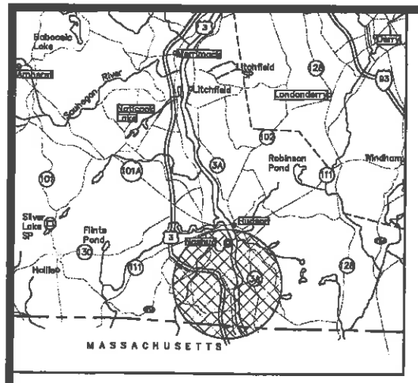
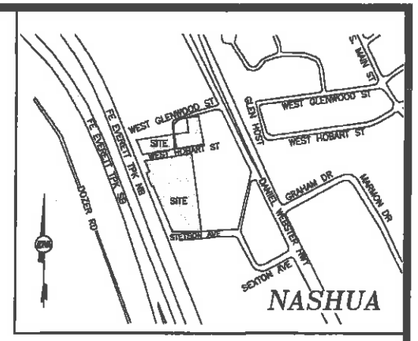
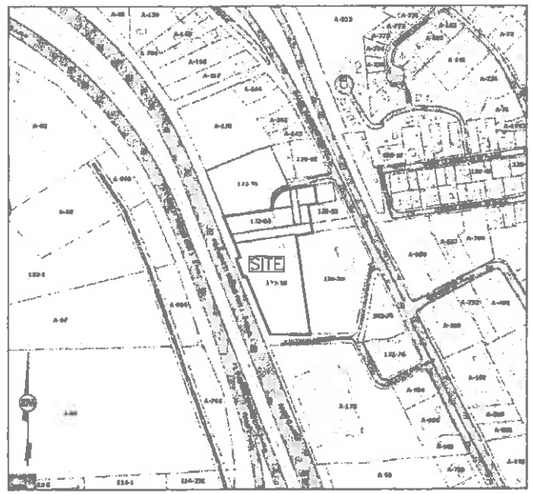


VICINITY PLAN
NOT TO SCALE

NON-RESIDENTIAL SITE PLAN
AUTO BODY SHOP
MAP 128 LOTS 31, 32 & 84
MAP 132 LOTS 38 & 84
WEST GLENWOOD STREET
NASHUA, NEW HAMPSHIRE



LOCATION PLAN
SCALE: 1" = 500' +/-



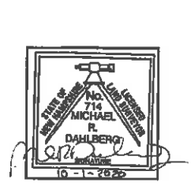
EXISTING FEATURES WITHIN 1,000-FT
NOT TO SCALE

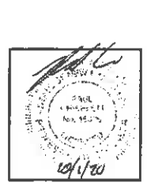
SHEET TITLE	SHEET No.
EXISTING CONDITIONS PLAN	1
REMOVALS PLAN	2
NON-RESIDENTIAL SITE PLAN	3
GRADING & DRAINAGE PLAN	4
UTILITY PLAN	5
EROSION CONTROL PLAN	6
LANDSCAPE PLAN	7
LIGHTING PLAN	8
ROADWAY PLAN & PROFILE	9
DRIVEWAY DRAINAGE PLAN & PROFILE	10
SIGHT DISTANCE PLAN & PROFILES	11 - 12
DRAINAGE PROFILES	13
SEWER PROFILE	14
CONSTRUCTION DETAILS	15 - 21
TEST PITS	22

ARCHITECTURAL PLANS
(BY BRUCE RONAYNE HAMILTON ARCHITECTS)

OWNER/APPLICANT:
ROSCOMMON INVESTMENTS, LLC
147 DANIEL WEBSTER HIGHWAY
NASHUA, NH 03060
(603) 888-5050

PREPARED BY:
KEACH-NORDSTROM ASSOCIATES, INC.
10 COMMERCE PARK NORTH, SUITE 3B
BEDFORD, NEW HAMPSHIRE 03110
(603) 627-2881

