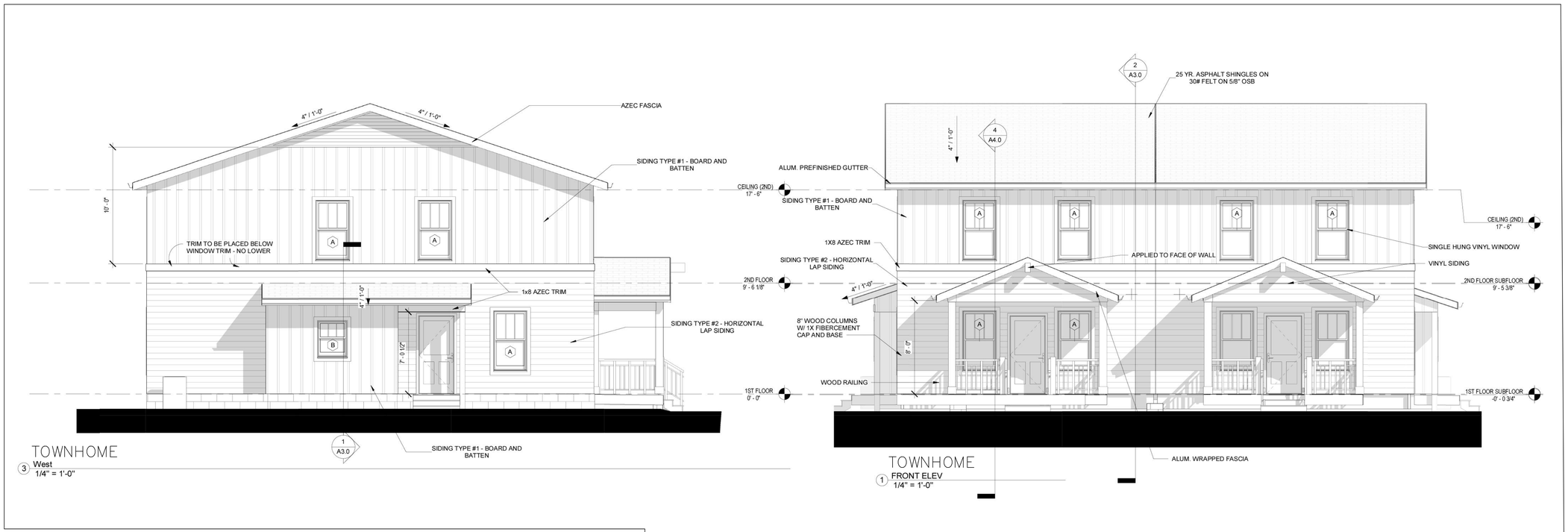
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PROJECT NUMBER: 25113
DATE: 8-5-26

CONCEPTUAL MASTER SITE PLAN

C-200

SCALE: 1"=30'





SINGLE FAMILY

FRONT ELEVATION



2 REAR ELEVATION TOWNHOME
1/4" = 1'-0"

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NORTH CAROLINA PROFESSIONAL SEAL DAVID L. DERTON

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BUILDING ELEVATIONS

C-901

SCALE: 1"=30'

GRADING AND EROSION CONTROL PLANS

for

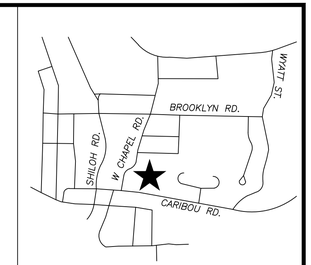
ASHEVILLE AREA HABITAT FOR HUMANITY

TRIED STREET SUBDIVISION

CITY OF ASHEVILLE
BUNCOMBE COUNTY
NORTH CAROLINA

STORMWATER PLANS

SHEET NO.	DESCRIPTION
C-300	GRADING AND EROSION CONTROL PLAN
C-301-304	GRADING AND EROSION CONTROL DETAILS



VICINITY MAP
NOT TO SCALE

DEVELOPMENT BLOCK

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REVISIONS

DATE	DESCRIPTION

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PROJECT NUMBER: 25113
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COVER

SCALE: AS NOTED

NOTES:

1.) MEASURES BEYOND THOSE SHOWN ON THE PLANS SHOULD BE APPROVED BY THE OWNER.
2.) CONTRACTOR SHALL OBTAIN A COPY OF THE APPROVED SEDIMENTATION AND EROSION CONTROL PERMIT AND FOLLOW ALL DIRECTIVES. CONTRACTOR SHALL READ AND UNDERSTAND THE NPDES REQUIREMENTS OF THE PERMIT INCLUDING BUT NOT LIMITED TO:
–PLACEMENT OF RAIN GAUGE ON THE SITE
–INSPECTION OF ALL EROSION CONTROL MEASURES FOLLOWING SPECIFIED RAINFALL EVENTS OR WEEKLY.
–UPKEEP OF INSPECTION LOG FOR REVIEW UPON REQUEST BY NCDENR, LOCAL EROSION CONTROL AUTHORITY, OWNER OR ENGINEER.
3.) CONTRACTOR SHALL MAINTAIN ALL EROSION CONTROL MEASURES THROUGHOUT THE LIFE OF THE PROJECT.
4.) CONTRACTOR SHALL REMOVE ALL EROSION CONTROL MEASURES AT COMPLETION OF PROJECT, AFTER SITE HAS STABILIZED AND RESTORE TO FINAL GRADE.
5.) CONTRACTOR TO PLACE STRAW BALES OR BY OTHER MEANS PREVENT ONSITE EROSION FROM LEAVING THE SITE AT THE END OF EACH WORKING DAY.
6.) NO SLOPES SHALL BE CONSTRUCTED STEEPER THAN A 2:1 AND AND SLOPES STEEPER THAN A 4:1 TO SHALL BE SEEDED AND MATTED WITH NORTH AMERICAN GREEN SC–150 OR APPROVED EQUAL.
7.) CONTRACTOR SHALL ENSURE NO SILT ENTERS INTO THE EXISTING STREETS. IF SILT OR DEBRIS ENTERS THE EXISTING STREETS, THEN THE CONTRACTOR MUST IMMEDIATELY REMOVE THE SILT AT THE CONTRACTORS EXPENSE.
8.) UTILITIES MAY EXIST WITHIN THE PROJECT BOUNDARY THAT ARE NOT SHOWN ON THE SURVEY, CONTRACTOR IS RESPONSIBLE FOR CALLING 811 PRIOR TO AND LAND DISTURBING ACTIVITY.
9.) IF ANY BORROW OR WASTE MATERIAL IS GENERATED DURING GRADING OPERATIONS, AN APPROVED EROSION AND SEDIMENTATION CONTROL PERMIT MUST BE SECURED FOR THE BORROW OR WASTE MATERIAL SITE PRIOR TO INITIATION OF ANY LAND DISTURBING ACTIVITY.
10.) NO STREAM OR WETLAND IMPACTS ARE PROPOSED FOR THIS PROJECT.
11.) 2' CONTOUR INTERVAL
12.) ALL STORM DRAINAGE INLETS (INCLUDING ALL EXISTING INLETS) SHALL HAVE INLET PROTECTION AS FOUND ON THE DETAIL SHEET.
13.) THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL FIELD STAKING NECESSARY FOR THE CONSTRUCTION OF THE PROJECT. THE ENGINEER WILL PROVIDE THE CONTRACTOR WITH AN ELECTRONIC COPY OF THE DESIGN FOR STAKING PURPOSES. HOWEVER ALL ELECTRONIC INFORMATION SHOULD BE COORDINATED WITH THE SIGNED AND APPROVED PLANS.
14.) ALL PROPOSED CONTOURS AND SPOT ELEVATIONS ARE TO FINISHED GRADE.
15.) ALL FILL SLOPES SHALL BE COMPACTED FULL DEPTH TO NOT LESS THAN 95 PERCENT MAXIMUM DENSITY (STANDARD PROCTOR SHALL BE PLACED ON A SURFACE CLEARED OF GROWTH AND DEBRIS, AND BE PROPERTY BENCHED AND DRAINED.
16.) MEASURES BEYOND THOSE SHOWN ON THE PLANS SHOULD BE APPROVED BY THE OWNER.
17.) CONTRACTOR TO ONLY REMOVE TREES WITHIN THE APPROVED LIMITS OF DISTURBANCE, ALL OTHERS ARE TO REMAIN.

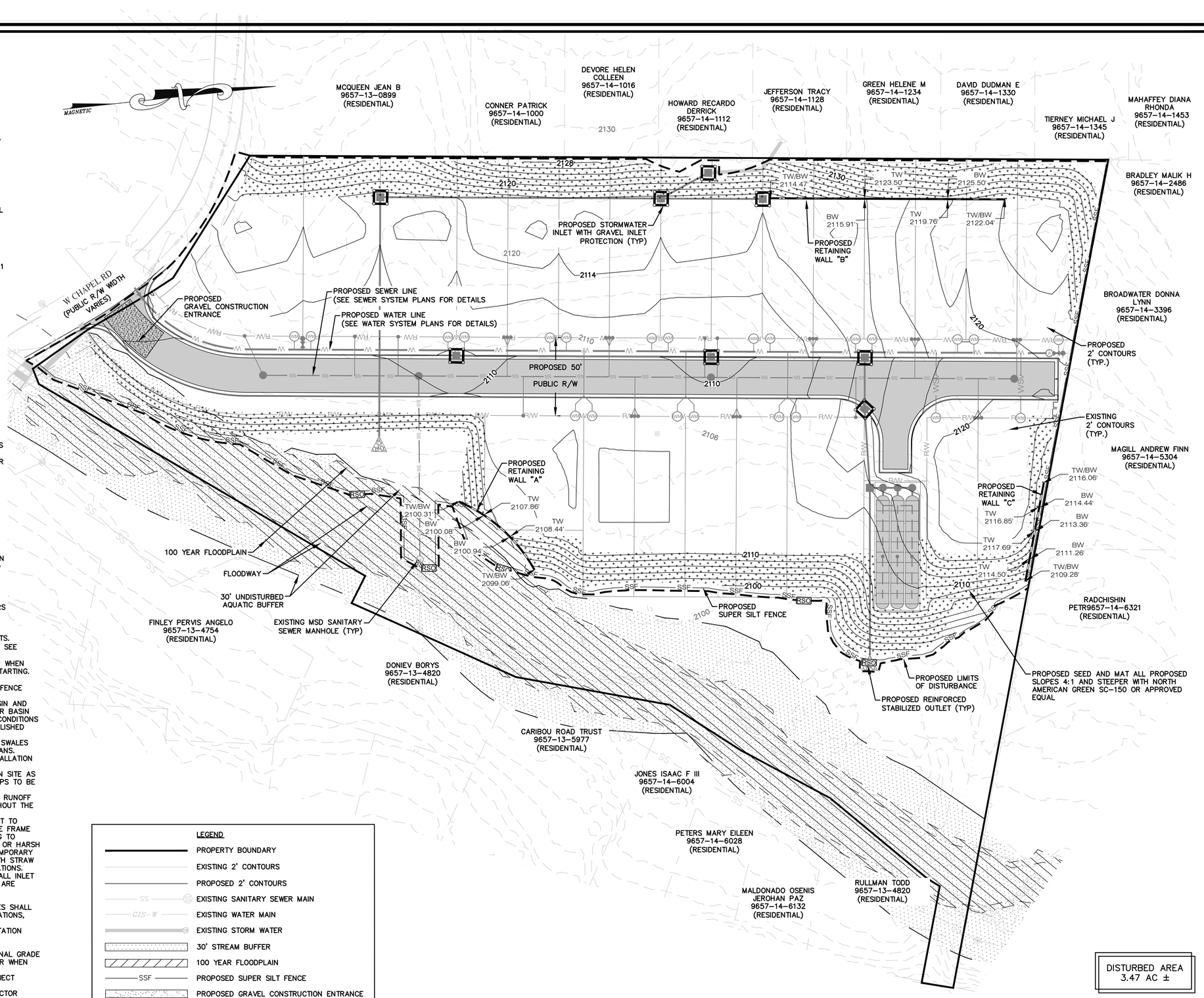
EROSION CONTROL CONSTRUCTION SEQUENCE

1. OBTAIN PLAN APPROVAL AND APPLICABLE PERMITS.
2. HOLD PRE CONSTRUCTION CONFERENCE. (PLEASE SEE NPDES REQUIREMENTS ON THIS SHEET).
3. CONTRACTOR SHALL NOTIFY THE COA INSPECTOR WHEN PROJECT IS WITHIN 48 HOURS OF CONSTRUCTION STARTING.
4. INSTALL STABILIZED CONSTRUCTION ENTRY/EXIT
5A. INSTALL PERIMETER MEASURES INCLUDING SILT FENCE AND REINFORCED STABILIZED OUTLETS.
5B. INSTALL AND STABILIZE SKIMMER SEDIMENT BASIN AND BASIN INLETS. CONTRACTOR TO ENSURE GRADING OR BASIN INSTALLATION DURING ANTICIPATED WET–WEATHER CONDITIONS DOES NOT OCCUR. GROUND COVER IS TO BE ESTABLISHED IMMEDIATELY.
5C. INSTALL AND STABILIZE TEMPORARY DIVERSION SWALES AS SHOWN ON GRADING AND EROSION CONTROL PLANS. CLEAR ONLY THE AREAS NECESSARY FOR THE INSTALLATION OF EROSION CONTROL MEASURES.
6. CLEAR AND GRUB SITE. STOCK PILE TOP SOIL ON SITE AS DIRECTED BY ENGINEER. ALL STUMPS AND WOODCHIPS TO BE REMOVED OFFSITE.
7. ROUGH GRADE SITE IN A MANNER THAT DIRECTS RUNOFF TOWARDS THE PROPOSED SEDIMENT BASIN THROUGHOUT THE DURATION OF THE PROJECT.
8. ANY DENUDED AREA THAT WILL NOT BE BROUGHT TO FINAL GRADE WITHIN THE NPDES STABILIZATION TIME FRAME SHALL IMMEDIATELY RECEIVE A TEMPORARY SEEDING TO TEMPORARILY STABILIZE THE AREA. IF THE SEASON OR HARSH CONDITIONS PREVENT THE ESTABLISHMENT OF A TEMPORARY COVER, DISTURBED AREAS SHALL BE MULCHED WITH STRAW OR EQUIVALENT MATERIAL ACCORDING TO SPECIFICATIONS.
9. CONSTRUCT STORM DRAINAGE SYSTEM AND INSTALL INLET PROTECTION AROUND EACH CATCH BASIN AS THEY ARE INSTALLED.
10. FINAL GRADE SITE.
11. ALL EROSION AND SEDIMENT CONTROL PRACTICES SHALL BE INSPECTED IN ACCORDANCE WITH NPDES REGULATIONS, NEEDED REPAIRS SHALL BE MADE IMMEDIATELY.
12. AFTER SITE IS FINE GRADED, PERMANENT VEGETATION SHALL BE INSTALLED IN ACCORDANCE WITH NPDES REQUIREMENTS.
13. ABANDON SEDIMENT BASIN AND RESTORE TO FINAL GRADE
14. CONTRACTOR SHALL NOTIFY THE COA INSPECTOR WHEN PROJECT IS READY FOR CLOSE OUT INSPECTION.
15. FILE FOR NPDES NCG010000 e–NOT WHEN PROJECT CLOSE OUT INSPECTION IS RECEIVED FROM COA.
16. AT THE END OF EACH WORK DAY, THE CONTRACTOR SHALL ESTABLISH A BERM OR DITCH AT THE TOP OF ALL FILL SLOPES. THE BERM OR DITCH SHALL BE CONSTRUCTED TO PREVENT POTENTIAL RUNOFF FROM SHEET FLOWING OVER AND DOWN THE SLOPE. POSITIVE DRAINAGE SHALL BE ESTABLISHED TO THE INLETS OF ANY SLOPE DRAINS.

APPROXIMATE EARTHWORK SUMMARY

CUT: 11,436 CY
FILL: 14,511 CY

NET FILL: 3,075 CY



LEGEND

- PROPERTY BOUNDARY
- EXISTING 2' CONTOURS
- PROPOSED 2' CONTOURS
- EXISTING SANITARY SEWER MAIN
- EXISTING WATER MAIN
- EXISTING STORM WATER
- 30' STREAM BUFFER
- 100 YEAR FLOODPLAIN
- PROPOSED SUPER SILT FENCE
- PROPOSED GRAVEL CONSTRUCTION ENTRANCE
- PROPOSED GRAVEL INLET PROTECTION
- PROPOSED REINFORCED STABILIZED OUTLET
- PROPOSED LIMITS OF DISTURBANCE
- PROPOSED SLOPE MATTING

WGLA Engineering

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NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 049181 FRED L. DERIDDER
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REVISIONS

DATE	DESCRIPTION

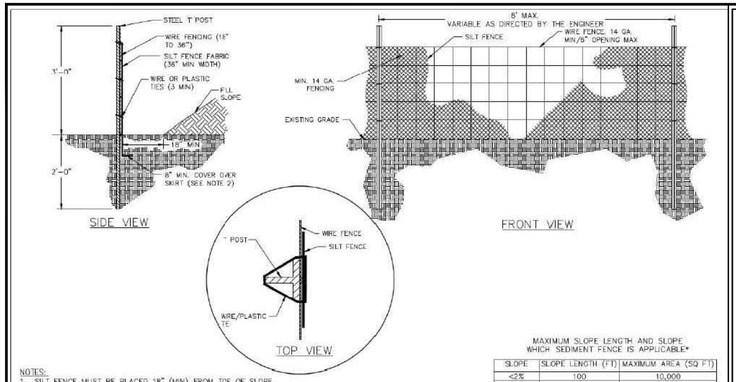
811 Know what's below. Call before you dig.

PROJECT NUMBER: 25113
DATE: 8-5-26

GRADING AND EROSION CONTROL PLAN

C-300

SCALE: 1"=30'



NOTES:
1. SILT FENCE MUST BE PLACED 18" (MIN) FROM TOE OF SLOPE. IT CAN NOT BE USED TO HOLD BACK FILL MATERIALS.
2. BOTTOM 12 INCHES OF SILT FENCE MUST BE BURIED. PLACE IT IN A TRENCH 8" DEEP AND 4" WIDE.
3. USE SILT FENCE ONLY WHEN DRAINAGE AREA DOES NOT EXCEED 1/4 ACRE AND NEVER IN AREAS OF CONCENTRATED FLOW OR IN A STREAM BED.

MAXIMUM SLOPE LENGTH AND SLOPE WHICH SEDIMENT FENCE IS APPLICABLE*

SLOPE	SLOPE LENGTH (FT)	MAXIMUM AREA (SQ FT)
<2%	100	10,000
2 TO 5%	75	7,500
5 TO 10%	50	5,000
10 TO 20%	25	2,500
>20%	15	1,500

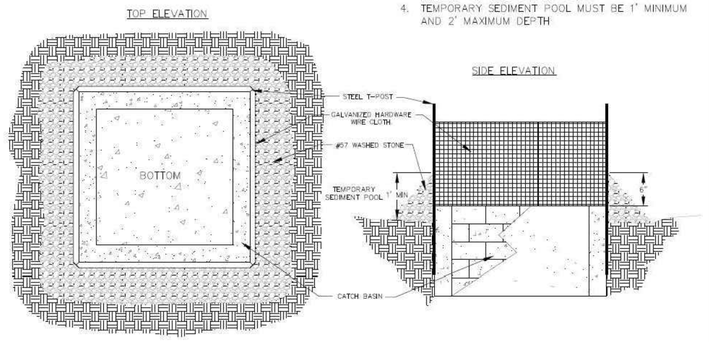
* TABLE INFORMATION TAKEN FROM THE NORTH CAROLINA EROSION AND SEDIMENT CONTROL PLANNING AND DESIGN MANUAL, DETAIL 6.62A.

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Standard Specifications and Details Manual

STANDARD TEMPORARY SILT FENCE

REVISIONS DATE	DESCRIPTION	STD. NO.
6/6/15	MINOR GRAPHIC REP. REVISIONS	7.01

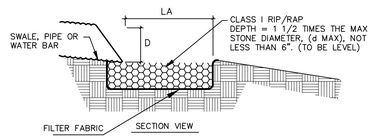
NOTES:
1. SILT FENCE IS NOT ACCEPTABLE IN PLACE OF HARDWARE CLOTH.
2. ONLY STEEL T-POST ARE ACCEPTABLE.
3. #57 WASHED STONE MUST BE A MIN 6" ABOVE THE TOP OF THE CATCH BASIN.
4. TEMPORARY SEDIMENT POOL MUST BE 1' MINIMUM AND 2' MAXIMUM DEPTH.



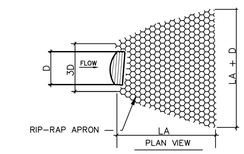
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STANDARD CATCH BASIN INLET PROTECTION

REVISIONS DATE	DESCRIPTION	STD. NO.
		7.11

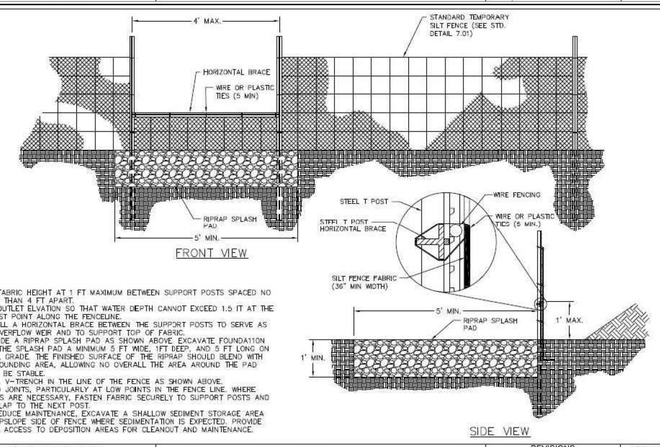


NUMBER	D	LA	d50 SIZE



NOTES
1) d50 = MEDIAN STONE SIZE dMAX = 1.5 X d50
2) OUTLET PROTECTION TO BE INSTALLED LEVEL BOTH LONGITUDINALLY (LA) AND HORIZONTALLY

MAINTENANCE:
INSPECT RIPRAP OUTLET STRUCTURE WEEKLY AND AFTER SIGNIFICANT (1/2 INCH OR GREATER) RAINFALL EVENTS TO SEE IF ANY EROSION AROUND OR BELOW THE RIPRAP HAS TAKEN PLACE, OR IF STONES HAVE BEEN DISLODGED. IMMEDIATELY MAKE ALL NEEDED REPAIRS TO PREVENT FURTHER DAMAGE.

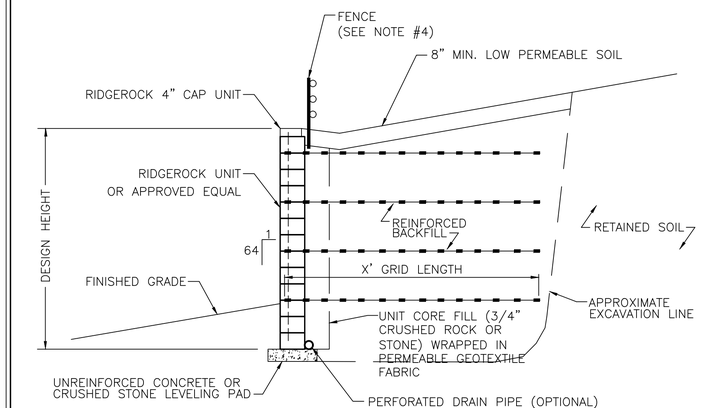


NOTES:
1. SET FABRIC HEIGHT AT 1 FT MAXIMUM BETWEEN SUPPORT POSTS SPACED NO MORE THAN 4 FT APART.
2. SET OUTLET ELVATION SO THAT WATER DEPTH CANNOT EXCEED 1.5 IT AT THE LOWEST POINT ALONG THE FENCELINE.
3. INSTALL A HORIZONTAL BRACE BETWEEN THE SUPPORT POSTS TO SERVE AS AN OVERFLOW WEIR AND TO SUPPORT TOP OF FABRIC.
4. PROVIDE A RIPRAP SPLASH PAD AS SHOWN ABOVE. EXCAVATE FOUNDATION FOR THE SPLASH PAD A MINIMUM 5 FT WIDE, 1FT DEEP, AND 5 FT LONG ON LEVEL GRADE. THE FINISHED SURFACE OF THE RIPRAP SHOULD BLEND WITH SURROUNDING AREA, ALLOWING NO OVERALL THE AREA AROUND THE PAD MUST BE STABLE.
5. DIG A V-TRENCH IN THE LINE OF THE FENCE AS SHOWN ABOVE.
6. AVOID JOINTS, PARTICULARLY AT LOW POINTS IN THE FENCE LINE. WHERE JOINTS ARE NECESSARY, FASTEN FABRIC SECURELY TO SUPPORT POSTS AND OVERLAP TO THE NEXT POST.
7. TO REDUCE MAINTENANCE, EXCAVATE A SHALLOW SEDIMENT STORAGE AREA ON UPSLOPE SIDE OF FENCE WHERE SEDIMENTATION IS EXPECTED. PROVIDE GOOD ACCESS TO DEPOSITION AREAS FOR CLEANOUT AND MAINTENANCE.

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STANDARD TEMPORARY SILT FENCE WITH REINFORCED STABILIZED OUTLET

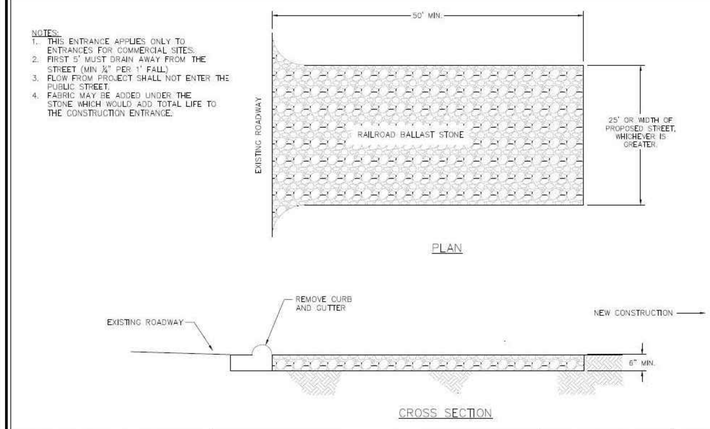
REVISIONS DATE	DESCRIPTION	STD. NO.
		7.01A



MODULAR BLOCK RETAINING WALL SECTION

NOTES: NTS

1. HEIGHTS ARE APPROXIMATE ONLY & DO NOT ACCOUNT FOR EMBEDMENT.
2. CONTRACTOR SHALL PROVIDE DESIGN BY A NORTH CAROLINA LICENSED P.E. FOR ALL RETAINING WALLS OVER 4' IN HEIGHT.
3. RETAINING WALL HEIGHTS AND LOCATIONS MAY BE ADJUSTED TO ACCOMMODATE FIELD CONDITIONS. ALL CHANGES MUST BE APPROVED BY THE ENGINEER AND THE OWNER.
4. PROVIDE FENCE AT TOP OF ALL WALLS (TYPE "AMERISTAR MONTAGE 3 RAIL, BLACK, 48IN HEIGHT" OR APPROVED EQUAL).
5. CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL APPLICABLE BUILDING PERMITS REQUIRED FOR RETAINING WALL CONSTRUCTION.



NOTES:
1. THIS ENTRANCE APPLIES ONLY TO ENTRANCES FOR COMMERCIAL SITES.
2. FIRST 5' MUST DRAIN AWAY FROM THE STREET (MIN ¼" PER 1' FALL)
3. FLOW FROM PROJECT SHALL NOT ENTER THE PUBLIC STREET.
4. FABRIC MAY BE ADDED UNDER THE STONE WHICH WOULD ADD TOTAL LIFE TO THE CONSTRUCTION ENTRANCE.

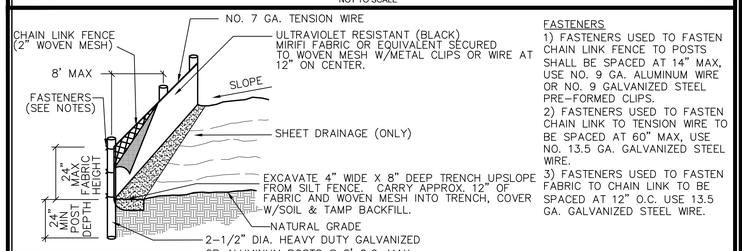
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COMMERCIAL CONSTRUCTION ENTRANCE

REVISIONS DATE	DESCRIPTION	STD. NO.
		7.03

RIP RAP OUTLET PROTECTION

5-29-26 — NOT TO SCALE — 3.06



FASTENERS
1) FASTENERS USED TO FASTEN CHAIN LINK FENCE TO POSTS SHALL BE SPACED AT 14" MAX, USE NO. 9 GA. ALUMINUM WIRE OR NO. 9 GALVANIZED STEEL PRE-FORMED CLIPS.
2) FASTENERS USED TO FASTEN CHAIN LINK TO TENSION WIRE TO BE SPACED AT 60" MAX, USE NO. 13.5 GA. GALVANIZED STEEL WIRE.
3) FASTENERS USED TO FASTEN FABRIC TO CHAIN LINK TO BE SPACED AT 12" O.C. USE 13.5 GA. GALVANIZED STEEL WIRE.