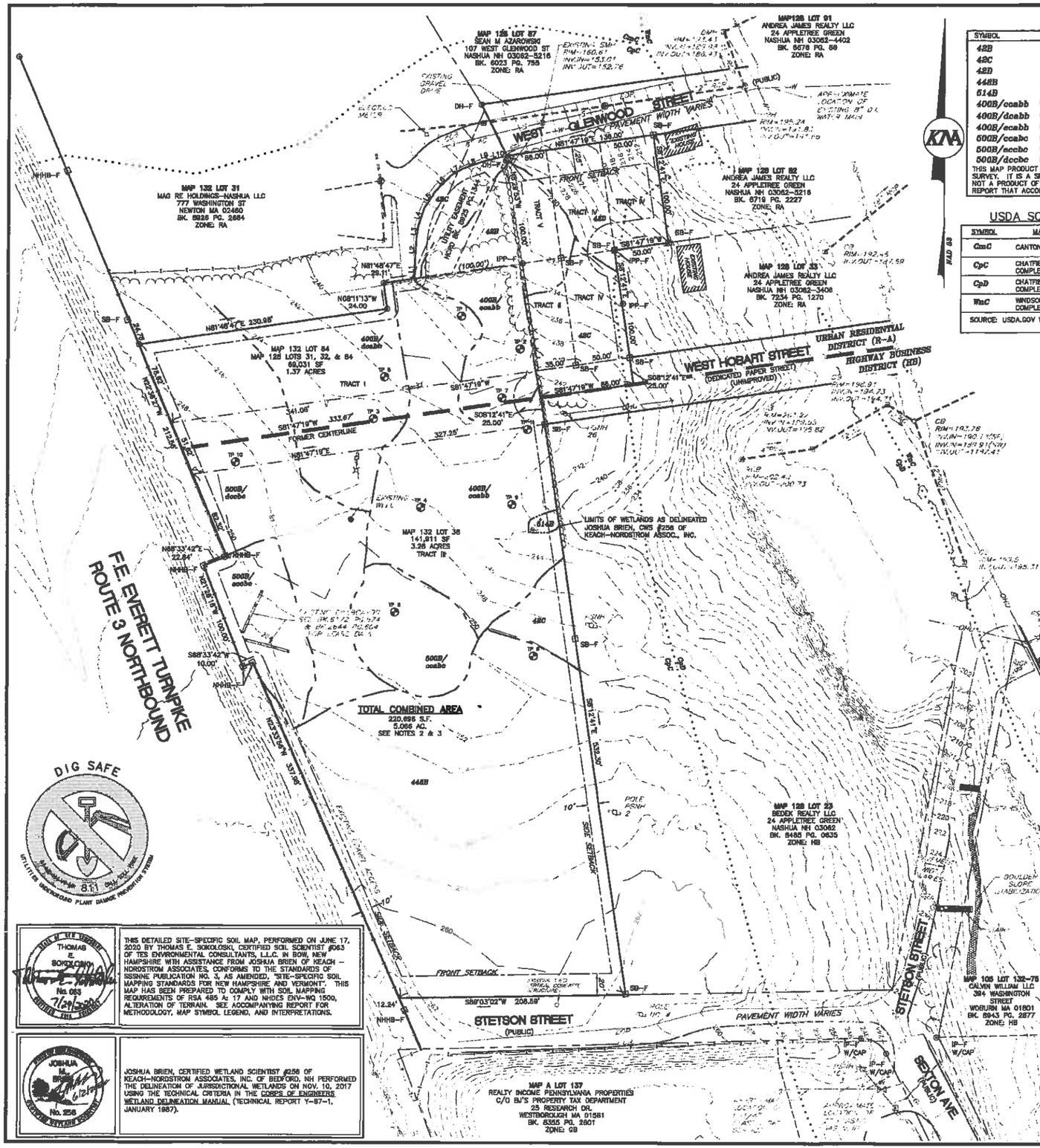




KEACH-NORDSTROM ASSOCIATES, INC.
Civil Engineering Land Surveying Landscape Architecture
10 Commerce Park North, Suite 3B, Bedford, NH 03110 Phone (603) 627-2881

JUNE 22, 2020

PROJECT NO. 17-1011-1



SITE SPECIFIC SOIL MAP UNIT KEY

SYMBOL	MAP UNIT	SLOPE CLASS	DRAINAGE CLASS	HSG
42B	CANTON FINE SANDY LOAM	0–8%	WELL	B
42C	CANTON FINE SANDY LOAM	8–15%	WELL	B
42D	CANTON FINE SANDY LOAM	15–25%	WELL	B
446B	SCITUATE, VERY STONY	0–8%	MODERATELY WELL	C
614B	LEICESTER	0–8%	POORLY DRAINED	C
400B/ccabb	UDORTHENTS	0–8%	MODERATELY WELL	B
400B/dcabb	UDORTHENTS	0–8%+	MODERATELY WELL	B
400B/ecabb	UDORTHENTS	0–8%	MODERATELY WELL	B
500B/ccabc	UDORTHENTS	0–8%+	MODERATELY WELL	C
500B/ecabc	UDORTHENTS	0–8%	MODERATELY WELL	C
500B/dccbc	UDORTHENTS	0–8%+	MODERATELY WELL	C

THIS MAP PRODUCT IS WITHIN THE TECHNICAL STANDARDS OF THE NATIONAL COOPERATIVE SOILS SURVEY. IT IS A SPECIAL PURPOSE PRODUCT, PRODUCED BY A CERTIFIED SOIL SCIENTIST, AND IS NOT A PRODUCT OF THE USDA NATURAL RESOURCE CONSERVATION SERVICE. THERE IS A NARRATIVE REPORT THAT ACCOMPANIES THIS MAP AND MAP KEY.

USDA SOIL MAP UNIT KEY

SYMBOL	MAP UNIT	SLOPE
CmC	CANTON FINE SANDY LOAM	8–15%
CpC	CHATFIELD–HOLLIS–CANTON COMPLEX	8–15%
CpD	CHATFIELD–HOLLIS–CANTON COMPLEX	15–25%
WmC	WINDSOR–URBAN LAND COMPLEX	3–15%

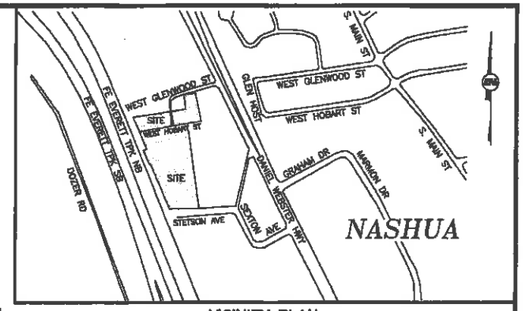
SOURCE: USDA.GOV WEB SOIL SURVEY

LINE TABLE

LINE	LENGTH	BEARING
L1	15.19	N00°28'13"E
L2	20.41	N03°04'07"E
L3	12.79	N08°37'05"E
L4	17.21	N18°43'40"E
L5	18.81	N33°35'37"E
L6	18.42	N45°10'07"E
L7	12.70	N58°32'30"E
L8	19.81	N70°27'58"E
L9	20.94	N76°12'28"E
L10	1.43	N81°36'00"E

LEGEND

- SB–F — STONE BOUND FOUND
- IPIN–F — IRON PIN FOUND
- IPP–F — IRON PIPE FOUND
- UTILITY POLE
- SIGN
- LIGHT
- GAS VALVE
- WATER VALVE
- HYDRANT
- WATER SHUT OFF
- SEWER MANHOLE
- DRAINAGE MANHOLE
- CATCH BASIN
- FLARED END SECTION
- WELL
- ABUTTER LINE
- PROPERTY LINE
- WETLAND
- CHAIN LINK FENCE
- OHU — OVERHEAD UTILITIES
- G — GAS LINE
- W — WATER LINE
- S — SEWER LINE
- DRAINAGE LINE
- TREELINE
- STONE WALL
- EOP — EDGE OF PAVEMENT
- BCC — BITUMINOUS CONCRETE CURB
- VGC — VERTICAL GRANITE CURB
- 10' CONTOUR
- 2' CONTOUR
- STONE WALL
- BUILDING SETBACK
- EASEMENT
- ZONE LINE
- USDA SOILS LINE
- TP — TEST PIT LOCATION