CONSTRUCTION SPECIFICATIONS
1. INSTALL 2 1/2" GALVANIZED OR ALUMINUM POSTS @ 8' O.C. MAX. SUPPORT POSTS SHOULD BE DRIVEN SECURELY INTO THE GROUND A MINIMUM OF 24 INCHES.
2. EXCAVATE A TRENCH APPROXIMATELY 4 INCHES WIDE AND 8 INCHES DEEP ALONG THE PROPOSED LINE OF POSTS AND UPSLOPE FROM THE BARRIER.
3. INSTALL 2" WOVEN MESH FASTENED SECURELY TO THE UPSLOPE SIDE OF THE POSTS. EXTEND THE WOVEN MESH TO THE BOTTOM OF THE TRENCH. THEN INSTALL FILTER FABRIC OVER THE 2 1/2" WOVEN MESH. WIRE OR PLASTIC ZIP TIES SHOULD HAVE MINIMUM 50 POUNDS TENSILE STRENGTH
4. CONSTRUCT THE FILTER FABRIC FROM A CONTINUOUS ROLL CUT TO THE LENGTH OF THE BARRIER TO AVOID JOINTS. WHEN JOINTS ARE NECESSARY, SECURELY FASTEN THE FILTER CLOTH ONLY AT A SUPPORT POST WITH 8 FEET MINIMUM OVERLAP TO THE NEXT POST.
5. ENSURE THAT THE HEIGHT OF THE SEDIMENT FENCE DOES NOT EXCEED 24 INCHES ABOVE THE GROUND SURFACE.
6. PLACE 12 INCHES OF THE FILTER FABRIC AND 2 1/2" WOVEN MESH ALONG THE BOTTOM AND SIDE OF THE TRENCH.
7. BACKFILL THE TRENCH WITH SOIL AND COMPACT. THOROUGH COMPACTION OF THE BACKFILL IS CRITICAL TO SILT FENCE PERFORMANCE.
8. DO NOT ATTACH FILTER FABRIC TO EXISTING TREES.
9. SILT FENCES SHOULD NOT BE USED IN AREAS OF CONCENTRATED FLOW (CREEKS, SWALES, ECT.)

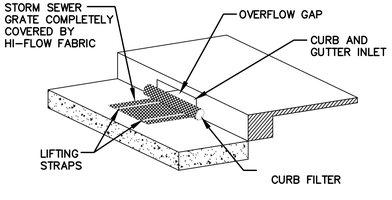
SUPER SILT FENCE

5-1-26 — NOT TO SCALE — 3.12

INSTALLATION:
1. PLACE THE EMPTY UNIT OVER THE GRATE AS THE GRATE STANDS ON END.
2. TUCK THE ENCLOSURE FLAP INSIDE TO COMPLETELY ENCLOSE THE GRATE.
3. HOLDING THE LIFTING DEVICES, BEING CAREFUL NOT TO DAMAGE THE SEWN FABRIC UNIT, INSERT THE GRATE INTO ITS FRAME, STREET SIDE FIRST, THEN LOWER THE BACK EDGE WITH CYLINDRICAL TUBE INTO PLACE. THE CYLINDRICAL TUBE SHOULD BE PARTIALLY BLOCKING THE CURB HOOD OPENING WHEN INSTALLED PROPERLY.

MAINTENANCE:
1. THE CONTRACTOR SHALL REMOVE ALL ACCUMULATED SEDIMENT AND DEBRIS FROM THE SURFACE AND VICINITY OF THE UNIT AFTER EACH RAIN EVENT OR AS DIRECTED BY ENGINEER/INSPECTOR. DISPOSE OF UNIT NO LONGER IN USE AT AN APPROPRIATE RECYCLING OR SOLID WASTE FACILITY.

NOTE:
SILT SAC SHALL HAVE OVERFLOW BYPASS PORTS



INLET PROTECTION

CURB INLET
8-13-24 — NOT TO SCALE — 3.14

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REVISIONS DATE	DESCRIPTION

811 Know what's below. Call before you dig.

PROJECT NUMBER: 25113
DATE: 8-5-26

GRADING AND EROSION CONTROL DETAILS

C-301

SCALE: AS NOTED

SEEDING SPECIFICATIONS

I. TEMPORARY COVER

A. LIME & FERTILIZER
CONTRACTOR SHALL FURNISH AND APPLY LIME AND FERTILIZER TO THE SOIL AS REQUIRED TO PROVIDE SATISFACTORY CONDITIONS FOR SEED GERMINATION.

A NORTH CAROLINA DEPARTMENT OF AGRICULTURE SOILS TEST OR EQUAL SHALL BE OBTAINED FOR ALL AREAS TO BE SEEDED. RECOMMENDED FERTILIZER AND pH ADJUSTING PRODUCTS SHALL BE INCORPORATED INTO APPLICABLE AREAS BASED ON THE TEST RESULTS.

THESE MATERIALS SHALL BE SPREAD UNIFORMLY OVER THE AREA TO BE PLANTED. THE SOIL SHALL BE TILLED TO A DEPTH OF 3 – 4 INCHES WITH EQUIPMENT APPROVED BY THE ENGINEER.

B. TEMPORARY COVER
SEEDING – CONTRACTOR SHALL SELECT A QUICK GROWING GRASS WITH HIGH SEEDING VIGOR THAT IS SUITED TO THE AREA, THE TIME OF PLANTING, AND THAT WILL NOT INTERFERE WITH PLANT TO BE SOWN LATER FOR PERMANENT COVER.

MAY THROUGH AUGUST
SUNDANGRASS 50 LB / AC
OR GERMAN MILLET 40 LB / AC

SEPT. THROUGH APRIL
RYEGRAIN 120 LB / AC

ALL SEEDS SHALL HAVE BEEN TESTED NOT MORE THAN 6 MONTHS PRIOR TO THE DATE OF SEEDING.

CONTRACTOR SHALL APPLY SEED UNIFORMLY BY HAND, CYCLONE SEEDER, DRILL, CULTIPACKER SEEDER, OR HYDRAULICALLY.

A SLURRY MIXTURE OF WATER, FERTILIZER, SEED AND CELLULOSE FIBER MULCH IS ACCEPTABLE ON THIS PROJECT.

C. MULCHING
IN ORDER TO REDUCE DAMAGE FROM WATER RUN–OFF AND IMPROVE MOISTURE CONDITIONS FOR SEEDLINGS, A MULCH MATERIAL SHALL BE FURNISHED WHEN TEMPORARY SEEDING IS TO BE DONE. ACCEPTABLE MATERIALS ARE:
–DRY UNCHOPPED, UNWEATHERED SMALL GRAIN STRAW OR HAY FREE OF SEEDS OF COMPETING PLANTS – 1–2 TONS / ACRE
–WOOD FIBER (EXCELSIOR)
–WOOD CELLULOSE FIBER – 500 LBS / ACRE WITHOUT STRAW
–JUTE MATTING

II. PERMANENT COVER

A. CONTRACTOR SHALL FURNISH AND APPLY

1– A NORTH CAROLINA DEPARTMENT OF AGRICULTURE SOILS TEST OR EQUAL SHALL BE OBTAINED FOR ALL AREAS TO BE SEEDED. RECOMMENDED FERTILIZER AND pH ADJUSTING PRODUCTS SHALL BE INCORPORATED INTO APPLICABLE AREAS BASED ON THE TEST RESULTS.

2– 2.3 LBS / 1000 SF OF KENTUCKY 31 TALL FESCUE (100 LBS / ACRE)

IN THE MANNER DESCRIBED ABOVE IN PARTS 1, 2 AND 3.

APPLY NURSE CROP AS FOLLOWS:
MAY 1 – AUG 15 – 10 LBS / AC GERMAN MILLET OR
– 15 LBS / AC SUNDANGRASS
AUG 15 – MAY 1 – 40 LBS / AC RYE (GRAIN)

B. SEEDING DATES: KY.31 TALL FESCUE
(BELOW 2500' ELEV)
AUG 20 – SEPT 15
MARCH 1 – MAY 1

(ABOVE 2500' ELEV)
JULY 15 – AUG 30
MARCH 5 – MAY 15

C. MULCHING
APPLY 4000 LB / AC OF GRAIN STRAW SUITABLY TACKED DOWN. ADD NETTING TO STEEP SLOPES AND STAPLE PER MANUFACTURERS RECOMMENDATIONS

III. SOIL PREPARATION

A. GENERAL REQUIREMENTS
1–PREPARATION FOR PRIMARY/PERMANENT STABILIZATION SHALL NOT BEGIN UNTIL ALL CONSTRUCTION AND UTILITY WORK WITHIN THE PREPARATION AREA IS COMPLETE. HOWEVER, IT MAY BE NECESSARY TO PREPARE FOR NURSE CROPS PRIOR TO COMPLETION OF CONSTRUCTION AND INSTALLATION OF UTILITIES.

2–A NORTH CAROLINA DEPARTMENT OF AGRICULTURE SOILS TEST (OR EQUAL) SHALL BE OBTAINED FOR ALL AREAS TO BE SEEDED, SPRIGGED, SODDED OR PLANTED. RECOMMENDED FERTILIZER AND pH ADJUSTING PRODUCTS SHALL BE INCORPORATED INTO THE PREPARED AREAS AND BACKFILL MATERIAL PER THE TEST.

3–ALL AREAS TO BE SEEDED OR PLATED SHALL BE TILLED OR RIPPED TO A DEPTH OF 4". RIPPING CONSISTS OF CREATING FISSURES IN A CRISS–CROSS PATTERN OVER THE ENTIRE SURFACE AREA USING AN IMPLEMENT THAT WILL NOT GLAZE THE SIDE WALLS OF THE FISSURES. SITE PREPARATION THAT DOES NOT COMPLY WITH THESE DOCUMENTS SHALL NOT BE ACCEPTABLE. THE DEPTH OF SOIL PREPARATION MAY BE ESTABLISHED AS A RANGE BASED ON THE APPROVAL OF THE REVIEW AGENCY. ONCE TILLED OR RIPPED ACCORDING TO THE APPROVED PLAN, ALL AREAS ARE TO BE RETURNED TO FINAL GRADE. pH MODIFIERS AND/OR OTHER SOIL AMENDMENTS SPECIFIED IN THE SOIL TESTS CAN BE ADDED DURING THE SOIL PREPARATION PROCEDURE OR AS DESCRIBED BELOW.

4–ALL STONES LARGER THAN 3" ON ANY SIDE, STICKS, ROOTS, AND OTHER EXTRANEOUS MATERIALS THAT SURFACE DURING THE BED PREPARATION SHALL BE REMOVED.

B. AREAS TO BE SEEDED
1–TILL OR DISC THE PREPARED AREAS TO BE SEEDED TO A MINIMUM DEPTH OF 4". REMOVE STONES LARGER THAN 3" ON ANY SIDE, STICKS, ROOTS, AND OTHER EXTRANEOUS MATERIALS THAT SURFACE. IF NOT INCORPORATED IN THE RIPPING PROCESS, ADD pH MODIFIERS AND FERTILIZERS AT THE RATE SPECIFIED.

2–RECOMPACT THE AREA UTILIZING A CULTIPACKER ROLLER. THE FINISHED GRADE SHALL BE SMOOTH EVEN SOIL SURFACE WITH LOOSE, UNIFORMLY FINE TEXTURE. ALL RIDGES AND DEPRESSIONS SHALL BE REMOVED AND FILLED TO PROVIDE THE APPROVED SURFACE DRAINAGE. SEEDING THE GRADED AREAS IS TO BE DONE IMMEDIATELY AFTER FINISHED GRADES ARE OBTAINED AND SEEDBED PREPARATION IS COMPLETE.

C. AREAS TO BE SPRIGGED, SODDED, AND/OR PLANTED
1–AT THE TIME OF PLANTING, TILL OR DISC THE PREPARED AREA TO A DEPTH OF 4"–6" BELOW THE APPROVED FINISHED GRADE. REMOVE ALL STONES LARGER THAN 3" ON ANY SIDE, STICKS, ROOTS AND OTHER EXTRANEOUS MATERIALS THAT SURFACE. IF NOT INCORPORATED DURING THE RIPPING PROCESS, ADD pH MODIFIERS, FERTILIZER AND OTHER RECOMMENDED SOIL AMENDMENTS.

2–RECOMPACT THE AREA UTILIZING A CULTIPACKER ROLLER AND PREPARE FINAL GRADES AND DESCRIBED ABOVE. INSTALL SPRIGS, SOD AND PLANTS AS DIRECTED IMMEDIATELY AFTER FINE GRADING IS COMPLETE. MULCH, MAT AND/OR TACK AS SPECIFIED.

IV. CLOSEOUT

1–REFER TO NCG01 REQUIREMENTS AND CONSTRUCTION SEQUENCE FOR GROUND STABILIZATION TIMEFRAMES.

2–CONTRACTOR RESPONSIBLE FOR ESTABLISHING GROUND COVER PRIOR TO CLOSE OUT OF EROSION CONTROL PERMIT OR ACCEPTANCE BY OWNER. GROUND COVER WILL BE CONSIDERED ESTABLISHED WHEN ALL EXPOSED SOILS HAVE BEEN STABILIZED WITH A PERMANENT PERENNIAL VEGETATIVE COVER WITH A DENSITY OF 80% WITH NO CONTIGUOUS BARE AREAS GREATER THAN ONE SQUARE YARD. VEGETATION DENSITY SHALL BE DETERMINED BY THE ENGINEER OR EROSION CONTROL INSPECTOR.

3–MULTIPLE SEEDING EFFORTS BY THE CONTRACTOR MAY BE REQUIRED FOR PORTIONS OF OR THE ENTIRE SITE TO ESTABLISH SUITABLE GROUND COVER.

SEEDING SPECIFICATIONS
11–15–23 NOT TO SCALE 3.10

GENERAL CONSTRUCTION NOTES

1. ALL WORK AND CONSTRUCTION ACTIVITIES ON THE PROJECT SITE SHALL COMPLY WITH ALL APPLICABLE OSHA REGULATIONS AND REQUIREMENTS. IT IS THE CONTRACTOR'S RESPONSIBILITY TO MAINTAIN A SAFE WORK SITE.

2. THE ENGINEER AND OWNER RESERVE THE RIGHT TO MODIFY PROJECT WORK ITEMS (INCLUDING GRADING) AS DEEMED NECESSARY FOR THE SUCCESSFUL COMPLETION OF THE PROJECT. THE CONTRACTOR MAY SUGGEST ADJUSTMENTS TO GRADING OR OTHER WORK ITEMS TO BE APPROVED BY THE ENGINEER OR OWNER.

3. THE CONTRACTOR SHALL COMPLY WITH THE GEOTECHNICAL REPORT FOR THE PLACEMENT OF FILL AND COMPACTION REQUIREMENTS. IF NO REPORT IS AVAILABLE, THE FOLLOWING MINIMUM STANDARDS SHALL APPLY:

PLACEMENT OF FILL:
A. PLACE THE MATERIAL IN SUCCESSIVE HORIZONTAL LAYERS NOT EXCEEDING 8" FOR THE FULL WIDTH OF THE CROSS SECTION.
B. FILL SHALL BE PLACED ONLY WHEN IT IS WITHIN 3% OF ITS OPTIMUM MOISTURE CONTENT AS DETERMINED BY A STANDARD PROCTOR ASTM D 698.
C. EACH LAYER OF FILL SHALL BE SPREAD EVENLY AND SHALL BE COMPACTED TO ITS SPECIFIED DENSITY AS DETERMINED BY STANDARD PROCTOR ASTM D 698 BEFORE NEW LAYERS ARE PLACED AND COMPACTED.
D. SLOPED GROUND SURFACES STEEPER THAN ONE VERTICAL TO FOUR HORIZONTAL, ON WHICH FILL IS TO BE PLACED, SHALL BE STEPPED OR BENCHED SUCH THAT FILL MATERIAL WILL BOND TO THE EXISTING SURFACES.
E. EMBANKMENT SLOPES SHALL BE CONSTRUCTED BY FILLING ONE (1) FOOT BEYOND THE PROPOSED FINISHED SLOPE SURFACE FOR EACH LIFT. COMPACTION EQUIPMENT SHALL WORK TO THE EDGE OF EACH LIFT. AFTER THE ENTIRE FILL IS PLACED AND COMPACTED, THE OUTSIDE FOOT OF THE SLOPE SHALL BE TRIMMED TO THE DESIGN SLOPE WITH A DOZER. UNLESS INDICATED ON THE DRAWINGS, NO FILL SLOPES SHALL BE STEEPER THAN 2 HORIZONTAL TO 1 VERTICAL.

COMPACTION:
A. STRUCTURAL FILL UNDER BUILDINGS AND WITHIN 10' OF BUILDING PERIMETER, 100% OF STANDARD PROCTOR THE ENTIRE DEPTH OF FILL.
B. UNDER WALKS, DRIVES, PADS, AND PAVED AREAS: 95% OF STANDARD PROCTOR EXCEPT 100% OF STANDARD PROCTOR IN THE UPPER 2'.
C. UNDER LAWNS AND PLANTING AREAS BEYOND 10' FROM BUILDING: 95% OF STANDARD PROCTOR.
D. BACKFILL IN TRENCHES: COMPLY WITH COMPACTION REQUIREMENTS FOR THE AREA THROUGH WHICH THE TRENCH RUNS.
4. ALL EROSION CONTROL DEVICES SUCH AS SILT FENCES, DIVERSIONS, SEDIMENT TRAPS, ETC. SHALL BE MAINTAINED IN WORKABLE CONDITIONS FOR THE LIFE OF THE PROJECT AND SHALL BE REMOVED AT THE COMPLETION OF THE PROJECT ONLY WITH THE ENGINEER'S APPROVAL. SEE THE NPDES REQUIREMENTS ON THIS PLAN SHEET FOR MORE DETAIL. IF DURING THE LIFE OF THE PROJECT A STORM CAUSES SOIL EROSION WHICH CHANGES THE FINISHED GRADES OR CREATES "GULLIES" AND "WASHED AREAS", THESE SHALL BE REPAIRED BY THE CONTRACTOR AT NO EXTRA COST. THE CONTRACTOR SHALL ADHERE TO THE APPROVED EROSION CONTROL PLAN AND TAKE ANY ADDITIONAL MEASURES NECESSARY TO PREVENT SEDIMENT FROM LEAVING THE SITE.

4. DISPOSABLE MATERIALS:
A. CLEARING AND GRUBBING WASTES SHALL BE REMOVED FROM THE SITE AND PROPERLY DISPOSED OF BY THE CONTRACTOR AT THEIR EXPENSE, UNLESS OTHERWISE SPECIFIED.
B. SOLID WASTES TO BE REMOVED SUCH AS SIDEWALKS, CURBS, PAVEMENT, ETC. MAY BE PLACED IN SPECIFIED DISPOSAL AREAS IF PERMITTED BY THE APPROPRIATE AGENCIES AND APPROVED BY THE OWNER. THIS MATERIAL SHALL BE SPREAD AND MIXED WITH DIRT ELIMINATING ALL VOIDS. THIS MATERIAL SHALL HAVE A MINIMUM COVER OF 2'. THE CONTRACTOR SHALL MAINTAIN SPECIFIED COMPACTION REQUIREMENTS IN THESE AREAS. WHEN DISPOSAL SITES ARE NOT PROVIDED, THE CONTRACTOR SHALL REMOVE THIS WASTE FROM THE SITE AND PROPERLY DISPOSE OF IT AT THEIR EXPENSE.
C. ABANDONED UTILITIES SUCH AS CULVERTS, WATER PIPE, HYDRANTS, CASTING, PIPE APPURTENANCES, UTILITY POLES, ETC. SHALL BE THE PROPERTY OF THE SPECIFIED UTILITY AGENCY OR COMPANY HAVING JURISDICTION. BEFORE THE CONTRACTOR CAN REMOVE, DESTROY, SALVAGE, RE–USE, SELL OR STORE FOR THEIR OWN USE ANY ABANDONED UTILITY, THEY MUST PRESENT TO THE OWNER WRITTEN PERMISSION FROM THE UTILITY INVOLVED.
D. UNLESS OTHERWISE NOTED ON THE PLANS, BURNING WILL NOT BE ALLOWED ON THIS PROJECT. SHOULD BURNING BE ALLOWED BY THE OWNER, IT IS THE CONTRACTOR'S RESPONSIBILITY TO OBTAIN ALL NECESSARY PERMITS (AT THEIR EXPENSE) AND FOLLOW ALL APPLICABLE RULES AND REGULATIONS.

6. UNLESS OTHERWISE SPECIFIED, ALL BASE, PAVING, CURBING AND OTHER CONCRETE WORK SHALL CONFORM TO THE LOCAL MUNICIPALITY OR NCDOT SPECIFICATIONS FOR CONSTRUCTION. ALL WATER AND SEWER CONSTRUCTION SHALL CONFORM TO THE LOCAL UTILITY REQUIREMENTS AND/OR THE NCDENR MINIMUM STANDARDS.

7. IN THE EVENT EXCESSIVE GROUND WATER OR SPRINGS ARE ENCOUNTERED WITHIN THE LIMITS OF CONSTRUCTION, THE CONTRACTOR SHALL INSTALL NECESSARY UNDERDRAINS AND STONE AS DIRECTED BY THE ENGINEER. ALL WORK SHALL BE PAID BASED UPON THE UNIT PRICES UNLESS OTHERWISE SPECIFIED.

8. THE CONTRACTOR IS RESPONSIBLE FOR THE COORDINATION OF ADJUSTMENT OF ALL UTILITY SURFACE ACCESSES (INCLUDING MANHOLE COVERS, VALVE BOXES, ETC.) WHETHER HE PERFORMS THE WORK OR THE UTILITY COMPANY PERFORMS THE WORK.

9. THE CONTRACTOR SHALL CONTROL ALL "DUST" BY PERIODIC WATERING AND SHALL PROVIDE ACCESS AT ALL TIMES FOR PROPERTY OWNERS WITHIN THE PROJECT AND FOR EMERGENCY VEHICLES. ALL OPEN DITCHES AND HAZARDOUS AREAS SHALL BE CLEARLY MARKED IN ACCORDANCE WITH OSHA REGULATIONS.

10. ALL AREAS OF EXPOSED SOIL SHALL BE SEEDED, FERTILIZED AND MULCHED ACCORDING TO THE SPECIFICATIONS. THE FINISHED SURFACE SHALL BE TO GRADE AND SMOOTH, FREE OF ALL ROCKS LARGER THAN 3", EQUIPMENT TRACKS, DIRT CLODS, BUMPS, RIDGES, AND GOUGES PRIOR TO SEEDING. THE SURFACE SHALL BE LOOSENED TO A DEPTH OF 1"+/– TO ACCEPT SEED. THE CONTRACTOR SHALL NOT PROCEED WITH SEEDING OPERATIONS WITHOUT FIRST OBTAINING THE ENGINEER'S APPROVAL OF THE GRADED SURFACE. ALL SEEDING SHALL BE PERFORMED BY A MECHANICAL "HYDRO–SEEDER". THE ENGINEER PRIOR TO SEEDING MUST APPROVE HAND SEEDING ON ANY AREA.

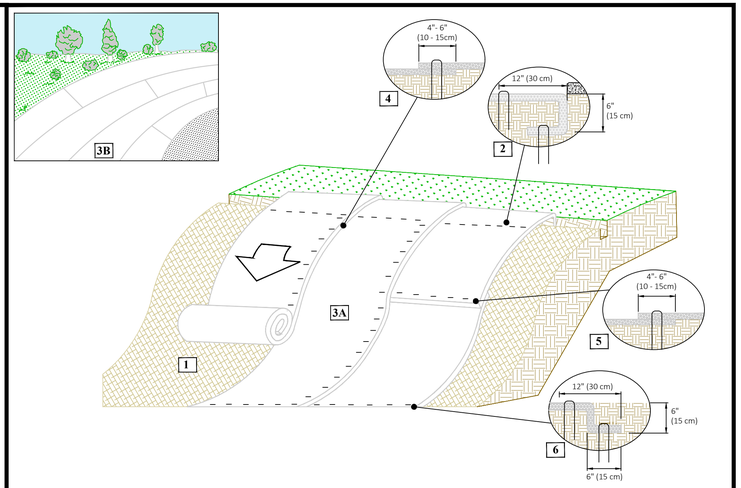
11. GRADED SLOPES AND FILLS SHALL BE PROTECTED WITH ROLLED EROSION CONTROL PRODUCT IF COMPLETED OUTSIDE OF OPTIMUM GERMINATION SEASON WHEN UNFAVORABLE WEATHER CONDITIONS PREVENT ESTABLISHMENT OF VEGETATIVE GROUND COVER.

GENERAL CONSTRUCTION NOTES
12–20–2022 NOT TO SCALE 3.28

EROSION CONTROL SEQUENCE

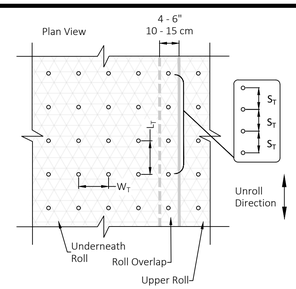
1. OBTAIN PLAN APPROVAL AND APPLICABLE PERMITS
2. NOTIFY LQS INSPECTOR 48 HOURS BEFORE PROJECT STARTS.
3. NO MAJOR GRADING ACTIVITIES OR BASIN CONSTRUCTION ARE TO TAKE PLACE DURING WET WEATHER OR PERIODS OF PREDICTED WET WEATHER I.E. HURRICANES. SITE MUST BE "STORM READY" BEFORE ANY EXTENDED BREAKS IN CONSTRUCTION ACTIVITIES INCLUDING WEEKENDS.
4. INSTALL STABILIZED CONSTRUCTION ENTRY/EXIT
5. CLEAR ONLY THE AREAS NECESSARY FOR THE INSTALLATION OF EROSION CONTROL MEASURES.
6. INSTALL PERIMETER MEASURES INCLUDING SILT FENCE
7. INSTALL SEDIMENT/SKIMMER BASIN(S). BASINS MUST BE STABILIZED IMMEDIATELY WITH ADEQUATE GROUND COVER UPON CONSTRUCTION. PRIOR TO CONSTRUCTION OF THE BASIN, SILT FENCE SHALL BE INSTALLED BELOW THE TOE OF THE PROPOSED EMBANKMENT OF THE BASIN TO PREVENT SEDIMENTATION DAMAGE DURING BASIN CONSTRUCTION
8. INSTALL PERMANENT AND TEMPORARY DIVERSIONS AS SHOWN ON THE PLANS
9. CLEAR AND GRUB SITE.
10. ROUGH GRADE SITE IN A MANNER THAT DIRECTS WATER TOWARD CONSTRUCTED BASINS THROUGHOUT THE DURATION OF THE PROJECT.
11. FOR SITES USING SLOPE DRAINS, AT THE END OF EACH DAY, THE CONTRACTOR SHALL ESTABLISH A BERM OR DITCH AT THE TOP OF ALL FILL SLOPES TO PREVENT POTENTIAL RUNOFF FROM SHEET FLOWING OVER AND DOWN THE SLOPE. POSITIVE DRAINAGE SHALL BE ESTABLISHED TO THE INLETS OF ANY SLOPE DRAINS.
12. REFER TO NCG01 "REQUIRED GROUND STABILIZATION TIMEFRAMES" FOR ESTABLISHMENT OF TEMPORARY AND PERMANENT GROUND COVER REQUIREMENTS THROUGHOUT CONSTRUCTION.
13. INSPECTIONS SHALL BE PERFORMED BY THE CONTRACTOR INCLUDING RECORD KEEPING IN ACCORDANCE WITH NCG01 REQUIREMENTS THROUGHOUT THE PROJECT. NEEDED REPAIRS SHALL BE MADE IMMEDIATELY.
14. CONSTRUCT STORMWATER SYSTEM AND INSTALL INLET PROTECTION BY THE END OF EACH WORKDAY FOR ALL CONSTRUCTED SW INLETS. INSPECT AND CLEAN OUT STORMWATER SYSTEM BEFORE BRINGING ON LINE.
15. AS THE STORMWATER SYSTEM IS CONSTRUCTED, WATER WILL BE DIRECTED TO PROTECTED INLETS AND THE TEMPORARY DIVERSION SWALES CAN BE REMOVED.
16. FINAL GRADE SITE. AFTER SITE IS FINAL GRADED, PERMANENT VEGETATION SHALL BE INSTALLED IN ACCORDANCE WITH NCG01 REQUIREMENTS.
17. CALL AND REQUEST INSPECTION FROM NCDEQ LQS INSPECTOR BEFORE REMOVING SEDIMENT BASIN(S).
18. AFTER THE DRAINAGE AREAS TO THE BASINS HAVE BEEN PERMANENTLY STABILIZED, DEWATER THE BASINS. RESTORE BASIN AREA TO PRE–DEVELOPMENT ELEVATIONS. SMOOTH BASIN SITE TO BLEND WITH THE SURROUNDING AREA, ENSURING THE BASIN SITE WILL NOT POND WATER, AND IMMEDIATELY STABILIZE. DEWATERING OPERATIONS MUST BE DISCHARGED INTO ADEQUATE STILLING BASIN OR COMPARABLE MEASURES TO PREVENT THE DISCHARGE OF SEDIMENT.
19. NOTIFY NCDEQ LQS INSPECTOR WHEN PROJECT IS READY FOR A CLOSE OUT INSPECTION. FILE FOR NCG01 E–NOTICE OF TERMINATION WHEN FINAL CLOSE OUT INSPECTION REPORT IS RECEIVED FROM NCDEQ LQS.

EROSION CONTROL SEQUENCE
NCDEQ LAND QUALITY SECTION (LQS)
9–12–23 NOT TO SCALE 3.07



SLOPE MATTING
ON EMBANKMENT
12–20–2022 NOT TO SCALE 3.21A

1. Prepare soil before installing rolled erosion control products (RECPs), including any necessary application of lime, fertilizer, and seed. Ground surface must be free of debris, rocks, clay clods and raked smooth sufficient to allow intimate contact of the RECP with the soil over the entirety of the installation.
2. Begin at the top of the slope by anchoring the RECPs in a 6" (15 cm) deep X 6" (15 cm) wide trench. Anchor the RECPs with a row of staples/stakes/pins spaced at S_T apart in the bottom of the trench. Backfill and compact the trench after stapling and fold the roll over downslope. Secure RECPs over compacted soil with a row of staples/stakes/pins spaced at S_T apart across the width of the RECPs.
3. Roll the RECPs (A) down or (B) horizontally across the slope. RECPs will unroll with appropriate side against the soil surface. All RECPs must be securely fastened to soil surface by placing staples/stakes/pins in appropriate locations as shown in the staple pattern guide. RollMax RECPs and ECBs should utilize Staple Pattern C, TRMs and VMax materials should utilize Staple Pattern D.
4. The edges of parallel RECPs must be stapled with approximately 4" - 6" (10 - 15 cm) overlap.
5. Consecutive RECPs spliced down the slope must overlapped with the upstream mat atop the downstream mat (shingle style). The overlap should be 4" - 6" (10 - 15 cm).
6. At the terminal end, secure each mat across the width with a row of staples/stakes/pins spaced at S_T. If exposed to flow, foot traffic, wind uplift or other disruption, trench the terminal end in as shown in detail.
7. Fasteners should provide a minimum of twenty pounds of pullout resistance. Six-inch (10 cm) X one-inch (2.5 cm) eleven gauge staples are typically adequate. In loose soils, longer staples may be necessary, twist pins can provide the greatest pullout resistance. In hard or rocky soils, straight pins may by used where staples or twist pins are refused, provided the minimum pullout requirements are met. Bio-degradable fasteners shall not be used with VMax (TRM) or TMax (HPTRM) materials.



- Pin / Staple / Twist Pin, as appropriate for field conditions

	Staple Pattern	
Dimension	C	D
W_T	30" (75 cm)	24" (60 cm)
L_T	30" (75 cm)	20" (50 cm)
S_T	18" (45 cm)	18" (45 cm)
Nominal Frequency	1.7 / SY	3.0 / SY
Application	ECB (Degradable)	TRM (Permanent)

*Note: Staple Pattern A and B used prior to 8/2019 have been discontinued.

SLOPE MATTING
ON EMBANKMENT
12–20–2022 NOT TO SCALE 3.21B

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NORTH CAROLINA PROFESSIONAL ENGINEER SEAL DAVID L. DERIDO
Preliminary Not For Construction

REVISIONS

DATE	DESCRIPTION

811 Know what's below. Call before you dig.

PROJECT NUMBER: 25113
DATE: 8-5-26

GRADING AND EROSION CONTROL DETAILS

C-302

SCALE: AS NOTED

GROUND STABILIZATION AND MATERIALS HANDLING PRACTICES FOR COMPLIANCE WITH THE NCG01 CONSTRUCTION GENERAL PERMIT

Implementing the details and specifications on this plan sheet will result in the construction activity being considered compliant with the Ground Stabilization and Materials Handling sections of the NCG01 Construction General Permit (Sections E and F, respectively). The permittee shall comply with the Erosion and Sediment Control plan approved by the delegated authority having jurisdiction. All details and specifications shown on this sheet may not apply depending on site conditions and the delegated authority having jurisdiction.

SECTION E: GROUND STABILIZATION

Required Ground Stabilization Timeframes		
Site Area Description	Stabilize within this many calendar days after ceasing land disturbance	Timeframe variations
(a) Perimeter dikes, swales, ditches, and perimeter slopes	7	None
(b) High Quality Water (HQW) Zones	7	None
(c) Slopes steeper than 3:1	7	If slopes are 10 feet or less in length and are not steeper than 2:1, 14 days are allowed
(d) Slopes 3:1 to 4:1	14	-7 days for slopes greater than 50' in length and with slopes steeper than 4:1 -7 days for perimeter dikes, swales, ditches, perimeter slopes and HQW Zones -10 days for Falls Lake Watershed
(e) Areas with slopes flatter than 4:1	14	-7 days for perimeter dikes, swales, ditches, perimeter slopes and HQW Zones -10 days for Falls Lake Watershed unless there is zero slope

Note: After the permanent cessation of construction activities, any areas with temporary ground stabilization shall be converted to permanent ground stabilization as soon as practicable but in no case longer than 90 calendar days after the last land disturbing activity. Temporary ground stabilization shall be maintained in a manner to render the surface stable against accelerated erosion until permanent ground stabilization is achieved.

GROUND STABILIZATION SPECIFICATION

Stabilize the ground sufficiently so that rain will not dislodge the soil. Use one of the techniques in the table below:

Temporary Stabilization	Permanent Stabilization
• Temporary grass seed covered with straw or other mulches and tackifiers. • Hydroseeding • Rolled erosion control products with or without temporary grass seed • Appropriately applied straw or other mulch • Plastic sheeting	• Permanent grass seed covered with straw or other mulches and tackifiers • Geotextile fabrics such as permanent soil reinforcement matting (PRSM) • Hydroseeding • Shrubs or other permanent plantings covered with mulch • Uniform and evenly distributed ground cover sufficient to restrain erosion • Structural methods such as concrete, asphalt or retaining walls • Rolled erosion control products with grass seed

Note: The use of techniques listed above which promote and assist in establishment of vegetation does not consitute permanet stabilization prior to the establishment of permanent vegetation.

POLYACRYLAMIDES (PAMS) AND FLOCCULANTS

1. Select flocculants that are appropriate for the soils being exposed during construction, selecting from the NC DWR List of Approved PAMS/Flocculants
2. Apply flocculants at or before the inlets to Erosion and Sediment Control Measures.
3. Apply flocculants at the concentrations specified in the NC DWR List of Approved PAMS/Flocculants and in accordance with the manufacturer's instructions.
4. Provide ponding area for containment of treated Stormwater before discharging offsite.
5. Store flocculants in leak-proof containers that are kept under storm-resistant cover or surrounded by secondary containment structures.

EQUIPMENT AND VEHICLE MAINTENANCE

1. Maintain vehicles and equipment to prevent discharge of fluids.
2. Provide drip pans under any stored equipment.
3. Identify leaks and repair as soon as feasible, or remove leaking equipment from the project.
4. Collect all spent fluids, store in separate containers and properly dispose as hazardous waste (recycle when possible).
5. Remove leaking vehicles and construction equipment from service until the problem has been corrected.
6. Bring used fuels, lubricants, coolants, hydraulic fluids and other petroleum products to a recycling or disposal center that handles these materials.

LITTER, BUILDING MATERIAL AND LAND CLEARING WASTE

1. Never bury or burn waste. Place litter and debris in approved waste containers.
2. Provide a sufficient number and size of waste containers (e.g dumpster, trash receptacle) on site to contain construction and domestic wastes.
3. Locate waste containers at least 50 feet away from storm drain inlets and surface waters unless no other alternatives are reasonably available.
4. Locate waste containers on areas that do not receive substantial amounts of runoff from upland areas and does not drain directly to a storm drain, stream or wetland.
5. Cover waste containers at the end of each workday and before storm events or provide secondary containment. Repair or replace damaged waste containers.
6. Anchor all lightweight items in waste containers during times of high winds.
7. Empty waste containers as needed to prevent overflow. Clean up immediately if containers overflow.
8. Dispose waste off-site at an approved disposal facility.
9. On business days, clean up and dispose of waste in designated waste containers.

PAINT AND OTHER LIQUID WASTE

1. Do not dump paint and other liquid waste into storm drains, streams or wetlands.
2. Locate paint washouts at least 50 feet away from storm drain inlets and surface waters unless no other alternatives are reasonably available.
3. Contain liquid wastes in a controlled area.
4. Containment must be labeled, sized and placed appropriately for the needs of site.
5. Prevent the discharge of soaps, solvents, detergents and other liquid wastes from construction sites.

PORTABLE TOILETS

1. Install portable toilets on level ground, at least 50 feet away from storm drains, streams or wetlands unless there is no alternative reasonably available. If 50 foot offset is not attainable, provide relocation of portable toilet behind silt fence or place on a gravel pad and surround with sand bags.
2. Provide staking or anchoring of portable toilets during periods of high winds or in high foot traffic areas.
3. Monitor portable toilets for leaking and properly dispose of any leaked material. Utilize a licensed sanitary waste hauler to remove leaking portable toilets and replace with properly operating unit.

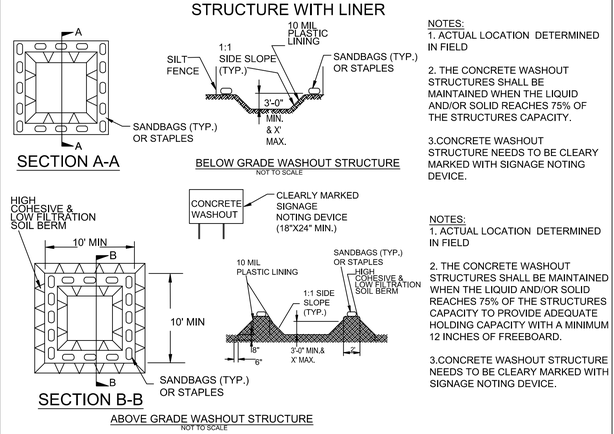
EARTHEN STOCKPILE MANAGEMENT

1. Show stockpile locations on plans. Locate earthen-material stockpile areas at least 50 feet away from storm drain inlets and surface waters unless it can be shown no other alternatives are reasonably available. It is recommended to locate stockpile areas at least 50 feet away from skimmer basins and anywhere stormwater flow is concentrated.
2. Protect stockpile with silt fence installed along toe of slope with a minimum offset of five feet from the toe of stockpile.
3. Provide stable stone access point when feasible.
4. Stabilize stockpile within the timeframes provided on this sheet and in accordance with the approved plan and any additional requirements. Soil stabilization is defined as vegetative, physical or chemical coverage techniques that will restrain accelerated erosion on disturbed soils for temporary or permanent control needs.

HAZARDOUS AND TOXIC WASTE

1. Create designated hazardous waste collection areas on-site.
2. Place hazardous waste containers under cover or in secondary containment.
3. Do not store hazardous chemicals, drums or bagged materials directly on the ground.

ONSITE CONCRETE WASHOUT STRUCTURE WITH LINER



NOTES:
1. ACTUAL LOCATION DETERMINED IN FIELD

2. THE CONCRETE WASHOUT STRUCTURES SHALL BE MAINTAINED WHEN THE LIQUID AND/OR SOLID REACHES 75% OF THE STRUCTURES CAPACITY.

3.CONCRETE WASHOUT STRUCTURE NEEDS TO BE CLEARY MARKED WITH SIGNAGE NOTING DEVICE.

NOTES:
1. ACTUAL LOCATION DETERMINED IN FIELD

2. THE CONCRETE WASHOUT STRUCTURES SHALL BE MAINTAINED WHEN THE LIQUID AND/OR SOLID REACHES 75% OF THE STRUCTURES CAPACITY TO PROVIDE ADEQUATE HOLDING CAPACITY WITH A MINIMUM 12 INCHES OF FREEBOARD.

3.CONCRETE WASHOUT STRUCTURE NEEDS TO BE CLEARY MARKED WITH SIGNAGE NOTING DEVICE.

CONCRETE WASHOUTS

1. Do not discharge concrete or cement slurry from the site.
2. Dispose of, or recycle settled, hardened concrete residue in accordance with local and state solid waste regulations and at an approved facility.
3. Manage washout from mortar mixers in accordance with the above item and in addition place the mixer and associated materials on impervious barrier and within lot perimeter silt fence.
4. Install temporary concrete washouts per local requirements, where applicable. If an alternate method or product is to be used, contact your approval authority for review and approval. If local standard details are not available, use one of the two types of temporary concrete washouts provided on this detail.
5. Do not use concrete washouts for dewatering or storing defective curb or sidewalk sections. Stormwater accumulated within the washout may not be pumped into or discharged to the storm drain system or receiving surface waters. Liquid waste must be pumped out and removed from project.
6. Locate washouts at least 50 feet from storm drain inlets and surface waters unless it can be shown that no other alternatives are reasonably available. At a minimum, install protection of storm drain inlet(s) closest to the washout which could receive spills or overflow.
7. Locate washouts in an easily accessible area, on level ground and install a stone entrance pad in front of the washout. Additional controls may be required by the approving authority.
8. Install at least one sign directing concrete trucks to the washout within the project limits. Post signage on the washout itself to identify this location.
9. Remove leavings from the washout when at approximately 75% capacity to limit overflow events. Replace the tarp, sand bags or other temporary structural components when no longer functional. When utilizing alternative or proprietary products, follow manufacturer's instructions.
10. At the completion of the concrete work, remove remaining leavings and dispose of in an approved disposal facility. Fill pit, if applicable, and stabilize any disturbance caused by removal of washout.

HERBICIDES, PESTICIDES AND RODENTICIDES

1. Store and apply herbicides, pesticides and rodenticides in accordance with label restrictions.
2. Store herbicides, pesticides and rodenticides in their original containers with the label, which lists directions for use, ingredients and first aid steps in case of accidental poisoning.
3. Do not store herbicides, pesticides and rodenticides in areas where flooding is possible or where they may spill or leak into wells, stormwater drains, ground water or surface water. If a spill occurs, clean area immediately.
4. Do not stockpile these materials onsite.

NORTH CAROLINA Department of Environmental Quality

GROUND COVER & MATERIALS HANDLING

Effective: April 1, 2024

WGLA Engineering

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REVISIONS	
DATE	DESCRIPTION

Know what's below. Call before you dig.

PROJECT NUMBER: 25113
DATE: 8-5-26

GRADING AND EROSION CONTROL DETAILS

C-303

SCALE: AS NOTED

PART III
SELF-INSPECTION, RECORDKEEPING AND REPORTING

SECTION A: SELF-INSPECTION

Self-inspections are required during normal business hours in accordance with the table below. When adverse weather or site conditions would cause the safety of the inspection personnel to be in jeopardy, the inspection may be delayed until the next business day on which it is safe to perform the inspection. In addition, when a storm event of equal to or greater than 1.0 inch occurs outside of normal business hours, the self-inspection shall be performed upon the commencement of the next business day. Any time when inspections were delayed shall be noted in the Inspection Record.

Inspect	Frequency (during normal business hours)	Inspection records must include:
(1) Rain gauge maintained in good working order	Daily	Daily rainfall amounts. If no daily rain gauge observations are made during weekend on holiday periods, and no individual-day rainfall information is available, record the cumulative rain measurement for those unattended days (this will determine if a site inspection is needed). Days on which no rainfall occurred shall be recorded as "Zero." The permittee may use another rain-monitoring device approved by the Division.
(2) E&SC Measures	At least once per 7 calendar days and within 24 hours of a rain event ≥ 1.0 inch in 24 hours.	1. Identification of the measures inspected 2. Date and Time of the inspection 3. Name of the person performing the inspection 4. Indication of whether the measures were operating properly 5. Description of maintenance needs for the measure 6. Description, Evidence, and date of corrective actions taken
(3) Stormwater discharge outfalls(SDOs)	At least once per 7 calendar days and within 24 hours of a rain event ≥ 1.0 inch in 24 hours.	1. Identification of the discharge outfalls inspected 2. Date and Time of the inspection 3. Name of the person performing the inspection 4. Evidence of indicators of stormwater pollution such as oil sheen, floating or suspended solids or discoloration 5. Indication of visible sediment leaving the site 6. Description, Evidence, and date corrective actions taken
(4) Perimeter of Site	At least once per 7 calendar days and within 24 hours of a rain event ≥ 1.0 inch in 24 hours.	If visible Sedimentation is found outside site limits, then record of the following shall be made: 1) Actions taken to clean up or stabilize sediment that has left the site limits 2) Description, Evidence and date of corrective actions taken 3) An explanation as to the actions taken to control future releases
(5) Streams or wetlands onsite or offsite (where accessible)	At least once per 7 calendar days and within 24 hours of a rain event ≥ 1.0 inch in 24 hours.	If the stream or wetland has increased visible sedimentation or has visible increased turbidity from the construction activity, then a record of the following shall be made: 1) Description, Evidence and date of corrective actions taken 2)Records of required reports to the appropriate Division Regional Office per Part III, Section C, Item(2)(a) of this permit
(6) Ground Stabilization Measures	After each phase of grading.	1. The phase of grading (installation of perimeter E&SC measures, clearing and grubbing, installation of storm drainage facilities, completion of all land-disturbing activity, construction or redevelopment, permanent ground cover). 2. Documentation that the required ground stabilization measures have been provided within the required timeframe or assurance that they will be provided as soon as possible.

NOTE: The rain inspection resets the required 7 calendar day inspection requirement.

PART III
SELF-INSPECTION, RECORDKEEPING AND REPORTING

SECTION B: RECORDKEEPING

1. E&SC Plan Documentation
The approved E&SC plan as well as any approved deviation shall be kept on the site. The approved E&SC plan must be kept up-to-date throughout the coverage under this permit. The following items pertaining to the E&SC plan shall be kept on site and available for inspection at all times during normal business hours.

Item to Document	Document Requirements
(a) Each E&SC measure has been installed and does not significantly deviate from the locations, dimensions and relative elevations shown on the approved E&SC plan.	Initial and date each E&SC measure on a copy of the approved E&SC plan or complete, date and sign an inspection report that lists each E&SC measure shown on the approved E&SC plan. This documentation is required upon the initial installation of the E&SC measures or if the E&SC measures are modified after initial installation.
(b) A phase of grading has been completed.	Initial and date a copy of the approved E&SC plan or complete, date and sign an inspection report to indicate completion of the construction phase.
(c) Ground cover is located and installed in accordance with the approved E&SC plan.	Initial and date a copy of the approved E&SC plan or complete, date and sign an inspection report to indicate compliance with approved ground cover specifications.
(d) The maintenance and repair requirements for all E&SC measures have been performed.	Complete, date and sign an inspection report.
(e) Corrective actions have been taken to E&SC measures.	Initial and date a copy of the approved E&SC plan or complete, date and sign an inspection report to indicate the completion of the corrective action.

2. Additional Documentation to be Kept on Site
In addition to the E&SC plan documents above, the following items shall be kept on the site and available for inspectors at all times during normal business hours, unless the Division provides a site-specific exemption based on unique site conditions that make this requirement not practical:

(a) This General Permit as well as the Certificate of Coverage, after it is received.

(b) Records of inspections made during the previous twelve months. The permittee shall record the required observations on the Inspection Record Form provided by the Division or a similar inspection form that includes all the required elements. Use of electronically-available records in lieu of the required paper copies will be allowed if shown to provide equal access and utility as the hard-copy records.

3. Documentation to be Retained for Three Years*
*All data used to complete the e-NOI and all inspection records shall be maintained for a period of three years after project completion and made available upon request. [40 CFR 122.41]

PART III
SELF-INSPECTION, RECORDKEEPING AND REPORTING

SECTION C: REPORTING

1. Occurrences that Must be Reported
Permittees shall report the following occurrences:
(a) Visible sediment deposition in a stream or wetland.
(b) Oil spills if:
- They are 25 gallons or more,
- They are less than 25 gallons but cannot be cleaned up within 24 hours,
- They cause sheen on surface waters (regardless of volume), or
- They are within 100 feet of surface waters (regardless of volume).

(c) Releases of hazardous substances in excess of reportable quantities under Section 311 of the Clean Water Act (Ref: 40 CFR 110.3 and 40 CFR 117.3) or Section 102 of CERCLA (Ref: 40 CFR 302.4) or G.S. 143-215.85.
(d) Anticipated bypasses and unanticipated bypasses.
(e) Noncompliance with the conditions of this permit that may endanger health or the environment.

2. Reporting Timeframes and Other Requirements
After a permittee becomes aware of an occurrence that must be reported, he shall contact the appropriate Division regional office within the timeframes and in accordance with the other requirements listed below. Occurrences outside normal business hours may also be reported to the Department's Environmental Emergency Center personnel at (800) 858-0368.

Occurrence	Reporting Timeframe (After Discovery) and Other Requirements
(a) Visible sediment deposition in a stream or wetland	• Within 24 hours, an oral or electronic notification. • Within 7 Calendar Days, a report that contains a description of the sediment and actions taken to address the cause of the deposition. Division staff may waive the requirement for a written report on a case-by-case basis. • If the stream is named on the NC 303(d) list as impaired for sediment-related caused, the permittee may be required to perform additional monitoring, inspections or apply more stringent practices if staff determine that additional requirements are needed to assure compliance with the federal or state impaired-waters conditions.
(b) Oil spills and release of hazardous substances per item 1(b)-(c) above	• Within 24 Hours, an oral or electronic notification. The notification shall include information about the date, time, nature, volume and location of the spill or release.
(c) Anticipated bypasses [40 CFR 122.41(m)(3)]	• *A report at least ten days before the date of the bypass, if possible.* The report shall include an evaluation of the anticipated quality and effect of the bypass.
(d) Unanticipated bypasses [40 CFR 122.41(m)(3)]	• Within 24 Hours, an oral or electronic notification • Within 7 calendar days, a report that includes an evaluation of the quality and effect of the bypass.
(e) Noncompliance with the conditions of this permit that may endanger health or the environment [40 CFR 122.41(l)(7)]	• Within 24 Hours, an oral or electronic notification • Within 7 calendar days, a report that contains a description of the noncompliance, and its causes; the period of noncompliance, including exact dates and times, and if the noncompliance has not been corrected, the anticipated time noncompliance is expected to continue; and steps taken or planned to reduce, eliminate and prevent reoccurrence of the noncompliance. [40 CFR 122.41(l)(6). • Division staff may waive the requirement for a written report on a case-by-case basis.

PART II, SECTION G, ITEM (4)
DRAW DOWN OF SEDIMENT BASINS FOR MAINTENANCE OR CLOSE OUT

Sediment basins and traps that receive runoff from drainage areas of one acre or more shall use outlet structures that withdraw water from the surface when these devices need to be drawn down for maintenance or close out unless this is infeasible. The circumstances in which it is not feasible to withdraw water from the surface shall be rare (for example, times with extended cold weather). Non-surface withdrawals from sediment basins shall be allowed only when all of the following criteria have been met:

(a) The E&SC plan authority has been provided with documentation of the non-surface withdrawal and the specific time periods or conditions in which it will occur. The non-surface withdrawal shall not commence until the E&SC plan authority has approved these items,
(b) The non-surface withdrawal has been reported as an anticipated bypass in accordance with Part III, Section C, Item (2)(c) and (d) of this permit,
(c) Dewatering discharges are treated with controls to minimize discharges of pollutants from stormwater that is removed from the sediment basin. Examples of appropriate controls include properly sited, designed and maintained dewatering tanks, weir tanks, and filtration systems,
(d) Vegetated, upland areas of the sites or a properly designed stone pad is used to the extent feasible at the outlet of the dewatering treatment devices described in Item (c) above,
(e) Velocity dissipation devices such as check dams, sediment traps, and riprap are provided at the discharge points of all dewatering devices, and
(f) Sediment removed from the dewatering treatment devices described in Item (c) above is disposed of in a manner that does not cause deposition of sediment into waters of the United States.

NORTH CAROLINA Department of Environmental Quality

INSPECTION, RECORD KEEPING AND REPORTING

Effective:
April 1, 2024

WGLA Engineering
WGLA ENGINEERING, PLLC
724 5th AVENUE WEST
HENDERSONVILLE, NC 28739
(828) 687-7177
WGLA.COM
NC LICENSE P-1342

ASHEVILLE HABITAT FOR HUMANITY
TRIED ST

ASHEVILLE
BUNCOMBE COUNTY
NORTH CAROLINA

Asheville Area Habitat for Humanity®
Building Houses Changing Lives

NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 049181 REGISTERED L. CERIDON
Preliminary Not For Construction

REVISIONS

DATE	DESCRIPTION

811 Know what's below. Call before you dig.

PROJECT NUMBER: 25113
DATE: 8-5-26

GRADING AND EROSION CONTROL DETAILS

C-304

SCALE: AS NOTED

STORMWATER MANAGEMENT PLANS

for

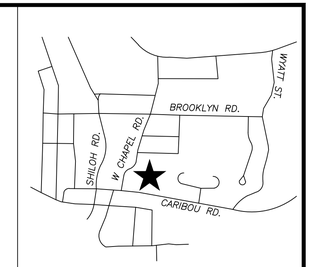
ASHEVILLE AREA HABITAT FOR HUMANITY

TRIED STREET SUBDIVISION

CITY OF ASHEVILLE
BUNCOMBE COUNTY
NORTH CAROLINA

STORMWATER PLANS

SHEET NO.	DESCRIPTION
C-400	STORMWATER PLAN
C-401	STORMWATER PROFILES
C-402	STORMTECH DETAILS
C-403-404	STORMWATER DETAILS



VICINITY MAP
NOT TO SCALE

DEVELOPMENT BLOCK

PROJECT NAME: ASHEVILLE HABITAT FOR HUMANITY – TRIED STREET

PROJECT ADDRESS: 990 W CHAPEL RD
ASHEVILLE, NC 28803

PIN #: 9657-14-2055, 9657-13-2806
9657-14-4041, 9657-14-4174
9657-14-4225, 9657-13-4808

DB: 6373 PG: 1755

OWNER / DEVELOPER: ASHEVILLE HABITAT FOR HUMANITY, INC.
33 MEADOW ROAD
ASHEVILLE, NC 28803
REGINALD JONES
828-251-5702

SURVEYOR: McABEE & ASSOCIATES, PA
3 McABEE TRAIL, FAIRVIEW, NC 28730
828-628-1295

ENGINEER: JARED L. DERIDDER, P.E.
WGLA ENGINEERING, PLLC
724 5TH AVENUE WEST
HENDERSONVILLE, NC 28739
828-687-7177

ACREAGE: 4.5 ACRES ±

CURRENT/PROPOSED ZONING
CITY OF ASHEVILLE – RS8 CZ

LAND USE: PREVIOUS: RESIDENTIAL
CURRENT: VACANT
PROPOSED: RESIDENTIAL

SINGLE FAMILY: 5

TOWNHOMES: 18

DENSITY: 5.11 UNITS/ACRE

WATER SYSTEM: CITY OF ASHEVILLE (PUBLIC)
SEWER SYSTEM: MSD (PUBLIC)

REQUIRED BUILDING SETBACKS:
FRONT 15'
SIDE 6'
REAR 15'

PROPOSED BUILDING SETBACKS:
FRONT 15'
SIDE 0'
REAR 15'

MINIMUM LOT SIZE:
REQUIRED: 4,000 SF
PROVIDED: 3,700 SF

MAX ALLOWABLE BUILDING HEIGHT: 35'
PROPOSED BUILDING HEIGHT: 17'-6" (TWO STORY)

MAXIMUM BUILDING FOOTPRINT
TOWNHOME 1,100 SF
SINGLE FAMILY 1,600 SF

MAXIMUM GROSS FLOOR AREA
TOWNHOME 2,200 SF
SINGLE FAMILY 3,200 SF

PARKING REQUIRED: 46 (2 PER UNIT)
PARKING PROVIDED: 46 (2 PER UNIT)

MAXIMUM ROAD GRADE: 9.18%

OPEN SPACE

SITE AREA: 196,118 SF
R/W AREA: 32,505

REQUIRED OPEN SPACE: 15% OF AREA OUTSIDE OF R/W
15% x 163,613 SF = 24,542 SF

PROVIDED OPEN SPACE: 24,628 SF (15.05%)
NATURAL: 12,314 SF (50%)
PATH REQUIREMENT: 320 LF (TOTAL WIDTH) x 80% = 256 LF
PATH PROVIDED: 260 LF WITH BENCH (MAX SLOPE 14%)
RECREATIONAL: 12,314 SF (50%)

IMPERVIOUS AREA SUMMARY
PRE DEV. IMP. AREA: 23,578 SF (0.541 AC ±)
TO REMAIN: 0 SF (0.00 AC ±)
TO BE REMOVED: 23,578 SF (0.541 AC ±)

POST DEV. IMP. AREA: 63,809 SF (1.465 AC ±)
POST DEV. IMP. PERCENTAGE: 32.54%

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NORTH CAROLINA REGISTERED PROFESSIONAL ENGINEER JARED L. DERIDDER 041349

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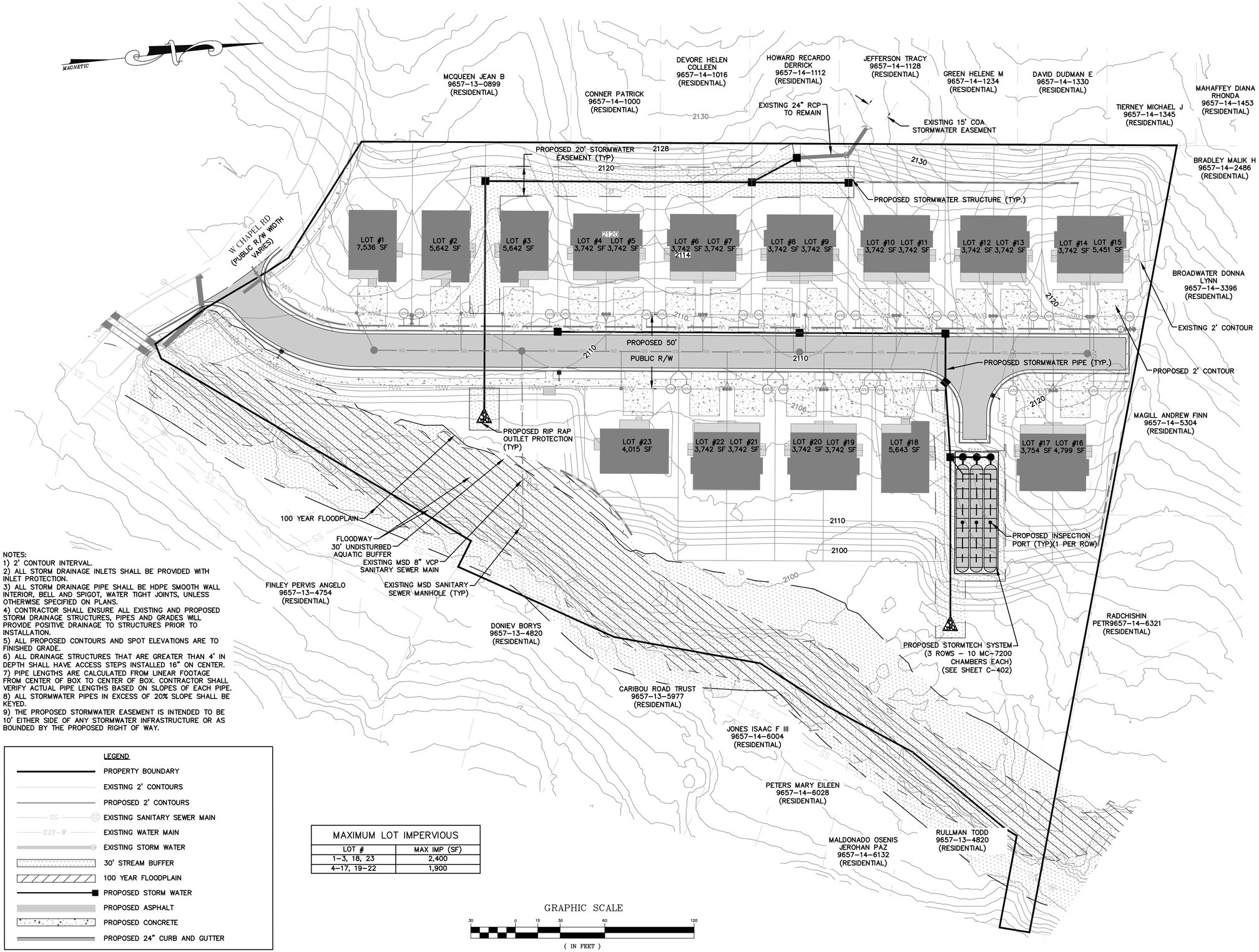
DATE	DESCRIPTION

811 Know what's below. Call before you dig.

PROJECT NUMBER: 25113
DATE: 8-5-26

COVER

SCALE: AS NOTED



NOTES:
1) 2' CONTOUR INTERVAL.
2) ALL STORM DRAINAGE INLETS SHALL BE PROVIDED WITH INLET PROTECTION.
3) ALL STORM DRAINAGE PIPE SHALL BE HDPE SMOOTH WALL INTERIOR, BELL AND SPIGOT, WATER TIGHT JOINTS, UNLESS OTHERWISE SPECIFIED ON PLANS.
4) CONTRACTOR SHALL ENSURE ALL EXISTING AND PROPOSED STORM DRAINAGE STRUCTURES, PIPES AND GRADES WILL PROVIDE POSITIVE DRAINAGE TO STRUCTURES PRIOR TO INSTALLATION.
5) ALL PROPOSED CONTOURS AND SPOT ELEVATIONS ARE TO FINISHED GRADE.
6) ALL DRAINAGE STRUCTURES THAT ARE GREATER THAN 4' IN DEPTH SHALL HAVE ACCESS STEPS INSTALLED 16" ON CENTER.
7) PIPE LENGTHS ARE CALCULATED FROM LINEAR FOOTAGE FROM CENTER OF BOX TO CENTER OF BOX. CONTRACTOR SHALL VERIFY ACTUAL PIPE LENGTHS BASED ON SLOPES OF EACH PIPE.
8) ALL STORMWATER PIPES IN EXCESS OF 20% SLOPE SHALL BE KEYED.
9) THE PROPOSED STORMWATER EASEMENT IS INTENDED TO BE 10' EITHER SIDE OF ANY STORMWATER INFRASTRUCTURE OR AS BOUNDED BY THE PROPOSED RIGHT OF WAY.

LEGEND

- PROPERTY BOUNDARY
- EXISTING 2' CONTOURS
- PROPOSED 2' CONTOURS
- EXISTING SANITARY SEWER MAIN
- EXISTING WATER MAIN
- EXISTING STORM WATER
- 30' STREAM BUFFER
- 100 YEAR FLOODPLAIN
- PROPOSED STORM WATER
- PROPOSED ASPHALT
- PROPOSED CONCRETE
- PROPOSED 24" CURB AND GUTTER

MAXIMUM LOT IMPERVIOUS	
LOT #	MAX IMP (SF)
1-3, 18, 23	2,400
4-17, 19-22	1,900

GRAPHIC SCALE

30 0 15 30 60 120

(IN FEET)

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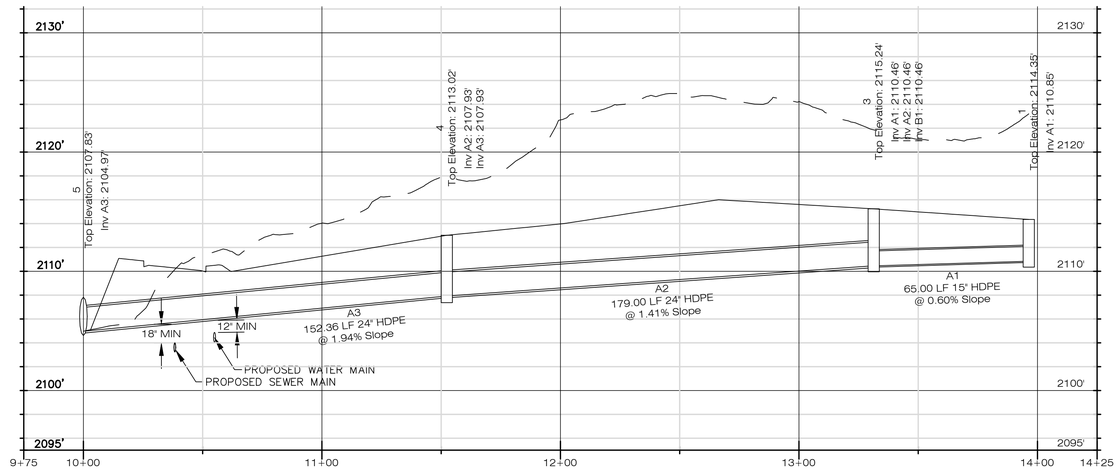
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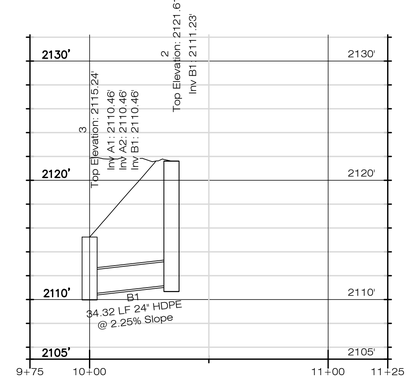
STORMWATER PLAN

C-400

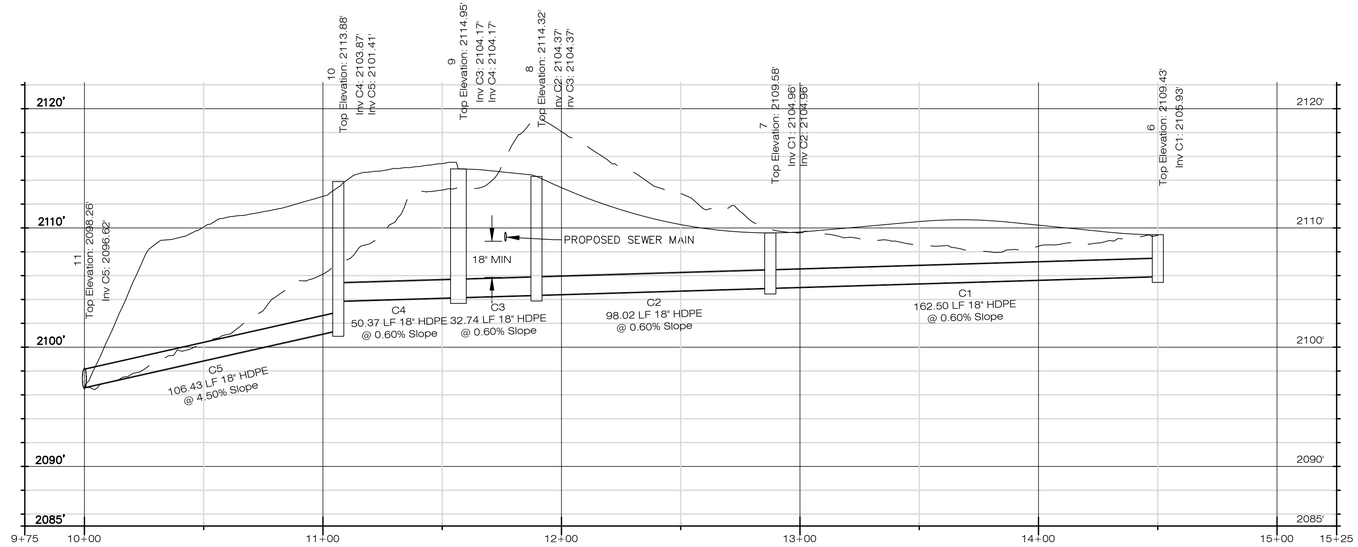
SCALE: 1"=30'



Profile View of STORMWATER A
Horizontal Scale:1"=30' Vertical Scale: 1"=6'



Profile View of STORMWATER B
Horizontal Scale:1"=30' Vertical Scale: 1"=6'



Profile View of STORMWATER C
Horizontal Scale:1"=30' Vertical Scale: 1"=6'

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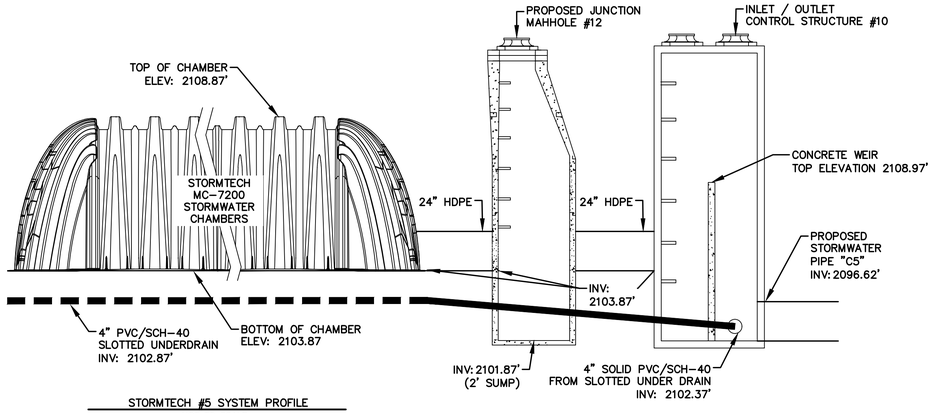
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STORMWATER PROFILES

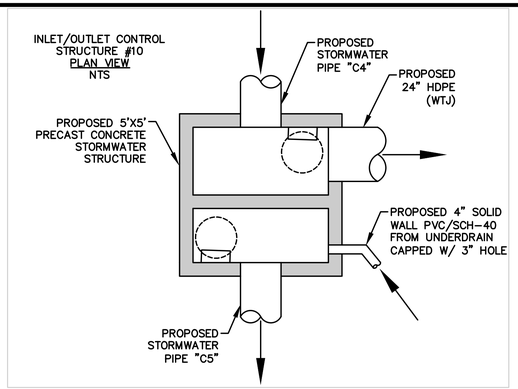
C-401

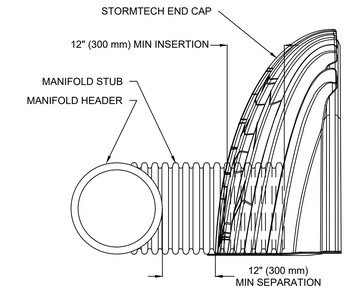
SCALE: AS NOTED



STORMTECH #5 SYSTEM PROFILE

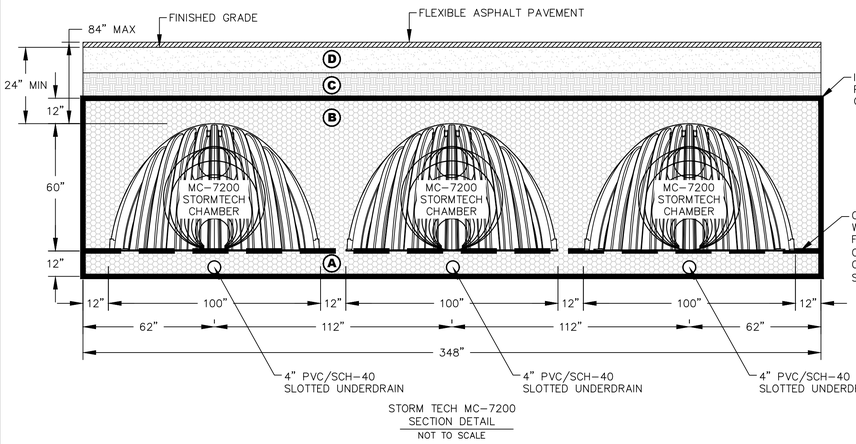
NOT TO SCALE





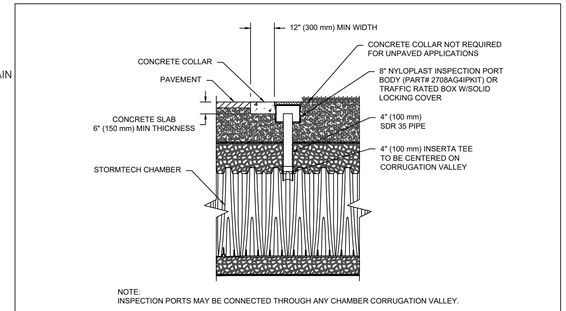
NOTE: MANIFOLD STUB MUST BE LAID HORIZONTAL FOR A PROPER FIT IN END CAP OPENING.

MC-SERIES END CAP INSERTION DETAIL



STORM TECH MC-7200 SECTION DETAIL

NOT TO SCALE



NOTE:
INSPECTION PORTS MAY BE CONNECTED THROUGH ANY CHAMBER CORRUGATION VALLEY.

4" PVC INSPECTION PORT DETAIL
(MC SERIES CHAMBER)

MC-7200 STORMTECH CHAMBER SPECIFICATIONS

1. CHAMBERS SHALL BE STORMTECH MC-7200.
2. CHAMBERS SHALL BE ARCH-SHAPED AND SHALL BE MANUFACTURED FROM VIRGIN, IMPACT-MODIFIED POLYPROPYLENE COPOLYMERS.
3. CHAMBERS SHALL MEET THE REQUIREMENTS OF ASTM F2418-16a, "STANDARD SPECIFICATION FOR POLYPROPYLENE (PP) CORRUGATED WALL STORMWATER COLLECTION CHAMBERS" CHAMBER CLASSIFICATION 60x101.
4. CHAMBER ROWS SHALL PROVIDE CONTINUOUS, UNOBSTRUCTED INTERNAL SPACE WITH NO INTERNAL SUPPORTS THAT WOULD IMPEDE FLOW OR LIMIT ACCESS FOR INSPECTION.
5. THE STRUCTURAL DESIGN OF THE CHAMBERS, THE STRUCTURAL BACKFILL, AND THE INSTALLATION REQUIREMENTS SHALL ENSURE THAT THE LOAD FACTORS SPECIFIED IN THE AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, SECTION 12.12, ARE MET FOR: 1) LONG-DURATION DEAD LOADS AND 2) SHORT-DURATION LIVE LOADS, BASED ON THE AASHTO DESIGN TRUCK WITH CONSIDERATION FOR IMPACT AND MULTIPLE VEHICLE PRESENCES.
6. CHAMBERS SHALL BE DESIGNED, TESTED AND ALLOWABLE LOAD CONFIGURATIONS DETERMINED IN ACCORDANCE WITH ASTM F2787, "STANDARD PRACTICE FOR STRUCTURAL DESIGN OF THERMOPLASTIC CORRUGATED WALL STORMWATER COLLECTION CHAMBERS". LOAD CONFIGURATIONS SHALL INCLUDE: 1) INSTANTANEOUS (<1 MIN) AASHTO DESIGN TRUCK LIVE LOAD ON MINIMUM COVER 2) MAXIMUM PERMANENT (75-YR) COVER LOAD AND 3) ALLOWABLE COVER WITH PARKED (1-WEEK) AASHTO DESIGN TRUCK.
7. REQUIREMENTS FOR HANDLING AND INSTALLATION:
   - TO MAINTAIN THE WIDTH OF CHAMBERS DURING SHIPPING AND HANDLING, CHAMBERS SHALL HAVE INTEGRAL, INTERLOCKING STACKING LUGS.
   - TO ENSURE A SECURE JOINT DURING INSTALLATION AND BACKFILL, THE HEIGHT OF THE CHAMBER JOINT SHALL NOT BE LESS THAN 3".
   - TO ENSURE THE INTEGRITY OF THE ARCH SHAPE DURING INSTALLATION, a) THE ARCH STIFFNESS CONSTANT SHALL BE GREATER THAN OR EQUAL TO 450 LBS/IN/IN. THE ASC IS DEFINED IN SECTION 6.2.8 OF ASTM F2418 AND b) TO RESIST CHAMBER DEFORMATION DURING INSTALLATION AT ELEVATED TEMPERATURES (ABOVE 73° F / 23° C), CHAMBERS SHALL BE PRODUCED FROM REFLECTIVE GOLD OR YELLOW COLORS.
8. ONLY CHAMBERS THAT ARE APPROVED BY THE SITE DESIGN ENGINEER WILL BE ALLOWED. UPON REQUEST BY THE SITE DESIGN ENGINEER OR OWNER, THE CHAMBER MANUFACTURER SHALL SUBMIT A STRUCTURAL EVALUATION FOR APPROVAL BEFORE DELIVERING CHAMBERS TO THE PROJECT SITE AS FOLLOWS:
   - THE STRUCTURAL EVALUATION SHALL BE SEALED BY A REGISTERED PROFESSIONAL ENGINEER.
   - THE STRUCTURAL EVALUATION SHALL DEMONSTRATE THAT THE SAFETY FACTORS ARE GREATER THAN OR EQUAL TO 1.95 FOR DEAD LOAD AND 1.75 FOR LIVE LOAD, THE MINIMUM REQUIRED BY ASTM F2787 AND BY SECTIONS 3 AND 12.12 OF THE AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS FOR THERMOPLASTIC PIPE.
   - THE TEST DERIVED CREEP MODULUS AS SPECIFIED IN ASTM F2418 SHALL BE USED FOR PERMANENT DEAD LOAD DESIGN EXCEPT THAT IT SHALL BE THE 75-YEAR MODULUS USED FOR DESIGN.
9. CHAMBERS AND END CAPS SHALL BE PRODUCED AT AN ISO 9001 CERTIFIED MANUFACTURING FACILITY.

IMPORTANT - NOTES FOR THE BIDDING AND INSTALLATION OF MC-7200 CHAMBER SYSTEM

1. STORMTECH MC-7200 CHAMBERS SHALL NOT BE INSTALLED UNTIL THE MANUFACTURER'S AND PROJECT ENGINEER'S REPRESENTATIVES HAVE COMPLETED A PRE-CONSTRUCTION MEETING WITH THE INSTALLERS.
2. STORMTECH MC-7200 CHAMBERS SHALL BE INSTALLED IN ACCORDANCE WITH THE "STORMTECH MC-7200 CONSTRUCTION GUIDE" AND ENGINEERS PLANS.
3. CHAMBERS ARE NOT TO BE BACKFILLED WITH A DOZER OR AN EXCAVATOR SITUATED OVER THE CHAMBERS. STORMTECH RECOMMENDS 3 BACKFILL METHODS:
   - ΣΤΟΝΕΣΗΟΟΤΕΡ ΑΟΧΑΤΕΑ ΟΦΦ ΤΗΕ ΧΗΑΜΒΕΡ ΒΕΔ.
   - ΒΑΧΚΦΙΑΛ ΑΣ ΡΟΩΣ ΑΡΕ ΒΥΙΑΤ ΥΣΙΝΓ ΑΝ ΕΞΧΑςΑΤΟΡ ΟΝ ΤΗΕ ΦΟΥΝΑΤΙΟΝ ΣΤΟΝΕ ΟΡ ΣΥΒΓΡΑΔΕ.
   - ΒΑΧΚΦΙΑΛ ΦΡΟΜ ΟΥΤΣΙΔΕ ΤΗΕ ΕΞΧΑςΑΤΙΟΝ ΥΣΙΝΓ Α ΛΟΝΓ ΒΟΟΜ ΗΟΕ ΟΡ ΕΞΧΑςΑΤΟΡ.
4. ΤΗΕ ΦΟΥΝΔΑΤΙΟΝ ΣΤΟΝΕ ΣΗΑΛΛ ΒΕ ΑΕςΕΛΕΔ ΑΝΔ ΧΟΜΠΑΧΤΕΔ ΠΡΙΟΡ ΤΟ ΠΛΑΧΙΝΓ ΧΗΑΜΒΕΡΣ.
5. ΘΟΙΝΤΣ ΒΕΤΩΕΕΝ ΧΗΑΜΒΕΡΣ ΣΗΑΛΛ ΒΕ ΠΡΟΠΕΡΛΨ ΣΕΑΤΕΔ ΠΡΙΟΡ ΤΟ ΠΛΑΧΙΝΓ ΣΤΟΝΕ.
6. ΜΑΙΝΤΑΙΝ ΜΙΝΙΜΥΜ -12∀ ΣΠΑΧΙΝΓ ΒΕΤΩΕΕΝ ΤΗΕ ΧΗΑΜΒΕΡ ΡΟΩΣ.
7. ΙΝΛΕΤ ΑΝΔ ΟΥΤΛΕΤ ΜΑΝΙΦΟΛΔΣ ΜΥΣΤ ΒΕ ΙΝΣΕΡΤΕΔ Α ΜΙΝΙΜΥΜ ΟΦ 12∀ (300 μμ) ΙΝΤΟ ΧΗΑΜΒΕΡ ΕΝΔ ΧΑΠΣ.
8. ΕΜΒΕΔΜΕΝΤ ΣΤΟΝΕ ΣΥΡΡΟΥΝΔΙΝΓ ΧΗΑΜΒΕΡΣ ΜΥΣΤ ΒΕ Α ΧΛΕΑΝ, ΧΡΥΣΗΕΔ, ΑΝΓΥΛΑΡ ΣΤΟΝΕ ΜΕΕΤΙΝΓ ΤΗΕ ΑΑΣΗΤΟ Μ43 ΔΕΣΙΓΝΑΤΙΟΝ ΟΦ #3 ΟΡ #4.
9. ΣΤΟΝΕ ΜΥΣΤ ΒΕ ΠΛΑΧΕΔ ΟΝ ΤΗΕ ΤΟΠ ΧΕΝΤΕΡ ΟΦ ΤΗΕ ΧΗΑΜΒΕΡ ΤΟ ΑΝΧΗΟΡ ΤΗΕ ΧΗΑΜΒΕΡΣ ΙΝ ΠΛΑΧΕ ΑΝΔ ΠΡΕΣΕΡςΕ ΡΟΩ ΣΠΑΧΙΝΓ.
10. ΤΗΕ ΧΟΝΤΡΑΧΤΟΡ ΜΥΣΤ ΡΕΠΟΡΤ ΑΝΨ ΔΙΣΧΡΕΠΑΝΧΙΕΣ ΩΙΤΗ ΧΗΑΜΒΕΡ ΦΟΥΝΔΑΤΙΟΝ ΜΑΤΕΡΙΑΛΣ ΒΕΑΡΙΝΓ ΧΑΠΑΧΙΤΙΕΣ ΤΟ ΤΗΕ ΣΙΤΕ ΔΕΣΙΓΝ ΕΝΓΙΝΕΕΡ.
11. ΑΑΣ ΡΕΧΟΜΜΕΝΔΣ ΤΗΕ ΥΣΕ ΟΦ ∀ΦΛΕΣΤΟΡΜ ΧΑΤΧΗ ΙΤ∀ ΙΝΣΕΡΤΣ ΔΥΡΙΝΓ ΧΟΝΣΤΡΥΧΤΙΟΝ ΦΟΡ ΑΛΛ ΙΝΛΕΤΣ ΤΟ ΠΡΟΤΕΧΤ ΤΗΕ ΣΥΒΣΥΡΦΑΧΕ ΣΤΟΡΜΩΑΤΕΡ ΜΑΝΑΓΕΜΕΝΤ ΣΨΣΤΕΜ ΦΡΟΜ ΧΟΝΣΤΡΥΧΤΙΟΝ ΣΙΤΕ ΡΥΝΟΦΦ.
12. ΧΟΝΤΡΑΧΤΟΡ ΣΗΑΛΛ ΠΡΟςΙΔΕ ΣΗΟΠ ΔΡΑΩΙΝΓΣ ΦΟΡ ΤΗΕ ΣΤΟΡΜ ΤΕΧΗ ΣΨΣΤΕΜ ΤΟ ΒΕ ΙΝΣΤΑΛΛΕΔ ΤΟ ΤΗΕ ΠΡΟΨΕΧΤ ΕΝΓΙΝΕΕΡ ΠΡΙΟΡ ΤΟ ΧΟΝΣΤΡΥΧΤΙΟΝ.

ΝΟΤΕΣ ΦΟΡ ΧΟΝΣΤΡΥΧΤΙΟΝ ΕΘΥΙΠΜΕΝΤ

1. ΣΤΟΡΜΤΕΧΗ ΜΧ-7200 ΧΗΑΜΒΕΡΣ ΣΗΑΛΛ ΒΕ ΙΝΣΤΑΛΛΕΔ ΙΝ ΑΧΧΟΡΔΑΝΧΕ ΩΙΤΗ ΤΗΕ ∀ΣΤΟΡΜΤΕΧΗ ΜΧ-7200 ΧΟΝΣΤΡΥΧΤΙΟΝ ΓΥΙΔΕ∀Σ ΕΝΓΙΝΕΕΡΣ ΠΛΑΝΣ.
2. ΤΗΕ ΥΣΕ ΟΦ ΕΘΥΙΠΜΕΝΤ ΟςΕΡ ΜΧ-7200 ΧΗΑΜΒΕΡΣ ΙΣ ΛΙΜΙΤΕΔ:
   - ΝΟ ΕΘΥΙΠΜΕΝΤ ΙΣ ΑΛΛΟΩΕΔ ΟΝ ΒΑΡΕ ΧΗΑΜΒΕΡΣ.
   - ΝΟ ΡΥΒΒΕΡ ΤΙΡΕΔ ΛΟΑΔΕΡ, ΔΥΜΠ ΤΡΥΧΚ, ΟΡ ΕΞΧΑςΑΤΟΡΣ ΑΡΕ ΑΛΛΟΩΕΔ ΥΝΤΙΛ ΠΡΟΠΕΡ ΦΙΑΛ ΔΕΠΤΗΣ ΑΡΕ ΡΕΑΧΗΕΔ ΙΝ ΑΧΧΟΡΔΑΝΧΕ ΩΙΤΗ ΤΗΕ ∀ΣΤΟΡΜΤΕΧΗ ΜΧ-7200 ΧΟΝΣΤΡΥΧΤΙΟΝ ΓΥΙΔΕ∀.
   - ΩΕΙΓΗΤ ΛΙΜΙΤΣ ΦΟΡ ΧΟΝΣΤΡΥΧΤΙΟΝ ΕΘΥΙΠΜΕΝΤ ΧΑΝ ΒΕ ΦΟΥΝΔ ΙΝ ΤΗΕ ∀ΣΤΟΡΜΤΕΧΗ ΜΧ-7200 ΧΟΝΣΤΡΥΧΤΙΟΝ ΓΥΙΔΕ∀.
3. ΦΥΛΛ 36∀ (900 μμ) ΟΦ ΣΤΑΒΙΛΙΖΕΔ ΧΟςΕΡ ΜΑΤΕΡΙΑΛ ΟςΕΡ ΤΗΕ ΧΗΑΜΒΕΡΣ ΙΣ ΡΕΘΥΙΡΕΔ ΦΟΡ ΔΥΜΠ ΤΡΥΧΚ ΤΡΑςΕΛ ΟΡ ΔΥΜΠΙΝΓ.

ΥΣΕ ΟΦ Α ΔΟΖΕΡ ΤΟ ΠΥΣΗ ΕΜΒΕΔΜΕΝΤ ΣΤΟΝΕ ΒΕΤΩΕΕΝ ΤΗΕ ΡΟΩΣ ΟΦ ΧΗΑΜΒΕΡΣ ΜΑΨ ΧΑΥΣΕ ΔΑΜΑΓΕ ΤΟ ΧΗΑΜΒΕΡΣ ΑΝΔ ΙΣ ΝΟΤ ΑΝ ΑΧΧΕΠΤΑΒΛΕ ΒΑΧΚΦΙΑΛ ΜΕΤΗΟΔ. ΑΝΨ ΧΗΑΜΒΕΡΣ ΔΑΜΑΓΕΔ Β∀ ΥΣΙΝΓ ΤΗΕ ∀ΔΥΜΠ ΑΝΔ ΠΥΣΗ∀ ΜΕΤΗΟΔ ΑΡΕ ΝΟΤ ΧΟςΕΡΕΔ ΥΝΔΕΡ ΤΗΕ ΣΤΟΡΜΤΕΧΗ ΣΤΑΝΔΑΡΔ ΩΑΡΡΑΝΤ∀.

ΧΟΝΤΑΧΤ ΣΤΟΡΜΤΕΧΗ ΑΤ 1-888-892-2694 ΩΙΤΗ ΑΝΨ ΘΥΕΣΤΙΟΝΣ ΟΝ ΙΝΣΤΑΛΛΑΤΙΟΝ ΡΕΘΥΙΡΕΜΕΝΤΣ ΟΡ ΩΕΙΓΗΤ ΛΙΜΙΤΣ ΦΟΡ ΧΟΝΣΤΡΥΧΤΙΟΝ ΕΘΥΙΠΜΕΝΤ.

ACCEPTABLE FILL MATERIALS: STORMTECH MC-7200 CHAMBER SYSTEMS

MATERIAL LOCATION		DESCRIPTION	AASHTO MATERIAL CLASSIFICATIONS	COMPACTION / DENSITY REQUIREMENT
D	**FINAL FILL:** FILL MATERIAL FOR LAYER 'D' STARTS FROM THE TOP OF THE 'C' LAYER TO THE BOTTOM OF FLEXIBLE PAVEMENT OR UNPAVED FINISHED GRADE ABOVE. NOTE THAT PAVEMENT SUBBASE MAY BE PART OF THE 'D' LAYER	ANY SOIL/ROCK MATERIALS, NATIVE SOILS, OR PER ENGINEER'S PLANS. CHECK PLANS FOR PAVEMENT SUBGRADE REQUIREMENTS.	N/A	PREPARE PER SITE DESIGN ENGINEER'S PLANS. PAVED INSTALLATIONS MAY HAVE STRINGENT MATERIAL AND PREPARATION REQUIREMENTS.
C	**INITIAL FILL:** FILL MATERIAL FOR LAYER 'C' STARTS FROM THE TOP OF THE EMBEDMENT STONE ('B' LAYER) TO 24" (600 mm) ABOVE THE TOP OF THE CHAMBER. NOTE THAT PAVEMENT SUBBASE MAY BE A PART OF THE 'C' LAYER.	GRANULAR WELL-GRADED SOIL/AGGREGATE MIXTURES, <35% FINES OR PROCESSED AGGREGATE. MOST PAVEMENT SUBBASE MATERIALS CAN BE USED IN LIEU OF THIS LAYER.	AASHTO M145[1] A-1, A-2-4, A-3 OR AASHTO M43[1] 3, 357, 4, 467, 5, 56, 57, 6, 67, 68, 7, 78, 8, 89, 9, 10	BEGIN COMPACTIONS AFTER 24" (600 mm) OF MATERIAL OVER THE CHAMBERS IS REACHED. COMPACT ADDITIONAL LAYERS IN 12" (300 mm) MAX LIFTS TO A MIN. 95% PROCTOR DENSITY FOR WELL GRADED MATERIAL AND 95% RELATIVE DENSITY FOR PROCESSED AGGREGATE MATERIALS.
B	**EMBEDMENT STONE:** FILL SURROUNDING THE CHAMBERS FROM THE FOUNDATION STONE ('A' LAYER) TO THE 'C' LAYER ABOVE.	CLEAN, CRUSHED, ANGULAR STONE	AASHTO M43[1] 3, 4	NO COMPACTION REQUIRED.
A	**FOUNDATION STONE:** FILL BELOW CHAMBERS FROM THE SUBGRADE UP TO THE FOOT (BOTTOM) OF THE CHAMBER.	CLEAN, CRUSHED, ANGULAR STONE	AASHTO M43[1] 3, 4	PLATE COMPACT OR ROLL TO ACHIEVE A FLAT SURFACE.[2,3]

PLEASE NOTE:
1. THE LISTED AASHTO DESIGNATIONS ARE FOR GRADATIONS ONLY. THE STONE MUST ALSO BE CLEAN, CRUSHED, ANGULAR. FOR EXAMPLE, A SPECIFICATION FOR #4 STONE WOULD STATE: "CLEAN, CRUSHED, ANGULAR NO. 4 (AASHTO M43) STONE".
2. STORMTECH COMPACTION REQUIREMENTS ARE MET FOR 'A' LOCATION MATERIALS WHEN PLACED AND COMPACTED IN 9" (230 mm) (MAX) LIFTS USING TWO FULL COVERAGES WITH A VIBRATORY COMPACTOR.
3. WHERE INFILTRATION SURFACES MAY BE COMPROMISED BY COMPACTION, FOR STANDARD DESIGN LOAD CONDITIONS, A FLAT SURFACE MAY BE ACHIEVED BY RAKING OR DRAGGING WITHOUT COMPACTION EQUIPMENT. FOR SPECIAL LOAD DESIGNS, CONTACT STORMTECH FOR COMPACTION REQUIREMENTS.
4. ONCE LAYER 'C' IS PLACED, ANY SOIL/MATERIAL CAN BE PLACED IN LAYER 'D' UP TO THE FINISHED GRADE. MOST PAVEMENT SUBBASE SOILS CAN BE USED TO REPLACE THE MATERIAL REQUIREMENTS OF LAYER 'C' OR 'D' AT THE SITE DESIGN ENGINEER'S DISCRETION.

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ASHEVILLE BUNCOMBE COUNTY NORTH CAROLINA

Asheville Area Habitat for Humanity®
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Preliminary Not For Construction

REVISIONS	
DATE	DESCRIPTION

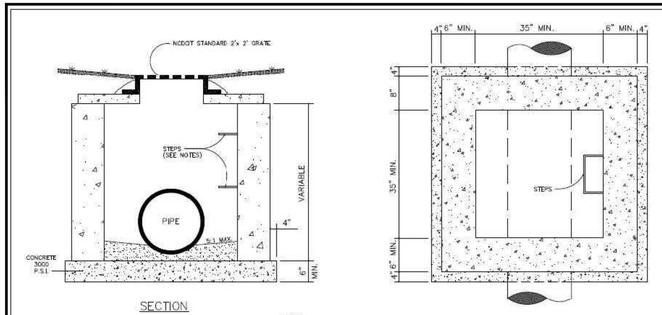
811 Know what's below. Call before you dig.

PROJECT NUMBER: 25113
DATE: 8-5-26

STORMTECH DETAILS

C-402

SCALE: AS NOTED



NOTES:
FOR 24" R.C.P. AND LARGER USE PIPE DIA. PLUS 12" FOR MINIMUM INSIDE DIMENSION.

GRATED INLETS SHALL NOT BE USED WITHIN TRAVEL AREAS.

STANDARD STEPS REQUIRED @ 16" O.C. WHERE DEPTH EXCEEDS 4'.

ALL JUNCTION BOXES SHALL HAVE A PAVED INVERT WITH A MAXIMUM 5:1 SLOPE EXTENDING FROM THE PIPE INVERT TO THE STRUCTURE WALL.

USE MIN. 4000 P.S.I. CONC. MIX.

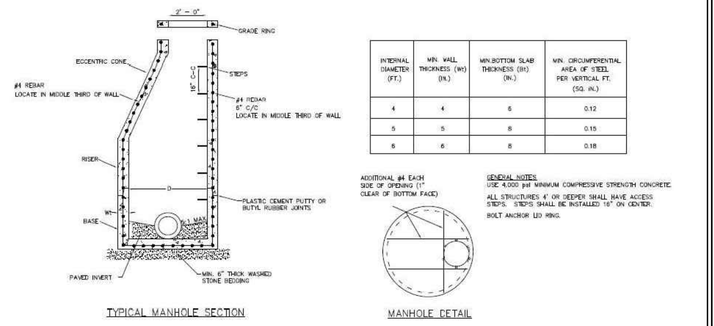
ALL STRUCTURES 4' OR DEEPER SHALL HAVE ACCESS STEPS. STEPS SHALL BE INSTALLED 16" ON CENTER.

City of Asheville, NC
Standard Specifications and Details Manual

STANDARD YARD INLET WITH GRATE AND FRAME

REVISIONS DATE	DESCRIPTION
6/8/15	REV. DIMENSION
6/8/15	REV. 12" O.C. TO 16" IN NOTES

STD. NO. 8.02



TYPICAL MANHOLE SECTION

INTERNAL DIAMETER (FT.)	MIN. WALL THICKNESS (W) (IN.)	MIN.BOTTOM SLAB THICKNESS (B) (IN.)	MIN. CIRCUMFERENTIAL AREA OF STEEL PER VERTICAL FT. (SQ. IN.)
4	4	6	0.12
5	5	6	0.15
6	6	8	0.18

MANHOLE DETAIL

GENERAL NOTES
USE 4,000 psi MINIMUM COMPRESSIVE STRENGTH CONCRETE.

ALL STRUCTURES 4' OR DEEPER SHALL HAVE ACCESS STEPS. STEPS SHALL BE INSTALLED 16" ON CENTER.

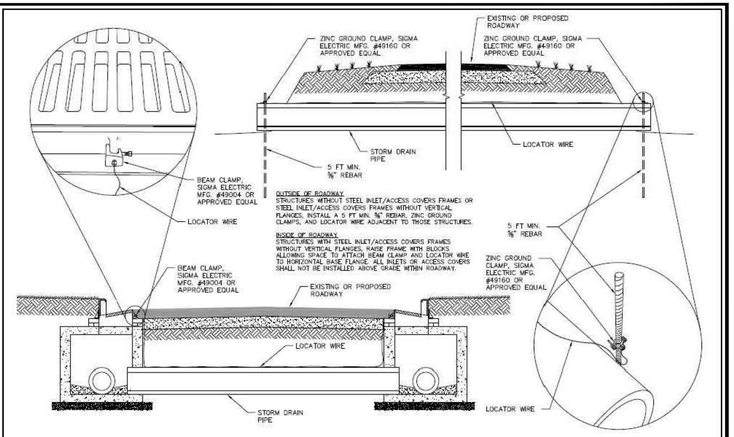
BOLT ANCHOR LID RING.

City of Asheville, NC
Standard Specifications and Details Manual

PRECAST CONCRETE MANHOLE JUNCTION BOX

REVISIONS DATE	DESCRIPTION
6/8/15	REV. 12" O.C. TO 16" IN DETAIL

STD. NO. 8.04

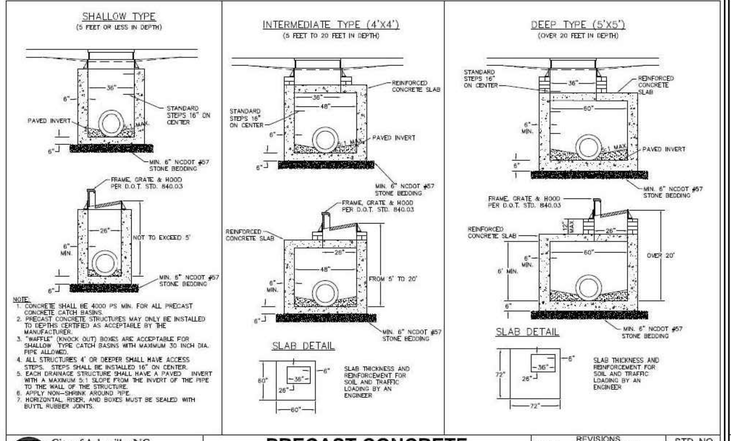


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STORM DRAIN PIPE LOCATION DEVICES

REVISIONS DATE	DESCRIPTION

STD. NO. 8.06



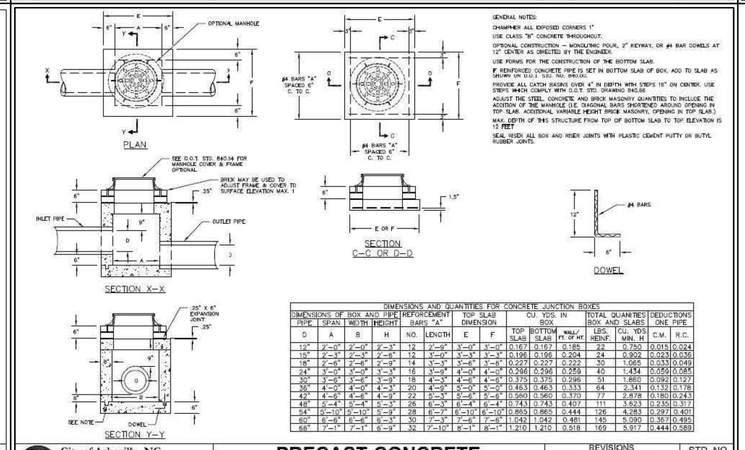
NOTE:
1. CONCRETE SHALL BE 4000 PS MIN. FOR ALL PRECAST CONCRETE CATCH BASINS.
2. PRECAST CONCRETE STRUCTURES MAY ONLY BE INSTALLED TO DEPTHS CERTIFIED AS ACCEPTABLE BY THE MANUFACTURER.
3. "WAFFLE" (KNOCK OUT) BOXES ARE ACCEPTABLE FOR SHALLOW CATCH BASINS WITH MAXIMUM 30 INCH DIA. PIPE ALLOWED.
4. ALL STRUCTURES 4' OR DEEPER SHALL HAVE ACCESS STEPS. STEPS SHALL BE INSTALLED 16" ON CENTER.
5. EACH DRAINAGE STRUCTURE SHALL HAVE A PAVED INVERT WITH A MAXIMUM 5:1 SLOPE FROM THE INVERT OF THE PIPE TO THE WALL OF THE STRUCTURE.
6. APPLY NON-SHRINK AROUND PIPE.
7. HORIZONTAL, RISER, AND BOXES MUST BE SEALED WITH BUTYL RUBBER JOINTS.

City of Asheville, NC
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PRECAST CONCRETE CATCH BASIN

REVISIONS DATE	DESCRIPTION
6/8/15	REV. 12" O.C. TO 16" IN DETAIL

STD. NO. 8.03



GENERAL NOTES:
CHAMFER ALL EXPOSED CORNERS 1"
USE CLASS "B" CONCRETE THROUGHOUT.
OPTIONAL CONSTRUCTION – MONOLITHIC POUR, 3" KEYWAY, OR #4 BAR DOWELS AT 12" CENTER AS DIRECTED BY THE ENGINEER.
USE FORMS FOR THE CONSTRUCTION OF THE BOTTOM SLAB.
IF REINFORCED CONCRETE PIPE IS SET IN BOTTOM SLAB OF BOX, ADD TO SLAB AS SHOWN ON D.O.T. STD. NO. 840.00.
PROVIDE ALL CATCH BASINS OVER 4' IN DEPTH WITH STEPS 16" ON CENTER. USE STEPS WHICH COMPLY WITH D.O.T. STD. DRAWING 840.66.
ADJUST THE STEEL, CONCRETE AND BRICK MASONRY QUANTITIES TO INCLUDE THE ADDITION OF THE MANHOLE (I.E. DIAGONAL BARS SHORTENED AROUND OPENING IN TOP SLAB, ADDITIONAL VARIABLE HEIGHT BRICK MASONRY OPENING IN TOP SLAB.)
MAX. DEPTH OF THIS STRUCTURE FROM TOP OF BOTTOM SLAB TO TOP ELEVATION IS 12 FEET
SEAL RISER, ALL BOX AND RISER JOINTS WITH PLASTIC CEMENT PUTTY OR BUTYL RUBBER JOINTS.

DIMENSIONS AND QUANTITIES FOR CONCRETE JUNCTION BOXES

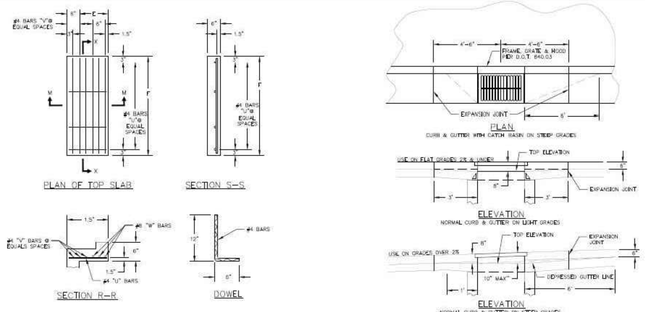
DIMENSIONS OF BOX AND PIPE D	A	B	H	REINFORCEMENT NO. BARS "A"	LENGTH	TOP SLAB DIMENSION E	F	CU. YDS. IN BOX TOP SLAB	BOTTOM SLAB	WALL/ FT. OF HT.	TOTAL QUANTITIES BOX AND SLABS LBS. REINF.	CU. YDS MIN. H	C.M.	DEDUCTIONS ONE PIPE R.C.
12"	2'-0"	2'-0"	2'-5"	12	2'-9"	3'-0"	3'-0"	0.167	0.167	0.185	22	0.750	0.015	0.024
15"	2'-3"	2'-3"	2'-8"	12	3'-0"	3'-3"	3'-3"	0.196	0.196	0.204	24	0.902	0.023	0.036
18"	2'-6"	2'-6"	2'-9"	14	3'-3"	3'-6"	3'-6"	0.227	0.227	0.222	32	1.065	0.033	0.049
24"	3'-0"	3'-0"	3'-3"	16	3'-9"	4'-0"	4'-0"	0.296	0.296	0.259	40	1.454	0.059	0.085
30"	3'-6"	3'-6"	3'-9"	18	4'-3"	4'-6"	4'-6"	0.375	0.375	0.296	51	1.860	0.092	0.127
36"	4'-0"	4'-0"	4'-3"	20	4'-9"	5'-0"	5'-0"	0.463	0.463	0.333	64	2.341	0.132	0.178
42"	4'-6"	4'-6"	4'-9"	22	5'-3"	5'-6"	5'-6"	0.560	0.560	0.370	77	2.878	0.180	0.243
48"	5'-0"	5'-0"	5'-3"	26	6'-3"	6'-0"	6'-0"	0.743	0.743	0.407	111	3.823	0.235	0.317
54"	5'-10"	5'-10"	5'-9"	28	6'-7"	6'-10"	6'-10"	0.865	0.865	0.444	126	4.283	0.297	0.401
60"	6'-6"	6'-6"	6'-3"	30	7'-3"	7'-6"	7'-6"	1.042	1.042	0.481	145	5.090	0.367	0.495
66"	7'-1"	7'-1"	6'-9"	32	7'-10"	8'-1"	8'-1"	1.210	1.210	0.518	169	5.917	0.444	0.589

City of Asheville, NC
Standard Specifications and Details Manual

PRECAST CONCRETE JUNCTION BOX

REVISIONS DATE	DESCRIPTION
8/9/15	ADDED DIMENSION
8/9/15	REV. 12" O.C. TO 16" IN NOTES

STD. NO. 8.04A



MINIMUM DIMENSIONS AND QUANTITIES FOR CONCRETE CATCH BASIN (BASED ON MIN. HEIGHT, H, WITH NO RISER) *

DIMENSIONS OF BOX AND PIPE PIPE	SPAN	WIDTH	WIDTH	SPAN	MIN. HEIGHT	COVER DIMENSION		BARS=U		BARS=V		BARS=W		CU. YDS. CONC. IN BOX TOTAL	BOTTOM SLAB	FOR WARIED HEIGHT, H	DEDUCTIONS ONE PIPE C.M.	R.C.
D	A	B	C	G	H	E	F	NO.	LENGTH	NO.	LENGTH	NO.	LENGTH	LBS.	SLAB	SLAB		
12"	5'-0"	2'-2"	---	---	2'-5"	---	---	---	---	---	---	---	---	---	0.235	0.772	0.015	0.026
15"	5'-0"	2'-2"	---	---	2'-8"	---	---	---	---	---	---	---	---	---	0.235	0.829	0.023	0.036
18"	5'-0"	2'-2"	---	---	3'-0"	---	---	---	---	---	---	---	---	---	0.235	0.887	0.033	0.049
24"	5'-0"	2'-2"	---	---	3'-6"	---	---	---	---	---	---	---	---	---	0.235	1.001	0.059	0.085
30"	5'-0"	2'-2"	3'-4"	---	4'-3"	1'-2"	4'-0"	4	1'-5"	2	3'-9"	3	3'-9"	39	0.123	0.331	1.433	0.092	0.127
36"	5'-0"	2'-2"	5'-10"	---	4'-9"	1'-8"	4'-0"	4	1'-11"	3	3'-9"	3	3'-9"	43	0.161	0.358	1.714	0.132	0.178
42"	5'-0"	2'-2"	---	4'-3"	5'-3"	1'-5"	4'-0"	4	1'-8"	2	2'-11"	5	2'-11"	52	0.122	0.318	1.738	0.180	0.243
48"	5'-0"	2'-2"	---	5'-0"	5'-9"	2'-0"	4'-0"	4	2'-3"	3	2'-11"	5	2'-11"	55	0.145	0.352	2.052	0.235	0.317
54"	5'-0"	2'-2"	---	6'-3"	6'-3"	2'-7"	4'-0"	4	2'-10"	3	2'-11"	3	2'-11"	41	0.180	0.380	2.387	0.297	0.401

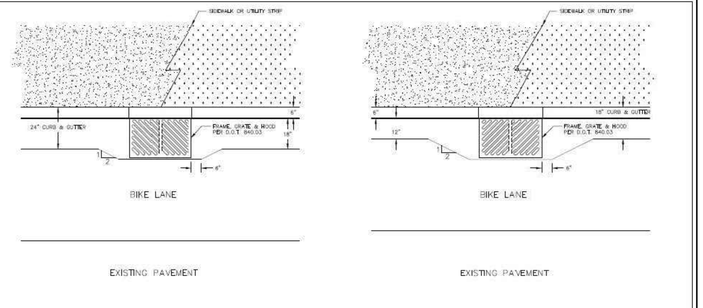
* RISER HAS .228 CUBIC YARDS OF CONCRETE PER FOOT HEIGHT

City of Asheville, NC
Standard Specifications and Details Manual

PRECAST CONCRETE CATCH BASIN

REVISIONS DATE	DESCRIPTION

STD. NO. 8.03A



GENERAL NOTES
1. FRAME, GRATE AND HOOD ASSEMBLY WILL BE DOMESTIC STEEL PRODUCT.
2. WHEN WARRANTED GRATES WILL BE TYPE E OR BICYCLE SAFE TYPE F AND TYPE G PER NC DOT STD. DETAIL 840.03 PAGE 2 OF 2.
3. CURB AND GUTTER WILL BE CONSTRUCTED WITH 4000 PSI CONCRETE.
4. ANY SUBSTITUTION OF GRATE TYPES OR VARIANCE OF CONSTRUCTION PRACTICES MUST BE APPROVED BY THE STORMWATER SERVICES MANAGER OR APPOINTED DESIGNEE.

City of Asheville, NC
Standard Specifications and Details Manual

CURB INLETS FOR 18" & 24" CURB & GUTTER

REVISIONS DATE	DESCRIPTION

STD. NO. 8.05

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Preliminary Not For Construction

REVISIONS DATE	DESCRIPTION

811 Know what's below. Call before you dig.

PROJECT NUMBER: 25113
DATE: 8-5-26

STORMWATER DETAILS

C-403

SCALE: AS NOTED

PIPE DIAM.	CLASS I		CLASS II		CLASS III
	COMPACTED	DUMPED	95%	90%	95%
4" (100mm)	37 (11.3m)	18 (5.5m)	25 (7.6m)	18 (5.5m)	18 (5.5m)
6" (150mm)	44 (13.4m)	20 (6.1m)	29 (8.8m)	20 (6.1m)	21 (6.4m)
8" (200mm)	32 (9.8m)	15 (4.6m)	22 (6.7m)	15 (4.6m)	16 (4.9m)
10" (250mm)	38 (11.6m)	18 (5.5m)	26 (7.9m)	18 (5.5m)	18 (5.5m)
12" (300mm)	35 (10.7m)	17 (5.2m)	24 (7.3m)	17 (5.2m)	17 (5.2m)
15" (375mm)	38 (11.6m)	17 (5.2m)	25 (7.6m)	17 (5.2m)	18 (5.5m)
18" (450mm)	36 (11.0m)	17 (5.2m)	24 (7.3m)	17 (5.2m)	17 (5.2m)
24" (600mm)	28 (8.5m)	13 (4.0m)	20 (6.1m)	13 (4.0m)	14 (4.3m)
30" (750mm)	28 (8.5m)	13 (4.0m)	20 (6.1m)	13 (4.0m)	14 (4.3m)
36" (900mm)	26 (7.9m)	12 (3.7m)	18 (5.5m)	13 (4.0m)	13 (4.0m)
42" (1050mm)	23 (7.0m)	11 (3.4m)	16 (4.9m)	11 (3.4m)	11 (3.4m)
48" (1200mm)	25 (7.6m)	11 (3.4m)	17 (5.2m)	11 (3.4m)	12 (3.7m)
60" (1500mm)	25 (7.6m)	11 (3.4m)	17 (5.2m)	11 (3.4m)	12 (3.7m)

FILL HEIGHT TABLE GENERATED USING AASHTO SECTION 12, LOAD RESISTANCE FACTOR DESIGN (LRFD) PROCEDURE WITH THE FOLLOWING ASSUMPTIONS:
NO HYDROSTATIC PRESSURE,
UNIT WEIGHT OF SOIL (Ys) = 120 PCF

NOTES:

1. ALL PIPE SYSTEMS SHALL BE INSTALLED IN ACCORDANCE WITH ASTM D2321, "STANDARD PRACTICE FOR UNDERGROUND INSTALLATION OF THERMOPLASTIC PIPE FOR SEWERS AND OTHER GRAVITY FLOW APPLICATIONS", LATEST ADDITION

2. MEASURES SHOULD BE TAKEN TO PREVENT MIGRATION OF NATIVE FINES INTO BACKFILL MATERIAL, WHEN REQUIRED.

3. FOUNDATION: WHERE THE TRENCH BOTTOM IS UNSTABLE, THE CONTRACTOR SHALL EXCAVATE TO A DEPTH REQUIRED BY THE ENGINEER AND REPLACE WITH SUITABLE MATERIAL AS SPECIFIED BY THE ENGINEER. AS AN ALTERNATIVE AND AT THE DISCRETION OF THE DESIGN ENGINEER, THE TRENCH BOTTOM MAY BE STABILIZED USING A GEOTEXTILE MATERIAL.

4. BEDDING: SUITABLE MATERIAL SHALL BE CLASS I, II OR III. THE CONTRACTOR SHALL PROVIDE DOCUMENTATION FOR MATERIAL SPECIFICATION TO ENGINEER. UNLESS OTHERWISE NOTED BY THE ENGINEER, MINIMUM BEDDING THICKNESS SHALL BE 4" (100mm) FOR 4"-24" (100mm-600mm); 6" (150mm) FOR 30"-60" (750mm-1500mm).

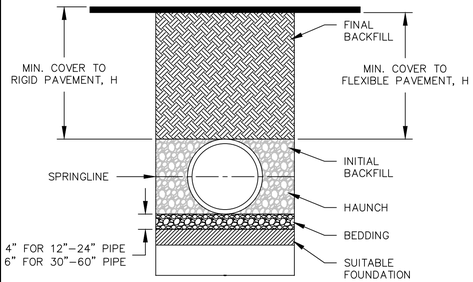
5. INITIAL BACKFILL: SUITABLE MATERIAL SHALL BE CLASS I, II OR III IN THE PIPE ZONE EXTENDING TO THE CROWN OF PIPE. THE CONTRACTOR SHALL PROVIDE DOCUMENTATION FOR MATERIAL SPECIFICATION TO ENGINEER. MATERIAL SHALL BE INSTALLED AS REQUIRED IN ASTM D2321, LATEST EDITION.

6. MINIMUM COVER: MINIMUM COVER, H, IN NON-TRAFFIC APPLICATIONS (GRASS OR LANDSCAPE AREAS) IS 12" FROM THE TOP OF PIPE TO GROUND SURFACE. ADDITIONAL COVER MAY BE REQUIRED TO PREVENT FLOTATION. FOR TRAFFIC APPLICATIONS, MINIMUM COVER, H, IS 12" UP TO 48" DIAMETER PIPE AND 24" OF COVER FOR 60" DIAMETER PIPE, MEASURED FROM TOP OF PIPE TO BOTTOM OF FLEXIBLE PAVEMENT OR TO TOP OF RIGID PAVEMENT. FOR TRAFFIC APPLICATIONS WITH LESS THAN FOUR FEET OF COVER, EMBEDMENT OF THE PIPE SHALL BE USING ONLY A CLASS I OR CLASS II BACKFILL.

MINIMUM RECOMMENDED COVER BASED ON VEHICLE LOADING CONDITIONS**

PIPE DIAM.	SURFACE LIVE LOADING CONDITION	
	H-25	HEAVY CONSTRUCTION (75T AXLE LOAD) *
12" - 48" (300mm - 1200mm)	12" (305mm)	48" (1219mm)
60" (1500mm)	24" (610mm)	60" (1524mm)

* VEHICLES IN EXCESS OF 75T MAY REQUIRE ADDITIONAL COVER
**SEE BACKFILL REQUIREMENTS IN NOTE 6.

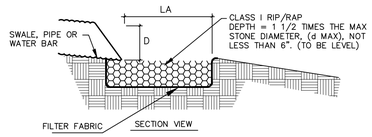


RECOMMENDED MINIMUM TRENCH WIDTHS

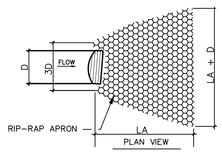
PIPE DIAM.	MIN. TRENCH WIDTH
4" (100mm)	21" (533mm)
6" (150mm)	23" (584mm)
8" (200mm)	26" (660mm)
10" (250mm)	28" (711mm)
12" (300mm)	30" (762mm)
15" (375mm)	34" (864mm)
18" (450mm)	39" (991mm)
24" (600mm)	48" (1219mm)
30" (750mm)	56" (1422mm)
36" (900mm)	64" (1626mm)
42" (1050mm)	72" (1829mm)
48" (1200mm)	80" (2032mm)
60" (1500mm)	96" (2438mm)

HDPE TRENCH DETAIL

12-20-2022 NOT TO SCALE 3.08



NUMBER	D	LA	d50 SIZE
5	24"	16'	9"
11	18	10	9



NOTES
1) d50 = MEDIAN STONE SIZE dMAX = 1.5 X d50
2) OUTLET PROTECTION TO BE INSTALLED LEVEL BOTH LONGITUDINALLY (LA) AND HORIZONTALLY

MAINTENANCE:
INSPECT RIPRAP OUTLET STRUCTURE WEEKLY AND AFTER SIGNIFICANT (1/2 INCH OR GREATER) RAINFALL EVENTS TO SEE IF ANY EROSION AROUND OR BELOW THE RIPRAP HAS TAKEN PLACE, OR IF STONES HAVE BEEN DISLODGED. IMMEDIATELY MAKE ALL NEEDED REPAIRS TO PREVENT FURTHER DAMAGE.

RIP RAP OUTLET PROTECTION

5-29-26 NOT TO SCALE 3.06

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REVISIONS	
DATE	DESCRIPTION

811 Know what's below. Call before you dig.

PROJECT NUMBER: 25113
DATE: 8-5-26

STORMWATER DETAILS

C-404

SCALE: AS NOTED

WATER SYSTEM PLANS

for

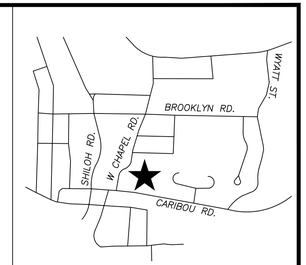
ASHEVILLE AREA HABITAT FOR HUMANITY

TRIED STREET SUBDIVISION

CITY OF ASHEVILLE
BUNCOMBE COUNTY
NORTH CAROLINA

SEWER PLANS

SHEET NO.	DESCRIPTION
C-500	WATER SYSTEM PLAN AND PROFILE
C-501-502	WATER SYSTEM DETAILS



VICINITY MAP
NOT TO SCALE

DEVELOPMENT BLOCK

PROJECT NAME: ASHEVILLE HABITAT FOR HUMANITY – TRIED STREET

PROJECT ADDRESS: 990 W CHAPEL RD
ASHEVILLE, NC 28803

PIN #: 9657-14-2055, 9657-13-2806
9657-14-4041, 9657-14-4174
9657-14-4225, 9657-13-4808

DB: 6373 PG: 1755

OWNER / DEVELOPER: ASHEVILLE HABITAT FOR HUMANITY, INC.
33 MEADOW ROAD
ASHEVILLE, NC 28803
REGINALD JONES
828-251-5702

SURVEYOR: McABEE & ASSOCIATES, PA
3 McABEE TRAIL, FAIRVIEW, NC 28730
828-628-1295

ENGINEER: JARED L. DERIDDER, P.E.
WGLA ENGINEERING, PLLC
724 5TH AVENUE WEST
HENDERSONVILLE, NC 28739
828-687-7177

ACREAGE: 4.5 ACRES ±

CURRENT/PROPOSED ZONING
CITY OF ASHEVILLE – RS8 CZ

LAND USE: PREVIOUS: RESIDENTIAL
CURRENT: VACANT
PROPOSED: RESIDENTIAL

SINGLE FAMILY: 5

TOWNHOMES: 18

DENSITY: 5.11 UNITS/ACRE

WATER SYSTEM: CITY OF ASHEVILLE (PUBLIC)
SEWER SYSTEM: MSD (PUBLIC)

REQUIRED BUILDING SETBACKS:
FRONT 15'
SIDE 6'
REAR 15'

PROPOSED BUILDING SETBACKS:
FRONT 15'
SIDE 0'
REAR 15'

MINIMUM LOT SIZE:
REQUIRED: 4,000 SF
PROVIDED: 3,700 SF

MAX ALLOWABLE BUILDING HEIGHT: 35'
PROPOSED BUILDING HEIGHT: 17'-6" (TWO STORY)

MAXIMUM BUILDING FOOTPRINT
TOWNHOME 1,100 SF
SINGLE FAMILY 1,600 SF

MAXIMUM GROSS FLOOR AREA
TOWNHOME 2,200 SF
SINGLE FAMILY 3,200 SF

PARKING REQUIRED: 46 (2 PER UNIT)
PARKING PROVIDED: 46 (2 PER UNIT)

MAXIMUM ROAD GRADE: 9.18%

OPEN SPACE

SITE AREA: 196,118 SF
R/W AREA: 32,505

REQUIRED OPEN SPACE: 15% OF AREA OUTSIDE OF R/W
15% x 163,613 SF = 24,542 SF

PROVIDED OPEN SPACE: 24,628 SF (15.05%)
NATURAL: 12,314 SF (50%)
PATH REQUIREMENT: 320 LF (TOTAL WIDTH) x 80% = 256 LF
PATH PROVIDED: 260 LF WITH BENCH (MAX SLOPE 14%)
RECREATIONAL: 12,314 SF (50%)

IMPERVIOUS AREA SUMMARY
PRE DEV. IMP. AREA: 23,578 SF (0.541 AC ±)
TO REMAIN: 0 SF (0.00 AC ±)
TO BE REMOVED: 23,578 SF (0.541 AC ±)

POST DEV. IMP. AREA: 63,809 SF (1.465 AC ±)
POST DEV. IMP. PERCENTAGE: 32.54%

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DATE	DESCRIPTION

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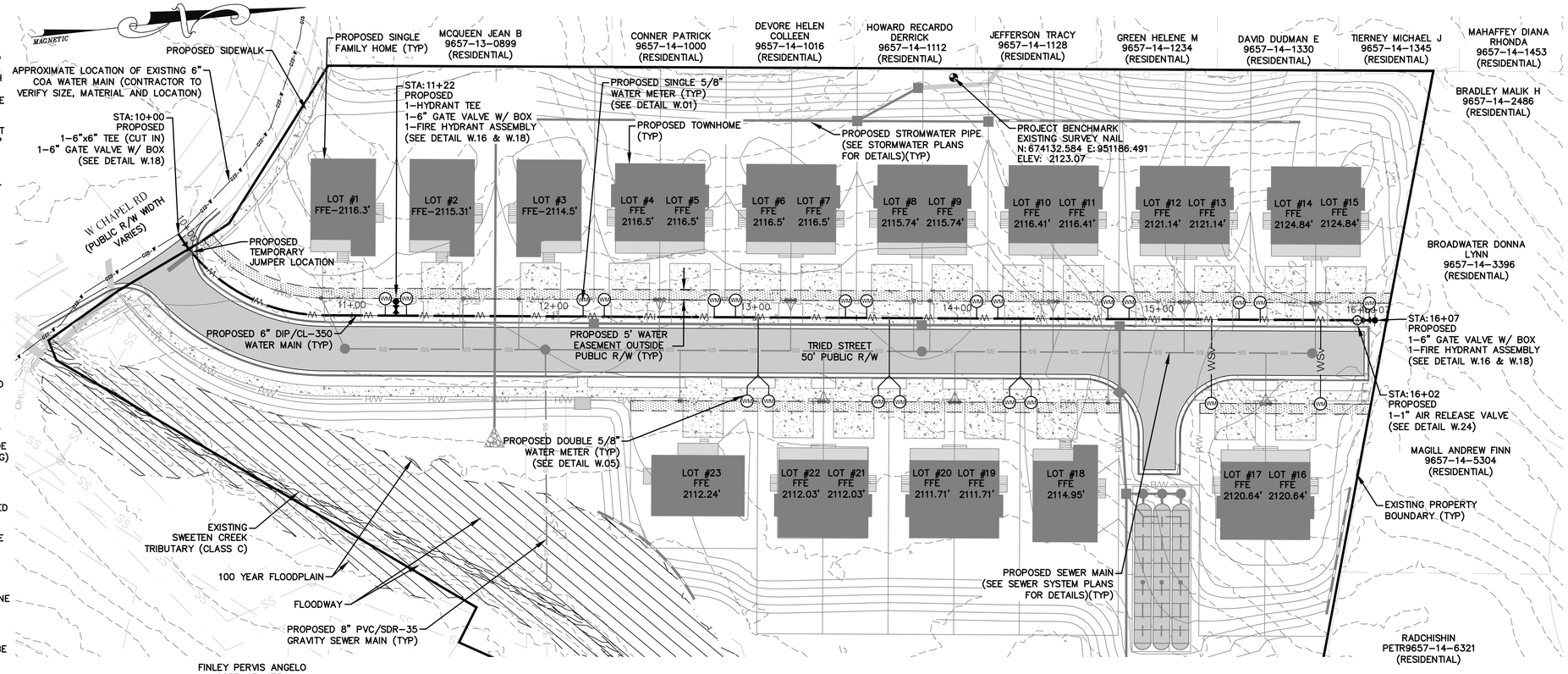
PROJECT NUMBER: 25113
DATE: 8-5-26

COA WATER PROJECT
WPFY-25-26-03

COVER

SCALE: AS NOTED

NOTES:
1. CITY OF ASHEVILLE STANDARDS SUPERSEDE ALL OTHERS.
2. INSTALLATIONS SHALL BE IN ACCORDANCE WITH THE CITY OF ASHEVILLE'S CURRENT DESIGN GUIDELINES UNDER THE INSPECTION OF THE CITY OF ASHEVILLE AND BY A NORTH CAROLINA LICENSED UTILITY CONTRACTOR.
3. THE WATERLINE SHALL BE PLACED WITHIN THE BENCH WITH A MINIMUM 2' SEPARATION FROM THE EDGE OF PAVEMENT AND A MINIMUM OF 2' SEPARATION FROM THE EDGE OF SLOPES UNLESS OTHERWISE NOTED ON PLANS.
4. ALL WATER METERS SHALL BE PLACED IN FRONT OF THE PROPERTY WHICH THEY WILL SERVE AND THEY MUST BE INSTALLED IN RELATIVELY FLAT AREAS NOT IN STEEP BANKS OR SLOPES.
5. ALL FIRE HYDRANTS MUST BE PLACED IN RELATIVELY FLAT AREAS, NOT IN STEEP BANKS OR SLOPES, AND MUST HAVE 3' OF CLEAR SPACE AROUND THE HYDRANT.
6. ALL BRASS FITTINGS MUST BE CERTIFIED LEAD FREE.
7. ALL METERS SHALL BE PLACED PER CITY OF ASHEVILLE DETAIL AS SHOWN ON DETAIL SHEET.
8. ALL PROPOSED ROADS ARE TO BE PRIVATE.
9. A MINIMUM OF 3 FEET IS REQUIRED BETWEEN THE WATER LINES AND ANY OTHER UNDERGROUND UTILITY.
10. WATER MAIN SHALL BE INSTALLED WITH 3 FEET COVER OVER WATER MAIN. ALL FIRE HYDRANTS, WATER METERS AND AIR RELEASE VALVES SHALL BE LOCATED OUTSIDE DRIVEWAYS.
11. RESTRAINED JOINTS BY A CITY OF ASHEVILLE APPROVED PIPE MANUFACTURER ARE TO BE USED FOR ALL PUBLIC WATER LINES; THRUST BLOCKS ARE PERMITTED WHERE CONNECTIONS ARE MADE TO EXISTING WATER MAIN OR WHERE THE USE OF MECHANICAL RESTRAINT IS NOT FEASIBLE.
12. 911 ADDRESSES ISSUED FROM BUNCOMBE COUNTY ARE REQUIRED BY BUNCOMBE COUNTY BEFORE WATER RELEASE.
13. MINIMUM CLEARANCE BETWEEN THE WATER MAIN AND DRAINAGE STRUCTURES IS 3 FEET. MINIMUM CLEARANCE BETWEEN THE WATER SERVICES AND DRAINAGE STRUCTURES IS 3 FEET.
14. CITY OF ASHEVILLE OWNERSHIP/MAINTENANCE SHALL END BEHIND THE METER.
15. THIS WATER EXTENSION PROJECT IS TOTALLY OUTSIDE THE 100YR FLOOD PLAIN (PER NC FLOOD PLAIN MAPPING)
16. NO UNIONS ARE PERMITTED FOR ANY SERVICE LINE BETWEEN THE MAIN AND THE WATER METER.
17. NO IRRIGATION METERS ARE PLANNED AS PART OF THIS PROJECT
18. NO LANDSCAPE TREES ARE PERMITTED TO BE PLACED WITHIN THE CITY OF ASHEVILLE WATER EASEMENT.
19. GAS, CABLE AND OTHER UTILITIES ARE TO BE INSTALLED SUCH THAT CLEARANCE FROM THE WATERLINE ARE MAINTAINED OR THEY SHALL BE LOCATED ON THE OPPOSITE SIDE OF THE ROAD.
20. STAKING OF THE RIGHT OF WAY LIMITS, ROADWAYS, CURBLINES, PROPOSED STRUCTURES, LANDSCAPE TREES, UTILITY CROSSINGS, PROPERTY CORNERS, ETC. IS REQUIRED PRIOR TO THE INSTALLATION OF THE WATERLINE FOR THE COA WATER DEPARTMENT REVIEW AND APPROVAL.
21. WATER METER LOCATIONS SHALL BE STAKED IN THE FIELD AND SHALL NOT BE LOCATED WITHIN A DRIVEWAY.
22. ALL PIPE LAID AT 12% OR GREATER SLOPE SHALL BE RESTRAINED JOINT PIPE.
23. STORM DRAIN: WATER MAINS SHALL BE LAID AT LEAST 3 FEET LATERALLY MEASURED EDGE TO EDGE FROM EXISTING OR PROPOSED STORM DRAIN. WHERE A WATER MAIN AND STORM SEWER MAIN CROSS THE MINIMUM VERTICAL SEPARATION IS 12 INCHES AND THE CROSSING SHOULD BE AT A APPROXIMATE 90-DEGREE ANGLE. A MINIMUM OF 3' (5' PREFERRED) SEPARATION IS REQUIRED FROM THE OUTSIDE EDGE OF PROPOSED STORMWATER STRUCTURES AND THE OUTSIDE EDGE OF THE PROPOSED WATERLINE.
24. A MINIMUM OF 10 FT HORIZONTAL AND 18 IN VERTICAL SEPARATION BETWEEN WATER AND SANITARY SEWER LINES MUST BE MAINTAINED. WHERE THE SEWER LINE DOES NOT CONFORM TO THIS REQUIREMENT OR HAVE A MINIMUM COVER OF 36" FROM FROM THE GROUND SURFACE OR 12" VERTICAL SEPARATION FROM STORM DRAINAGE LINES-SEWER PIPE MUST BE OF A FERROUS MATERIAL.



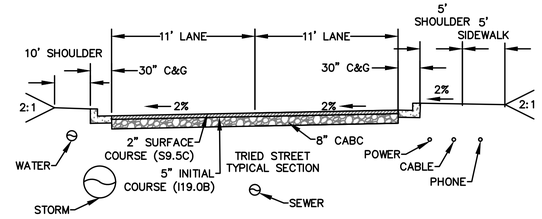
GRAPHIC SCALE

30 0 15 30 60 120

(IN FEET)

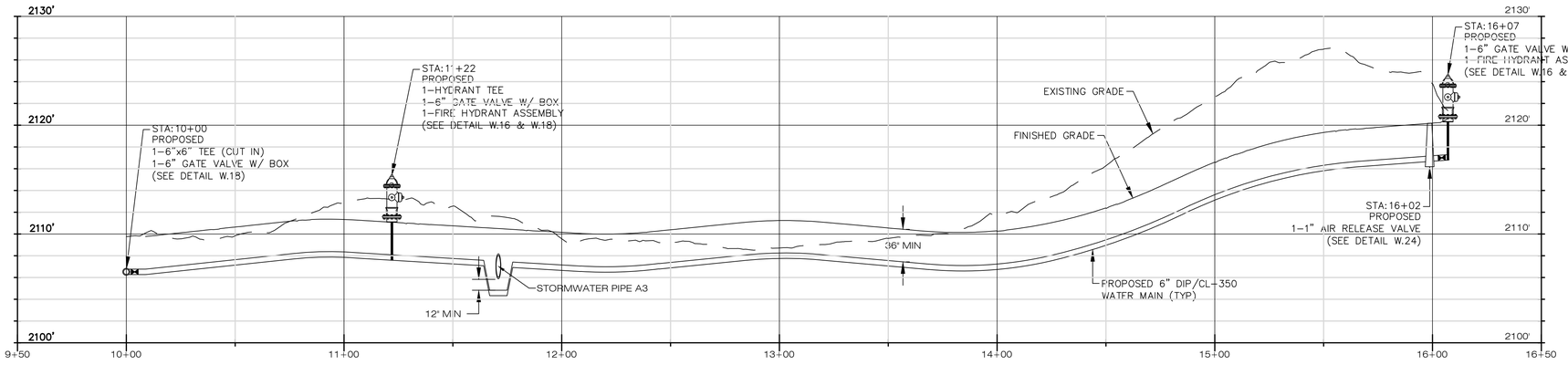
CITY OF ASHEVILLE PROJECT NO. WPFY-25-26-030
WATER LINE EASEMENT PLAT PB____PG____

ESTOPPEL CERTIFICATE REQUIRED YES___NO_X_



LEGEND

- PROPOSED WATER LINE
- PROPOSED WATER SERVICE W/ ⅝ WATER METER
- EXISTING COA WATER LINE
- EXISTING 2' CONTOURS
- PROPOSED 2' CONTOURS
- PROPOSED GATE VALVE
- PROPOSED FIRE HYDRANT
- PROPOSED AIR RELEASE VALVE



Profile View of WATER A
Horizontal Scale:1"=30' Vertical Scale: 1"=6'

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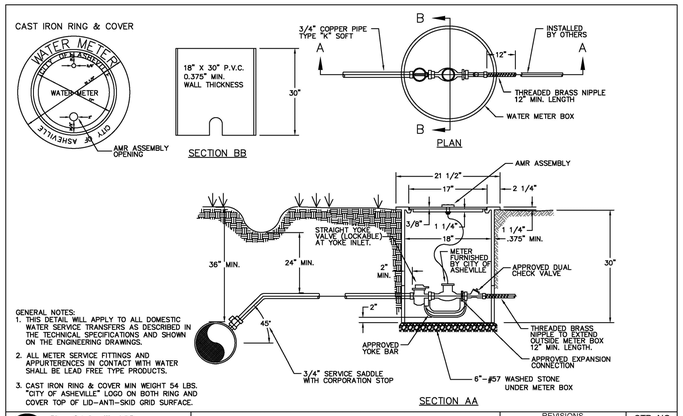
811 Know what's below. Call before you dig.

PROJECT NUMBER: 25113
DATE: 8-5-26

WATER LINE PLAN AND PROFILE

C-500

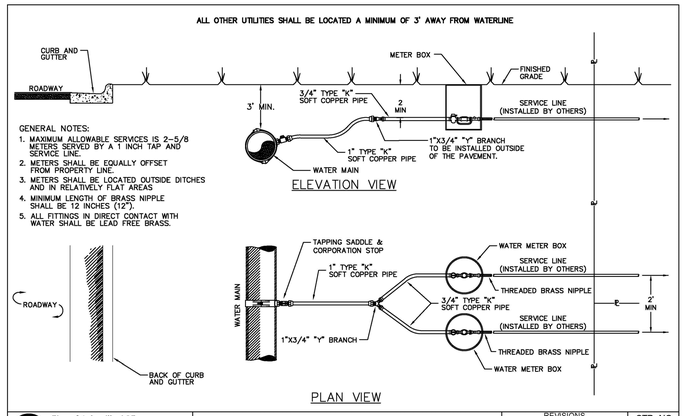
SCALE: 1"=30'



City of Asheville, NC
WATER ENGINEERING DIVISION

5/8"- 3/4" WATER METER BOX

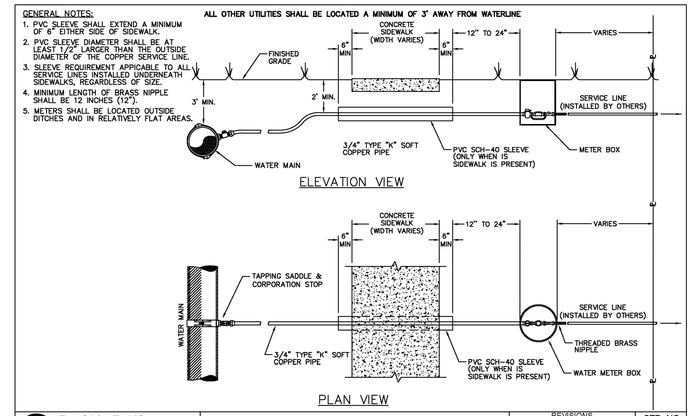
REVISIONS		STD. NO.
DATE	DESCRIPTION	
6/2015	REVISED	W.01



City of Asheville, NC
WATER ENGINEERING DIVISION

STANDARD MULTIPLE BRANCH SERVICES

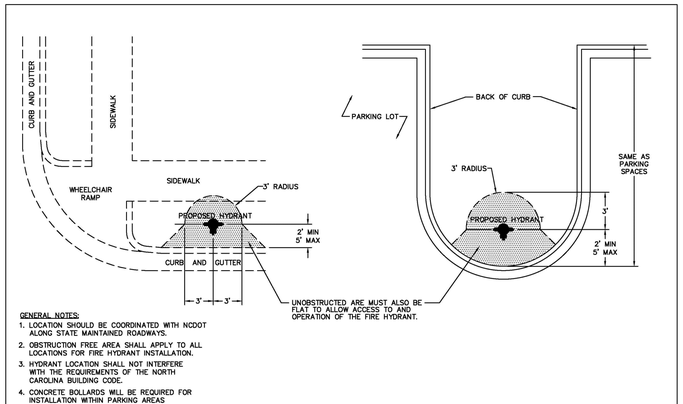
REVISIONS		STD. NO.
DATE	DESCRIPTION	
6/2015	REVISED	W.05



City of Asheville, NC
WATER ENGINEERING DIVISION

TYPICAL WATER SERVICE INSTALLATION WITH SIDEWALK

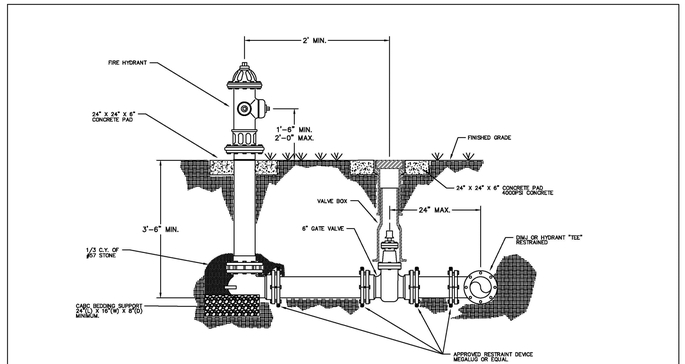
REVISIONS		STD. NO.
DATE	DESCRIPTION	
6/2015	REVISED	W.06



City of Asheville, NC
WATER ENGINEERING DIVISION

STANDARD HYDRANT LOCATION

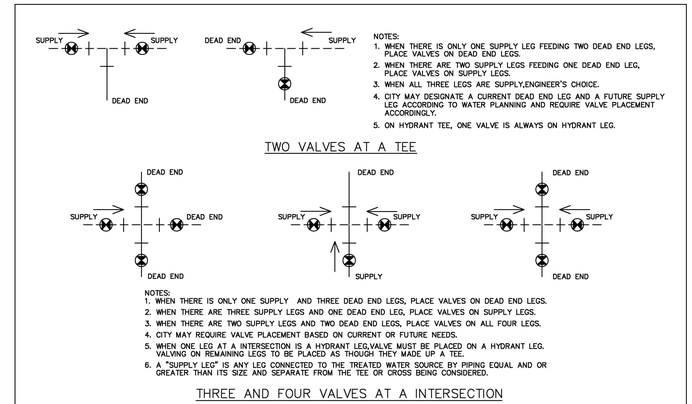
REVISIONS		STD. NO.
DATE	DESCRIPTION	
6/2015	REVISED	W.15



City of Asheville, NC
WATER ENGINEERING DIVISION

FIRE HYDRANT INSTALLATION

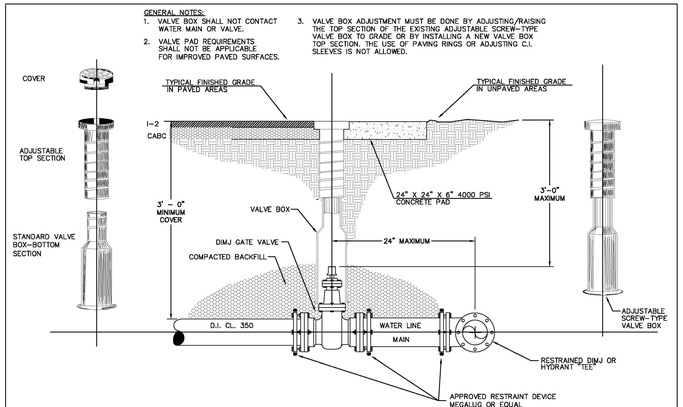
REVISIONS		STD. NO.
DATE	DESCRIPTION	
6/2015	REVISED	W.16



City of Asheville, NC
WATER ENGINEERING DIVISION

TYPICAL VALVING CONFIGURATION

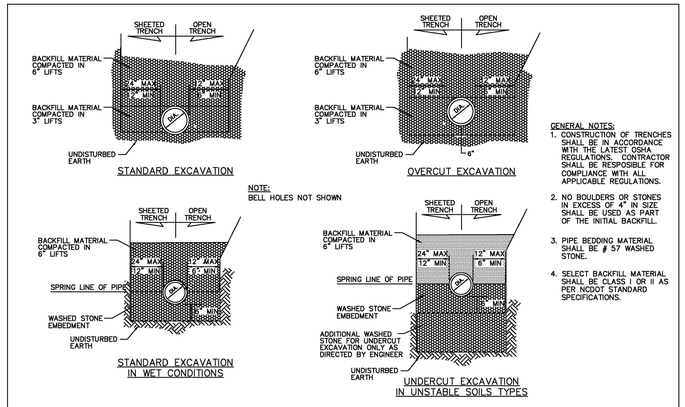
REVISIONS		STD. NO.
DATE	DESCRIPTION	
6/2015	REVISED	W.17



City of Asheville, NC
WATER ENGINEERING DIVISION

TYPICAL VALVE & VALVE BOX INSTALLATION / ADJUSTMENT

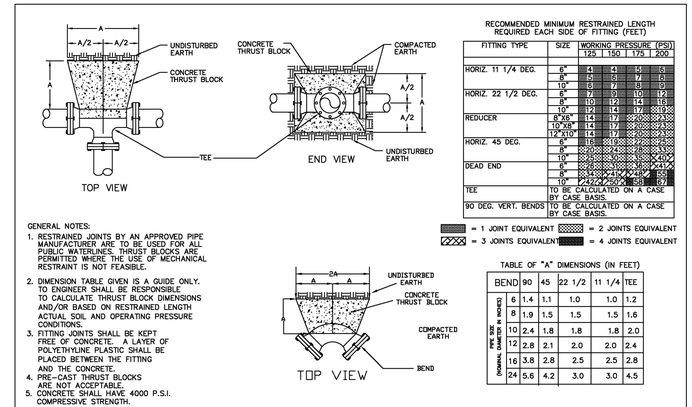
REVISIONS		STD. NO.
DATE	DESCRIPTION	
6/2015	REVISED	W.18



City of Asheville, NC
WATER ENGINEERING DIVISION

TYPICAL TRENCH DETAIL

REVISIONS		STD. NO.
DATE	DESCRIPTION	
6/2015	REVISED	W.21



City of Asheville, NC
WATER ENGINEERING DIVISION

THRUST BLOCK FOR FITTINGS & RESTRAINING REQUIREMENTS

REVISIONS		STD. NO.
DATE	DESCRIPTION	
6/2015	REVISED	W.22

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DATE	DESCRIPTION

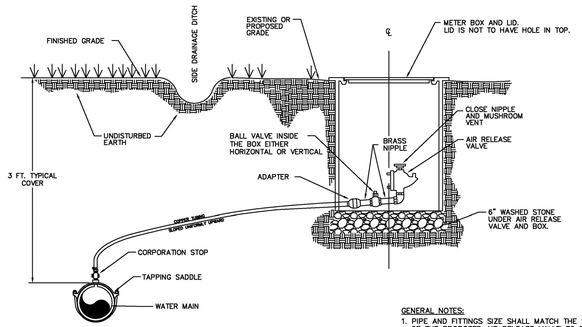
811 Know what's below. Call before you dig.

PROJECT NUMBER: 25113
DATE: 8-5-26

WATER SYSTEM DETAILS

C-501

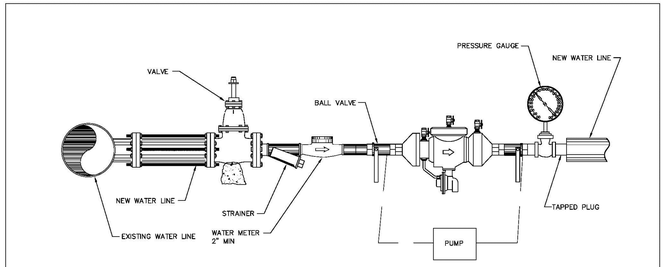
SCALE: AS NOTED



GENERAL NOTES:

1. PIPE AND FITTINGS SIZE SHALL MATCH THE SIZE OF THE PROPOSED AIR RELEASE VALVE TO BE INSTALLED.
2. REFER TO STANDARD DETAIL FOR METER BOX SPECIFICATIONS.
3. LOCATION TO BE SAME AS METER BOX DETAILS W.01 & W.05

City of Asheville, NC WATER ENGINEERING DIVISION	STANDARD AIR RELEASE VALVE INSTALLATION	REVISIONS DATE / DESCRIPTION: 6/2015 REVISED	STD. NO. W.24



GENERAL NOTES:

1. PRIOR TO CONNECTING TO THE EXISTING WATERLINE, THE NEW WATER LINE WILL BE PRESSURE TESTED, DISINFECTED AND A CLEAR WATER SAMPLE OBTAINED.
2. ALL WATER FOR FILLING AND FLUSHING OF NEW WATER LINE WILL BE DRAWN THROUGH THE REDUCED PRESSURE ZONE (RPZ) ASSEMBLY.
3. THE COSTS FOR PROVIDING REDUCED PRESSURE ZONE (RPZ) ASSEMBLY AND SLEEVE NECESSARY FOR FINAL CONNECTION WILL BE INCIDENTAL TO THE WATER LINE INSTALLATION.
4. THE BOTTOM OF THE REDUCED PRESSURE ZONE (RPZ) ASSEMBLY TO BE INSTALLED MINIMUM 12" FROM THE GROUND. ALL DISCHARGE MUST DRAIN AWAY FROM ASSEMBLY. CONTRACTOR IS RESPONSIBLE FOR PROTECTING REDUCED PRESSURE ZONE ASSEMBLY FROM FREEZING.
5. A PRV MUST BE INSTALLED BEFORE THE REDUCED PRESSURE ZONE (RPZ) ASSEMBLY IF THE PRESSURE IS GREATER THAN 175 PSI.

City of Asheville, NC WATER ENGINEERING DIVISION	NEW WATER LINE PRESSURE TEST BACKFLOW PREVENTION ASSEMBLY	REVISIONS DATE / DESCRIPTION: 1/2023 REVISED DETAIL FROM 8.21	STD. NO. W.28

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PROJECT NUMBER: 25113
DATE: 8-5-26

WATER SYSTEM DETAILS

C-502

SCALE: AS NOTED

SEWER SYSTEM PLANS

for

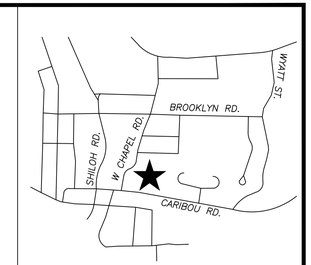
ASHEVILLE AREA HABITAT FOR HUMANITY

TRIED STREET SUBDIVISION

CITY OF ASHEVILLE
BUNCOMBE COUNTY
NORTH CAROLINA

SEWER PLANS

SHEET NO.	DESCRIPTION
C-600	SANITARY SEWER PLAN AND PROFILE
C-601-602	SANITARY SEWER SYSTEM DETAILS



VICINITY MAP
NOT TO SCALE

DEVELOPMENT BLOCK

PROJECT NAME: ASHEVILLE HABITAT FOR HUMANITY – TRIED STREET

PROJECT ADDRESS: 990 W CHAPEL RD
ASHEVILLE, NC 28803

PIN #: 9657-14-2055, 9657-13-2806
9657-14-4041, 9657-14-4174
9657-14-4225, 9657-13-4808

DB: 6373 PG: 1755

OWNER / DEVELOPER: ASHEVILLE HABITAT FOR HUMANITY, INC.
33 MEADOW ROAD
ASHEVILLE, NC 28803
REGINALD JONES
828-251-5702

SURVEYOR: McABEE & ASSOCIATES, PA
3 McABEE TRAIL, FAIRVIEW, NC 28730
828-628-1295

ENGINEER: JARED L. DERIDDER, P.E.
WGLA ENGINEERING, PLLC
724 5TH AVENUE WEST
HENDERSONVILLE, NC 28739
828-687-7177

ACREAGE: 4.5 ACRES ±

CURRENT/PROPOSED ZONING
CITY OF ASHEVILLE – RS8 CZ

LAND USE: PREVIOUS: RESIDENTIAL
CURRENT: VACANT
PROPOSED: RESIDENTIAL

SINGLE FAMILY: 5

TOWNHOMES: 18

DENSITY: 5.11 UNITS/ACRE

WATER SYSTEM: CITY OF ASHEVILLE (PUBLIC)
SEWER SYSTEM: MSD (PUBLIC)

REQUIRED BUILDING SETBACKS:
FRONT 15'
SIDE 6'
REAR 15'

PROPOSED BUILDING SETBACKS:
FRONT 15'
SIDE 0'
REAR 15'

MINIMUM LOT SIZE:
REQUIRED: 4,000 SF
PROVIDED: 3,700 SF

MAX ALLOWABLE BUILDING HEIGHT: 35'
PROPOSED BUILDING HEIGHT: 17'-6" (TWO STORY)

MAXIMUM BUILDING FOOTPRINT
TOWNHOME 1,100 SF
SINGLE FAMILY 1,600 SF

MAXIMUM GROSS FLOOR AREA
TOWNHOME 2,200 SF
SINGLE FAMILY 3,200 SF

PARKING REQUIRED: 46 (2 PER UNIT)
PARKING PROVIDED: 46 (2 PER UNIT)

MAXIMUM ROAD GRADE: 9.18%

OPEN SPACE

SITE AREA: 196,118 SF
R/W AREA: 32,505

REQUIRED OPEN SPACE: 15% OF AREA OUTSIDE OF R/W
15% x 163,613 SF = 24,542 SF

PROVIDED OPEN SPACE: 24,628 SF (15.05%)
NATURAL: 12,314 SF (50%)
PATH REQUIREMENT: 320 LF (TOTAL WIDTH) x 80% = 256 LF
PATH PROVIDED: 260 LF WITH BENCH (MAX SLOPE 14%)
RECREATIONAL: 12,314 SF (50%)

IMPERVIOUS AREA SUMMARY
PRE DEV. IMP. AREA: 23,578 SF (0.541 AC ±)
TO REMAIN: 0 SF (0.00 AC ±)
TO BE REMOVED: 23,578 SF (0.541 AC ±)

POST DEV. IMP. AREA: 63,809 SF (1.465 AC ±)
POST DEV. IMP. PERCENTAGE: 32.54%

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HENDERSONVILLE, NC 28739
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WGLA.COM
NC LICENSE P-1342

ASHEVILLE HABITAT FOR HUMANITY
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NORTH CAROLINA

Asheville Area Habitat for Humanity®
Building Houses Changing Lives

NORTH CAROLINA REGISTERED PROFESSIONAL ENGINEER SEAL 041349 JARED L. DERIDDER

Preliminary Not For Construction

REVISIONS

DATE	DESCRIPTION

811 Know what's below. Call before you dig.

PROJECT NUMBER: 25113
DATE: 8-5-26

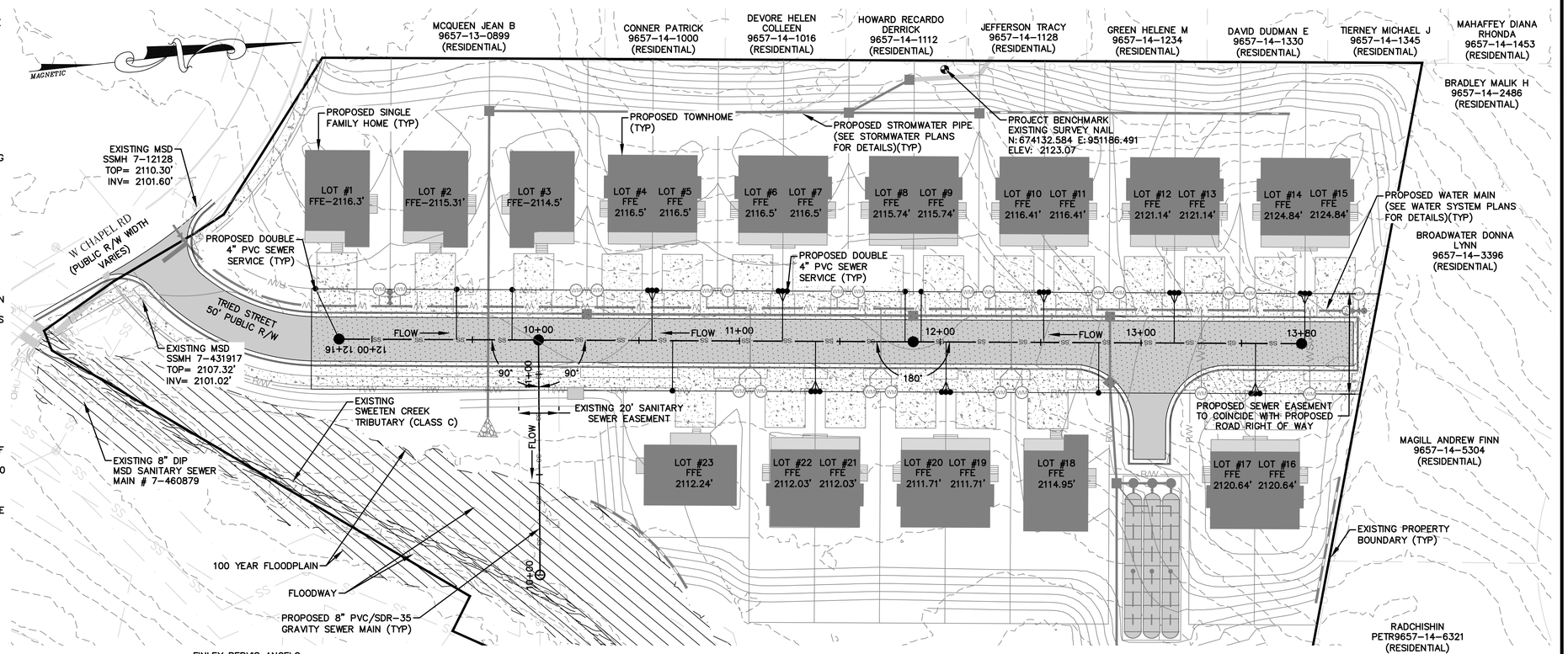
MSD PROJECT
2025253

COVER

SCALE: AS NOTED

NOTES:
1. THE SPECIFICATIONS AND REQUIREMENTS OF THE METROPOLITAN SEWAGE DISTRICT SUPERSEDE ALL OTHERS IN THE INSTALLATION OF THE PROPOSED EXTENSION(S).
2. MSD MAINTENANCE OF SEWER SERVICE ENDS AT THE FIRST CLEANOUT MAINTENANCE OF SERVICES BEYOND THIS POINT IS PRIVATE
3. PROPOSED INVERTS OF EXISTING MANHOLES SHALL BE CORED AND BOOTED, IF NEEDED FOR NEW PIPE CONNECTIONS AND INVERT SHALL BE CONSTRUCTED IN A U-SHAPED, SWEEPING MANNER.
4. ALL SEWER SERVICES SHALL BE 4" (PVC/SCH 40) UNLESS OTHERWISE NOTED.
5. CONTRACTOR SHALL PROVIDE DIP/CL-350 PIPING ON ALL SEWER LINES WHERE 3 FEET OF COVER IS NOT PROVIDED.
6. PIN # 965-713-4808 IS THE ONLY PROPERTY AFFECTED BY THE PROPOSED SEWER LINE.
7. ALL SANITARY SEWER WORK IS TO BE PERFORMED BY A LICENSED NORTH CAROLINA UTILITY CONTRACTOR.
8. ALL SEWER EASEMENTS SHALL BE 20' WIDE UNLESS NOTED ON PLAN OTHERWISE.
9. ALL PROPOSED SANITARY SEWER LINES TO BE TURNED OVER TO MSD WILL BE GRAVITY LINES.
10. IF CONTRACTOR TRANSITIONS FROM PVC TO DIP, THEN A SOLID SLEEVE COUPLING WILL BE USED. ONLY ONE TRANSITION WILL BE ALLOWED BETWEEN MANHOLES.
11. SEE THE GRADING AND EROSION CONTROL PLANS FOR ALL EROSION MEASURES RELATED TO SEWER CONSTRUCTION,
12. HORIZONTAL CONTROL IS NAD 83, VERTICAL CONTROL IS NAVD 88.
13. NO DOGHOUSE MANHOLES ALLOWED.
14. THE ENTIRE MSD PERMANENT SEWER EASEMENT MUST BE CLEARED AND REMAIN CLEAR OF TREE PLANTINGS & PERMANENT TYPE STRUCTURES.
15. CONTRACTOR SHALL PROVIDE MSD FIELD DENSITY REPORTS VERIFYING SEWER BUILT IN FILL AREAS ARE COMPACTED TO 95% STANDARD PROCTOR.
16. PIPE SLOPES AND LENGTHS ARE CALCULATED USING HORIZONTAL DISTANCES FROM INSIDE EDGES OF MANHOLES.
17. A PORTION OF THIS PROJECT LIES WITHIN THE 100 YEAR FLOOD PLAIN.
18. NO LOTS ARE PROPOSED TO PUMP TO THE PROPOSED GRAVITY SEWER SYSTEM.
19. NO PERMANENT STRUCTURES ALLOWED WITHIN THE EASEMENT.
20. RECEIVING WATER COURSE: ____ CREEK (CLASS ____)

LEGEND
- PROPERTY BOUNDARY
- EXISTING 2' CONTOURS
- PROPOSED 2' CONTOURS
- SS — SS — EXISTING SANITARY SEWER MAIN
- GIS-W — EXISTING WATER MAIN
- EXISTING STORM WATER
- 30' STREAM BUFFER
- 100 YEAR FLOODPLAIN
- SS — PROPOSED SANITARY SEWER MAIN
- PROPOSED ASPHALT
- PROPOSED 24" CURB AND GUTTER

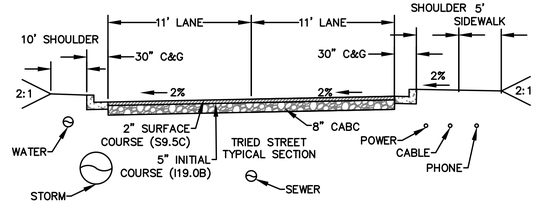


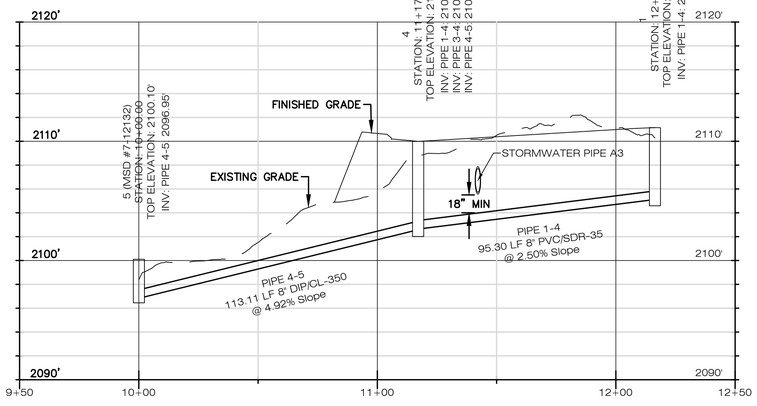
GRAPHIC SCALE

30 0 15 30 60 120

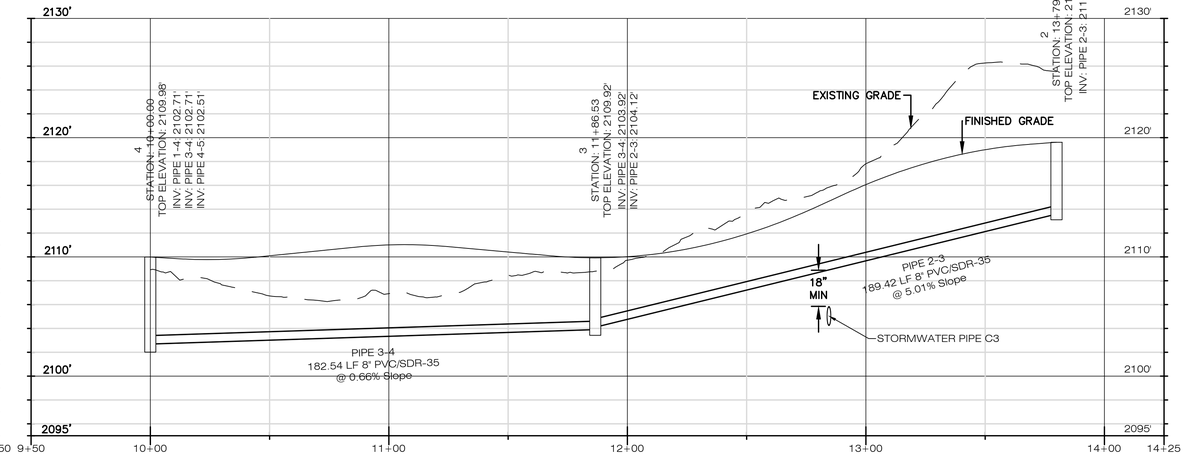
(IN FEET)

MSD PROJECT # 2025253





Profile View of SEWER A
Horizontal Scale:1"=30' Vertical Scale: 1"=6'



Profile View of SEWER B
Horizontal Scale:1"=30' Vertical Scale: 1"=6'

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NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 047844 DAVID L. DERICK

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REVISIONS	
DATE	DESCRIPTION

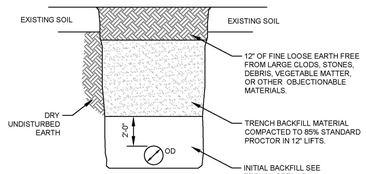
811 Know what's below. Call before you dig.

PROJECT NUMBER: 25113
DATE: 8-5-26

SANITARY SEWER PLAN AND PROFILE

C-600

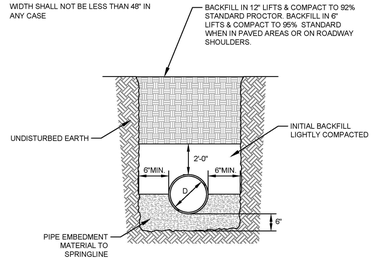
SCALE: 1"=30'



TRENCH BACKFILL IN MSD RIGHTS OF WAY
N.T.S.

STANDARD DETAIL	
Metropolitan Sewerage District of Buncombe County, North Carolina	
TRENCH BACKFILL	
DATE APPROVED: MARCH 2017	1.16 - 01

TRENCH WIDTH
THE MINIMUM TRENCH WIDTH SHALL BE THE NOMINAL PIPE DIAMETER PLUS 24", EXCEPT THAT THE MINIMUM TRENCH WIDTH SHALL NOT BE LESS THAN 48" IN ANY CASE



TRENCH FOR PVC PIPE (15" DIA. AND LESS)
N.T.S.

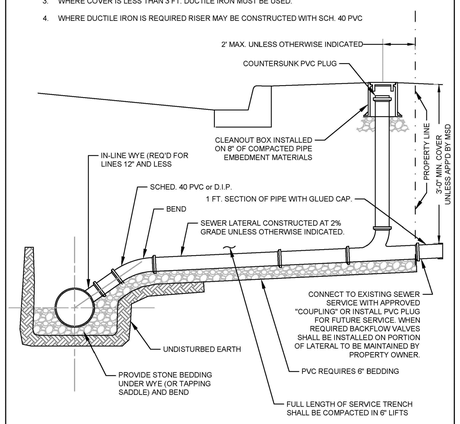
NOTES:

1. WALL THICKNESS SHALL BE SDR 35.
2. PVC PIPES REQUIRE #57 WASHED STONE PIPE EMBEDMENT MATERIALS.
3. THIS DETAIL IS VALID FOR PVC SEWER PIPE INSTALLED AT DEPTHS OF UP TO 20 FEET.
4. PVC PIPE NOT ALLOWED WITH LESS THAN 3'-0" COVER.
5. NO BOULDERS OR STONES WILL BE USED IN INITIAL BACKFILL.
6. WHEN TRENCH IS SUBJECT TO INUNDATION, EMBEDMENT MATERIALS MUST EXTEND TO TOP OF PIPE.

STANDARD DETAIL	
Metropolitan Sewerage District of Buncombe County, North Carolina	
TRENCH FOR PVC PIPE	
DATE APPROVED: MARCH 2017	2.04 - 01

NOTES:

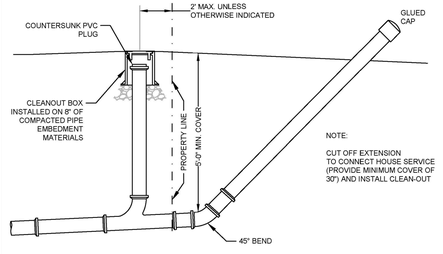
1. WYE CONNECTIONS ARE STANDARD FOR NEW SEWER MAIN CONSTRUCTION.
2. FORCE MAINS CARRYING DOMESTIC WASTEWATER FROM SANITARY CONVENIENCES WITHIN A SINGLE BUILDING, MAY BE CONNECTED TO A 4" MSD GRAVITY SERVICE LINE PROVIDED THAT GRAVITY FLOW WILL BE MAINTAINED DURING PROPOSED MAXIMUM DISCHARGE RATE FOR THE GRINDER OR EFFLUENT PUMP(S).
3. WHERE COVER IS LESS THAN 3 FT. DUCTILE IRON MUST BE USED.
4. WHERE DUCTILE IRON IS REQUIRED RISER MAY BE CONSTRUCTED WITH SCH. 40 PVC



STANDARD DETAIL	
Metropolitan Sewerage District of Buncombe County, North Carolina	
SANITARY SEWER SERVICE LESS THAN 5' DEEP	
DATE APPROVED: MARCH 2017	2.07 - 03

NOTES:

1. WYE CONNECTIONS ARE STANDARD FOR NEW SEWER MAIN CONSTRUCTION.
2. FORCE MAINS CARRYING DOMESTIC WASTEWATER FROM SANITARY CONVENIENCES WITHIN A SINGLE BUILDING, MAY BE CONNECTED TO A 4" MSD GRAVITY SERVICE LINE PROVIDED THAT GRAVITY FLOW WILL BE MAINTAINED DURING PROPOSED MAXIMUM DISCHARGE RATE FOR THE GRINDER OR EFFLUENT PUMP(S).
3. WHERE COVER IS LESS THAN 3 FT. DUCTILE IRON MUST BE USED.
4. WHERE DUCTILE IRON IS REQUIRED RISER MAY BE CONSTRUCTED WITH SCH. 40 PVC

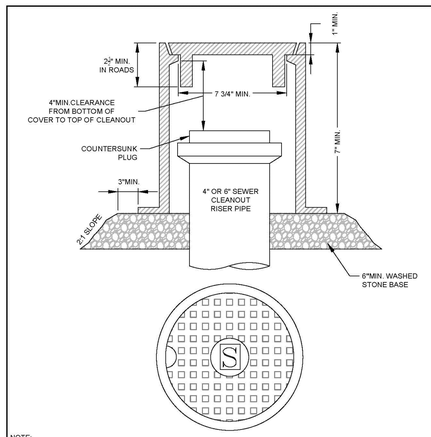


NOTE:
CUT OFF EXTENSION TO CONNECT HOUSE SERVICE (PROVIDE MINIMUM COVER OF 30") AND INSTALL CLEAN-OUT

CONNECT TO EXISTING SEWER SERVICE WITH APPROVED COUPLING OR INSTALL PVC PLUG FOR FUTURE SERVICE. WHEN REQUIRED BACKFLOW VALVES SHALL BE INSTALLED ON PORTION OF LATERAL TO BE MAINTAINED BY PROPERTY OWNER.

SEE DETAIL 2.07-03
FOR ADDITIONAL NOTES

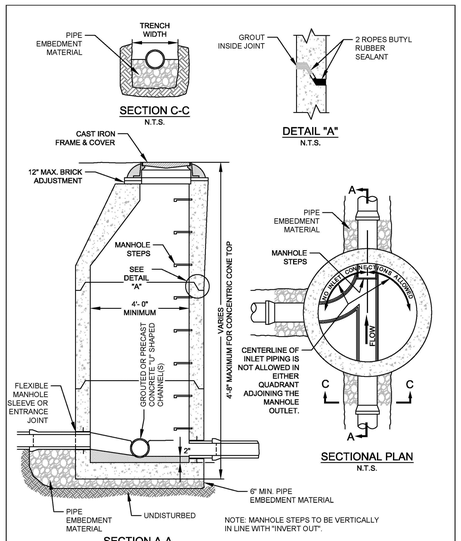
STANDARD DETAIL	
Metropolitan Sewerage District of Buncombe County, North Carolina	
SANITARY SEWER SERVICE MORE THAN 5' DEEP	
DATE APPROVED: MARCH 2017	2.07 - 04



NOTE:

1. ALL SANITARY SEWER CLEANOUT BOXES AND COVERS SHALL BE MANUFACTURED FROM GRAY IRON (CAST IRON) MEETING THE REQUIREMENTS OF AWWA C110 AND ASTM A536.
2. ALL SANITARY SEWER CLEANOUT BOXES AND COVERS SHALL CONFORM TO PARAGRAPH 2.01(d) OF ITEM II, SECTION VI OF MSD'S TECHNICAL SPECIFICATIONS (MADE IN THE U.S.A.)
3. NON-TRAFFIC LOCATIONS: SANITARY SEWER CLEANOUT BOXES AND COVERS SHALL BE AS MANUFACTURED BY EAST JORDAN IRON WORKS MODEL 1566 (OR APPROVED EQUAL)
4. TRAFFIC LOCATIONS: SANITARY SEWER CLEANOUT BOXES AND COVERS SHALL BE AS MANUFACTURED BY EAST JORDAN IRON WORKS MODEL 1574 (OR APPROVED EQUAL)

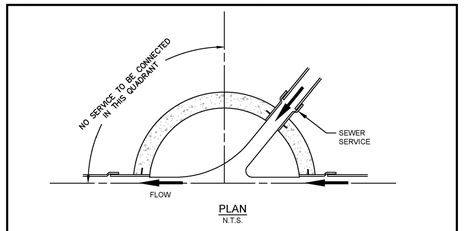
STANDARD DETAIL	
Metropolitan Sewerage District of Buncombe County, North Carolina	
CLEANOUT BOX	
DATE APPROVED: MARCH 28, 2019	2.07 - 05



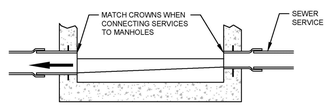
MANHOLE NOTES:

1. FOR MANHOLES LARGER THAN 4 FT. DIA., MAINTAIN FULL MANHOLE DIA. TO 6 FT. ABOVE INVERT BENCH.
2. FOR 5 FT. AND 6 FT. DIA. MANHOLES, USE A TRANSITION CONE TO REDUCE TO 4 FT. DIA. FOR 7 FT. TO 10 FT. DIA. MANHOLES, USE A TRANSITION TOP TO REDUCE TO 4 FT. DIA.

STANDARD DETAIL	
Metropolitan Sewerage District of Buncombe County, North Carolina	
STANDARD MANHOLE	
DATE APPROVED: MARCH 2017	2.11 - 01

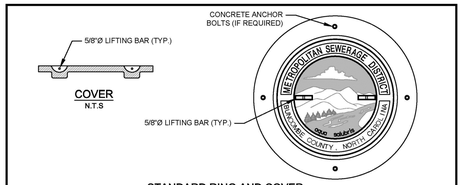


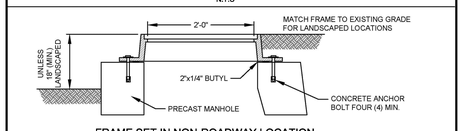
PLAN
N.T.S.

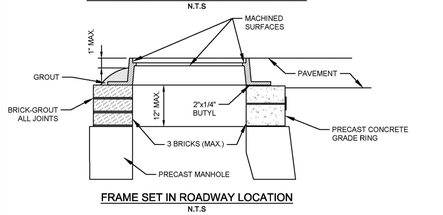


SECTION
N.T.S.

STANDARD DETAIL	
Metropolitan Sewerage District of Buncombe County, North Carolina	
SERVICE CONNECTIONS AT MANHOLES	
DATE APPROVED: MARCH 2017	2.11 - 07.1







NOTE:

1. WHERE M.H. IS IN ROAD SHOULDER AND ROAD DOES NOT HAVE CURB AND GUTTER, DO NOT USE ANCHOR BOLTS IN FRAME.
2. "MSD OF BUNCOMBE COUNTY" TO APPEAR ON COVERS ONLY WHEN THE SEWER SYSTEM IS TO BE MAINTAINED BY MSD

STANDARD DETAIL	
Metropolitan Sewerage District of Buncombe County, North Carolina	
STANDARD MANHOLE FRAME & COVER	
DATE APPROVED: MARCH 2017	2.11 - 08.1

MSD PROJECT # 2025253

WGLA Engineering

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Preliminary
Not For Construction
DAVID L. DERDOUSKI

REVISIONS	
DATE	DESCRIPTION

811 Know what's below. Call before you dig.

PROJECT NUMBER: 25113
DATE: 8-5-26

SANITARY SEWER SYSTEM DETAILS

C-601

SCALE: AS NOTED ON SHEET

UTILITY CROSSING Clearance requirements are to be met or ferrous sewer pipe with joints equivalent to water main standards will be used for a distance of ten feet outside said point of crossing.

Storm Sewer – 24" Vertical
Water – 18" Vertical (Sewer over water requires that both pipes shall be ferrouos pipe with a 20 foot jointless span centered at crossing).
Power – 24" Vertical
Gas – 24" Vertical
Cable – 24" Vertical

MINIMUM SEPARATION Distance from all Sewer Collection Systems are to be met or ferrous sewer pipe with joints equivalent to water main standards will be used.

Storm Sewer – 5' Horizontal
Water Mains – 10' Horizontal
Water Supply – 100' Horizontal (AS–I Waters, Class I or Class II impounded reservoirs).
Water Supply – 50' Horizontal (WS–I, WS–II, WS–III, B, SA, or BS Waters – Nateral High Water).
Other Stream, Lake or Impoundment – 10' Horizontal
Designed Trout Streams – 25' Horizontal
Building Foundation – 5' Horizontal
Basement – 10' Horizontal
Ground Water Lowering and Surface Drainage Ditch – 10' Horizontal
Swimming Pool – 10' Horizontal

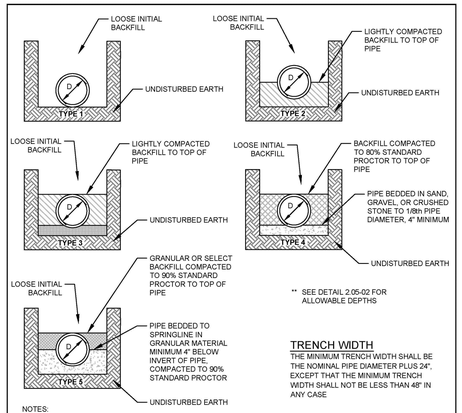
Note: Absolute Minimum sepaaration from Private Wells – 25'; Public Wells – 50'.

METROPOLITAN SEWAGE DISTRICT
REQUIRED PERMANENT EASEMENT WIDTHS

WHERE THE DEPTH OF SANITARY SEWERS EXCEEDS TWENTY FEET (20') OR WHERE SLOPES EXCEED A RATIO OF THREE TO ONE (3:1) EASEMENT WIDTHS WILL BE DETERMINED BY THE DISTRICT ON A CASE BY CASE BASIS.

TRENCH DEPTH	8"–12" SEWER RIGHT OF WAY	15"–18" SEWER RIGHT OF WAY	21"–27" SEWER RIGHT OF WAY	30"–36" SEWER RIGHT OF WAY	42"–54" SEWER RIGHT OF WAY
0–6	20'	20'	25'	25'	30'
6–8	20'	20'	25'	25'	30'
8–10	20'	25'	25'	25'	30'
10–12	20'	25'	25'	30'	30'
12–14	25'	30'	30'	35'	35'
14–16	30'	35'	35'	40'	40'
16–18	30'	35'	40'	40'	40'
18–20	30'	40'	45'	45'	45'

NOTE:
MSD–BUNCOMBE COUNTY STANDARDS SUPERCEDES ALL OTHERS IN SANITARY SEWER CONSTRUCTION.



** SEE DETAIL 2.05-02 FOR ALLOWABLE DEPTHS

TRENCH WIDTH
THE MINIMUM TRENCH WIDTH SHALL BE THE NOMINAL PIPE DIAMETER PLUS 24", EXCEPT THAT THE MINIMUM TRENCH WIDTH SHALL NOT BE LESS THAN 48" IN ANY CASE

NOTES:

1. MINIMUM ALLOWABLE DEPTH OF COVER IS 3 FT.
2. IN ROCK OR WET SOIL, PIPE MUST BE BEDDED IN AT LEAST 6" OF CRUSHED STONED EMBEDMENT MATERIAL BELOW THE INVERT OF THE PIPE.
3. GRANULAR MATERIALS ARE DEFINED PER THE AASHTO SOIL CLASSIFICATION SYSTEM (ASTMD3282) OR THE UNIFIED SOIL CLASSIFICATION SYSTEM (ASTM D2487), WITH THE EXCEPTION THAT GRAVEL BEDDING/BACKFILL ADJACENT TO THE PIPE IS LIMITED TO 2" MAXIMUM PARTICLE SIZE PER ANSI/AWWA C600
4. THESE PIPES ARE ADEQUATE FOR DEPTHS OF COVER FROM 3 FT. UP TO THE MAXIMUM SHOWN INCLUDING AN ALLOWANCE FOR A SINGLE H-20 TRUCK WITH A 1.5 IMPACT FACTOR UNLESS NOTED.
5. RING DEFLECTION LIMITED TO 3%, MINIMUM SAFETY FACTOR OF 2. EARTH LOAD BASED ON SOIL WEIGHT OF 120 PCF.

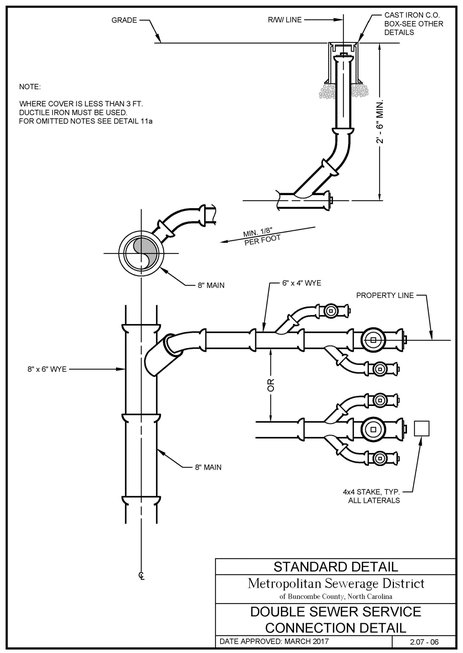
STANDARD DETAIL
Metropolitan Sewerage District
of Buncombe County, North Carolina
TYPICAL TRENCH DETAIL FOR DUCTILE IRON PIPE - 1
DATE APPROVED: MARCH 2017 | 2.05 - 01

Maximum Depth of Cover for Ductile Iron Pipe w/ Cement Lining

Pipe Size	Class					
		Type 1	Type 2	Type 3	Type 4	Type 5
4	350	53	61	69	85	100
6	350	26	31	37	47	65
8	350	16	20	25	34	50
10	350	11	15	19	28	45
12	350	10	15	19	28	44
14	250	–	11	15	23	36
14	300	–	13	17	26	42
14	350	–	14	19	27	44
16	250	–	11	15	24	34
16	300	–	13	17	26	39
16	350	–	15	20	28	44
18	250	–	10	14	22	31
18	300	–	13	17	26	36
18	350	–	15	19	28	41
20	250	–	10	14	22	30
20	300	–	13	17	26	35
20	350	–	15	19	28	38
24	200	–	8	12	17	25
24	250	–	11	15	20	29
24	300	–	13	17	24	32
24	350	–	15	19	28	37
30	200	–	8	12	16	24
24	250	–	11	15	19	27
30	300	–	12	16	21	29
30	350	–	15	19	25	33
36	200	–	8	12	15	23
36	250	–	10	14	18	25
36	300	–	12	16	20	28
36	350	–	15	19	24	32
42	200	–	8	12	15	22
42	250	–	10	14	17	25
42	300	–	12	16	20	27
42	350	–	15	19	23	32
48	200	–	8	11	15	22
48	250	–	10	13	17	24
48	300	–	12	15	19	27
48	350	–	15	18	22	30
54	200	–	8	11	14	22
54	250	–	10	13	16	24
54	300	–	13	15	19	27
54	350	–	15	18	22	30
60	200	–	8	11	14	22
60	250	–	10	13	16	24
60	300	–	13	15	19	26
60	350	–	15	18	22	30
64	200	–	8	11	14	21
64	250	–	10	13	16	24
64	300	–	12	15	19	26
64	350	–	15	17	21	29

SOURCE: Ductile Iron Pipe for Wastewater Applications, DIPRA 2006

STANDARD DETAIL
Metropolitan Sewerage District
of Buncombe County, North Carolina
TYPICAL TRENCH DETAIL FOR DUCTILE IRON PIPE - 2
DATE APPROVED: MARCH 2017 | 2.05 - 02



STANDARD DETAIL
Metropolitan Sewerage District
of Buncombe County, North Carolina
DOUBLE SEWER SERVICE CONNECTION DETAIL
DATE APPROVED: MARCH 2017 | 2.07 - 06

MSD PROJECT # 2025253

WGLA Engineering

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724 5th AVENUE WEST
HENDERSONVILLE, NC 28739
(828) 687-7177
WGLA.COM
NC LICENSE P-1342

ASHEVILLE HABITAT FOR HUMANITY
TRIED ST

ASHEVILLE
BUNCOMBE COUNTY
NORTH CAROLINA

Asheville Area Habitat for Humanity®
Building Houses Changing Lives

NORTH CAROLINA REGISTERED PROFESSIONAL ENGINEER SEAL 041319 FRED L. DERODITIS

Preliminary Not For Construction

REVISIONS	
DATE	DESCRIPTION

811 Know what's below. Call before you dig.

PROJECT NUMBER: 25113
DATE: 8-5-26

SANITARY SEWER SYSTEM DETAILS

C-602

SCALE: AS NOTED ON SHEET

ROADWAY PLANS

for

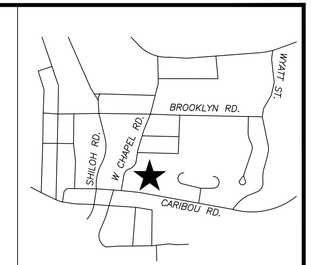
ASHEVILLE AREA HABITAT FOR HUMANITY

TRIED STREET SUBDIVISION

CITY OF ASHEVILLE
BUNCOMBE COUNTY
NORTH CAROLINA

ROADWAY PLANS

SHEET NO.	DESCRIPTION
C-700	ROADWAY PLAN AND PROFILE
C-701	ROADWAY DETAILS



VICINITY MAP
NOT TO SCALE

DEVELOPMENT BLOCK

PROJECT NAME: ASHEVILLE HABITAT FOR HUMANITY – TRIED STREET

PROJECT ADDRESS: 990 W CHAPEL RD
ASHEVILLE, NC 28803

PIN #: 9657-14-2055, 9657-13-2806
9657-14-4041, 9657-14-4174
9657-14-4225, 9657-13-4808

DB: 6373 PG: 1755

OWNER / DEVELOPER: ASHEVILLE HABITAT FOR HUMANITY, INC.
33 MEADOW ROAD
ASHEVILLE, NC 28803
REGINALD JONES
828-251-5702

SURVEYOR: McABEE & ASSOCIATES, PA
3 McABEE TRAIL, FAIRVIEW, NC 28730
828-628-1295

ENGINEER: JARED L. DERIDDER, P.E.
WGLA ENGINEERING, PLLC
724 5TH AVENUE WEST
HENDERSONVILLE, NC 28739
828-687-7177

ACREAGE: 4.5 ACRES ±

CURRENT/PROPOSED ZONING
CITY OF ASHEVILLE – RS8 CZ

LAND USE: PREVIOUS: RESIDENTIAL
CURRENT: VACANT
PROPOSED: RESIDENTIAL

SINGLE FAMILY: 5

TOWNHOMES: 18

DENSITY: 5.11 UNITS/ACRE

WATER SYSTEM: CITY OF ASHEVILLE (PUBLIC)
SEWER SYSTEM: MSD (PUBLIC)

REQUIRED BUILDING SETBACKS:
FRONT 15'
SIDE 6'
REAR 15'

PROPOSED BUILDING SETBACKS:
FRONT 15'
SIDE 0'
REAR 15'

MINIMUM LOT SIZE:
REQUIRED: 4,000 SF
PROVIDED: 3,700 SF

MAX ALLOWABLE BUILDING HEIGHT: 35'
PROPOSED BUILDING HEIGHT: 17'-6" (TWO STORY)

MAXIMUM BUILDING FOOTPRINT
TOWNHOME 1,100 SF
SINGLE FAMILY 1,600 SF

MAXIMUM GROSS FLOOR AREA
TOWNHOME 2,200 SF
SINGLE FAMILY 3,200 SF

PARKING REQUIRED: 46 (2 PER UNIT)
PARKING PROVIDED: 46 (2 PER UNIT)

MAXIMUM ROAD GRADE: 9.18%

OPEN SPACE

SITE AREA: 196,118 SF
R/W AREA: 32,505

REQUIRED OPEN SPACE: 15% OF AREA OUTSIDE OF R/W
15% x 163,613 SF = 24,542 SF

PROVIDED OPEN SPACE: 24,628 SF (15.05%)
NATURAL: 12,314 SF (50%)
PATH REQUIREMENT: 320 LF (TOTAL WIDTH) x 80% = 256 LF
PATH PROVIDED: 260 LF WITH BENCH (MAX SLOPE 14%)
RECREATIONAL: 12,314 SF (50%)

IMPERVIOUS AREA SUMMARY
PRE DEV. IMP. AREA: 23,578 SF (0.541 AC ±)
TO REMAIN: 0 SF (0.00 AC ±)
TO BE REMOVED: 23,578 SF (0.541 AC ±)

POST DEV. IMP. AREA: 63,809 SF (1.465 AC ±)
POST DEV. IMP. PERCENTAGE: 32.54%

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ASHEVILLE HABITAT FOR HUMANITY
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Preliminary Not For Construction

REVISIONS	
DATE	DESCRIPTION

811 Know what's below. Call before you dig.

PROJECT NUMBER: 25113
DATE: 8-5-26

COVER

SCALE: AS NOTED



Profile View of Road A
Horizontal Scale:1"=30' Vertical Scale: 1"=6'

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Engineering

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REVISIONS	
DATE	DESCRIPTION

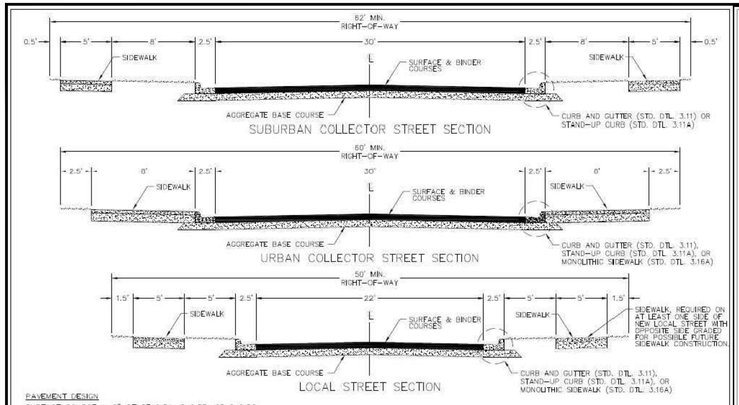
811 Know what's below. Call before you dig.

PROJECT NUMBER: 25113
DATE: 8-5-26

ROADWAY
PLAN AND PROFILE

C-700

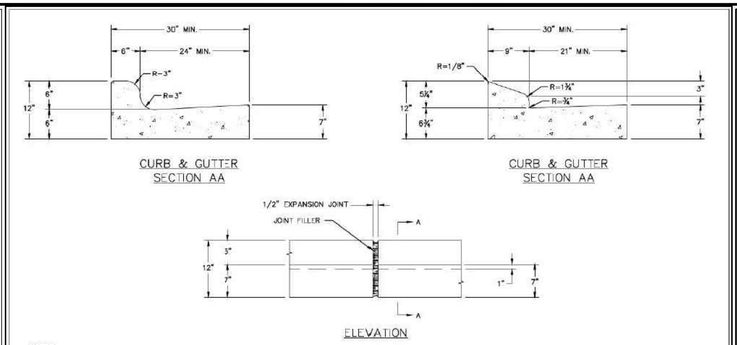
SCALE: 1"=30'



City of Asheville, NC
Standard Specifications and Details Manual

STANDARD STREET SECTIONS (SUBURBAN COLLECTOR, URBAN COLLECTOR & LOCAL)

REVISIONS DATE	DESCRIPTION	STD. NO.
		3.01

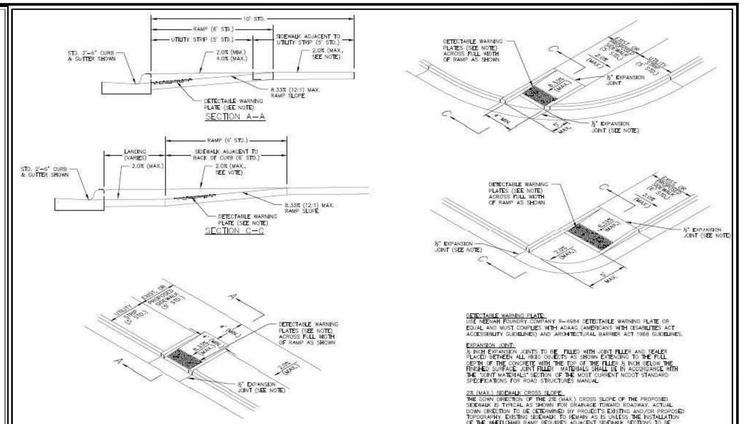


NOTES:
1. CONCRETE SHALL BE 4,000 P.S.I.
2. A 1/2 INCH EXPANSION JOINT FILLED WITH JOINT FILLER SHALL BE PLACED NO FARTHER THAN 50 FEET APART OR AT ALL RIGID OBJECTS.
3. JOINT MATERIALS SHALL BE ACCORDANCE WITH THE JOINT MATERIALS SECTION OF THE MOST CURRENT NCDOT STANDARD SPECIFICATIONS FOR ROAD STRUCTURES MANUAL.
4. A NON SEALED 3/4 INCH DEEP TOOL JOINT SHALL BE PLACED EVERY 10 FEET UNLESS CONSTRUCTED WITH SIDEWALK THAT ABUTS BACK OF CURB, THEN TOOL JOINT SHALL BE PLACED AS SPACED AND INLINE WITH SIDEWALK TOOL JOINT.

City of Asheville, NC
Standard Specifications and Details Maunual

STANDARD CONCRETE CURB AND GUTTER

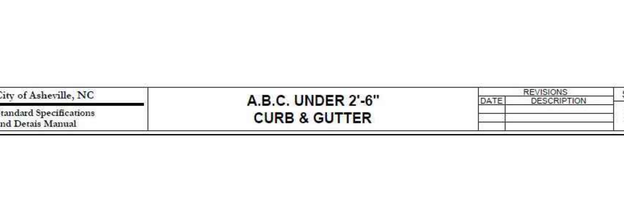
REVISIONS DATE	DESCRIPTION	STD. NO.
9/9/15	REVISED NOTE 4	3.11



City of Asheville, NC
Standard Specifications and Details Manual

STANDARD WHEELCHAIR RAMP

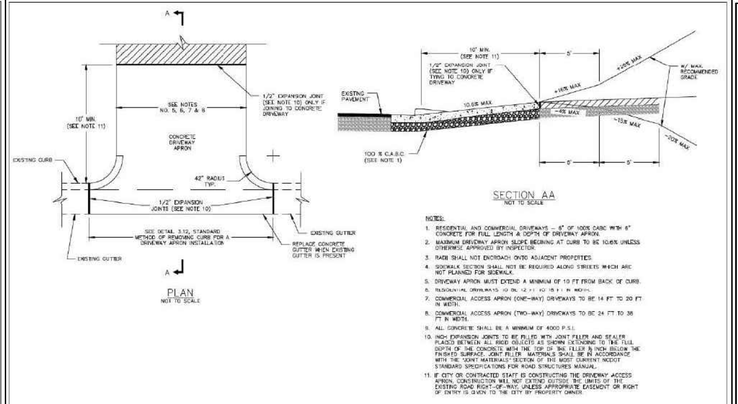
REVISIONS DATE	DESCRIPTION	STD. NO.
		3.17A



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Standard Specifications and Details Manual

STANDARD SHOULDER SECTION WITHOUT SIDEWALK

REVISIONS DATE	DESCRIPTION	STD. NO.
		3.06

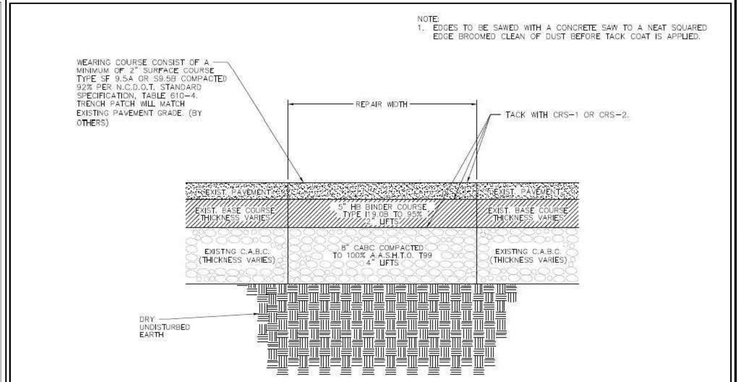


NOTES:
1. RESIDENTIAL AND COMMERCIAL DRIVEWAYS – 6" OF 4000 CABC WITH 6" CONCRETE FOR FULL LENGTH & DEPTH OF DRIVEWAY APRON.
2. MAXIMUM DRIVEWAY APRON SLOPE BEGINNING AT CURB TO BE 10.0% UNLESS OTHERWISE APPROVED BY INSPECTOR.
3. RADII SHALL NOT ENCROACH ONTO ADJACENT PROPERTIES.
4. SIDEWALK SECTION SHALL NOT BE REQUIRED ALONG STREETS WHICH ARE NOT PLANNED FOR SIDEWALK.
5. DRIVEWAY APRON MUST EXTEND A MINIMUM OF 10 FT FROM BACK OF CURB.
6. RESIDENTIAL DRIVEWAYS 10 FT TO 12 FT IN WIDTH.
7. COMMERCIAL ACCESS APRON (ONE-WAY) DRIVEWAYS TO BE 14 FT. TO 20 FT. IN WIDTH.
8. COMMERCIAL ACCESS APRON (TWO-WAY) DRIVEWAYS TO BE 24 FT TO 36 FT IN WIDTH.
9. ALL CONCRETE SHALL BE A MINIMUM OF 4000 P.S.I.
10. INCH EXPANSION JOINTS TO BE FILLED WITH JOINT FILLER AND SEALER PLACED BETWEEN ALL RIGID OBJECTS AS SHOWN EXTENDING TO THE FULL DEPTH OF THE CONCRETE WITH THE TOP OF THE FILLER ½ INCH BELOW THE FINISHED SURFACE. JOINT FILLER MATERIALS SHALL BE IN ACCORDANCE WITH THE JOINT MATERIALS SECTION OF THE MOST CURRENT NCDOT STANDARD SPECIFICATIONS FOR ROAD STRUCTURES MANUAL.
11. IF CITY OR CONTRACTED STAFF IS CONSTRUCTING THE DRIVEWAY ACCESS APRON, CONSTRUCTION WILL NOT EXTEND OUTSIDE THE LIMITS OF THE EXISTING ROAD RIGHT-OF-WAY, UNLESS APPROPRIATE EASEMENT OR RIGHT OF ENTRY IS GIVEN TO THE CITY BY PROPERTY OWNER.

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STANDARD DRIVEWAY ACCESS APRON WITH CURB & GUTTER & WITHOUT SIDEWALK

REVISIONS DATE	DESCRIPTION	STD. NO.
6/6/15	ADDED NOTE 11	3.15B
9/9/15	REVISED APRON CURB NO	



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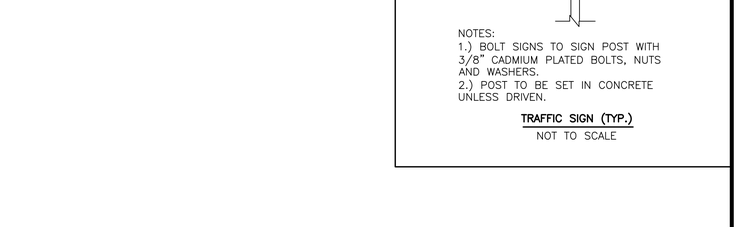
ROAD PAVEMENT REPAIR

REVISIONS DATE	DESCRIPTION	STD. NO.
		5.10

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A.B.C. UNDER 2'-6" CURB & GUTTER

REVISIONS DATE	DESCRIPTION	STD. NO.
		3.10



STOP BAR STRIPING DETAIL
NOT TO SCALE

NOTES:
1.) BOLT SIGNS TO SIGN POST WITH 3/8" CADMIUM PLATED BOLTS, NUTS AND WASHERS.
2.) POST TO BE SET IN CONCRETE UNLESS DRIVEN.

TRAFFIC SIGN (TYP.)
NOT TO SCALE

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PROJECT NUMBER: 25113
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ROADWAY DETAILS

C-701

SCALE: AS NOTED