VICINITY PLAN

SCALE: 1" = 500' +/–

NOTES:

1. THE PURPOSE OF THIS PLAN IS TO DEPICT THE EXISTING CONDITIONS FOR HCRD BOOK 9045 PAGE 874, ASSESSOR'S MAP 128 LOTS 31, 32 & 84 AND MAP 132 LOTS 38 & 84 IN NASHUA, NEW HAMPSHIRE AND NO OTHER PURPOSE.
2. THIS PLAN PRESUMES THE APPROVAL OF THE LOT LINE ADJUSTMENT WITH MAG–RE HOLDINGS –NASHUA, LLC AND THE REVERSION OF THOSE PORTIONS OF WEST HOBART STREET THAT ABUT THE ROSSCOMMON INVESTMENTS, LLC PROPERTIES.
3. TOTAL SITE AREA = 220,695 SF, OR 5.066 ACRES (SEE NOTE 2).
4. TAX MAP 128 LOTS 31, 32 & 84 AND MAP 132 LOTS 38 & 84 INDICATE CITY OF NASHUA TAX ASSESSORS MAP AND LOT NUMBER.
5. OWNER OF RECORD
   ROSCOMMON INVESTMENTS, LLC
   147 DANIEL WEBSTER HIGHWAY
   NASHUA, NEW HAMPSHIRE 03060
   BK. 9045 PG. 874
   PRESENT ZONING: URBAN RESIDENCE DISTRICT (R–A)
   MINIMUM BUILDING SETBACKS:
   – FRONT 25 FT
   – SIDE 10 FT
   – REAR 25 FT
   HIGHWAY BUSINESS DISTRICT (HB)
   – FRONT 20 FT
   – SIDE 10 FT
   – REAR 20 FT
6. BOUNDARY AND TOPOGRAPHIC INFORMATION IS BASED ON A FIELD SURVEY PERFORMED BY THIS OFFICE IN OCTOBER OF 2017.
7. HORIZONTAL DATUM IS NAD 83, NORTH ORIENTATION IS NAD 83, VERTICAL DATUM IS NGVD29.
8. EXAMINATION OF THE FEDERAL EMERGENCY MANAGEMENT AGENCY (FEMA) FLOOD INSURANCE RATE MAPS (FIRM) FOR THE CITY OF NASHUA NEW HAMPSHIRE, HILLSBOROUGH COUNTY, COMMUNITY PANEL NUMBER 330007 0652E PANEL NUMBER 652 OF 701, EFFECTIVE DATE: APRIL 15, 2011 INDICATES THAT NO PORTION OF THE SUBJECT PREMISES IS LOCATED WITHIN A DESIGNATED FLOOD HAZARD AREA.
9. THE LOCATION OF ANY UNDERGROUND UTILITY INFORMATION SHOWN ON THIS PLAN IS APPROXIMATE. KEACH–NORDSTROM ASSOCIATES, INC. MAKES NO CLAIM TO THE ACCURACY OR COMPLETENESS OF UTILITIES SHOWN. PRIOR TO ANY EXCAVATION ON SITE THE CONTRACTOR SHALL CONTACT DIG SAFE AT 811.
10. EASEMENTS, RIGHTS AND RESTRICTIONS SHOWN OR IDENTIFIED HEREON ARE THOSE FOUND DURING RESEARCH AT THE ROCKINGHAM COUNTY REGISTRY OF DEEDS. OTHER EASEMENTS, RIGHTS AND RESTRICTIONS MAY EXIST WHICH A TITLE EXAMINATION OF THE SUBJECT PREMISES MAY DETERMINE.

REFERENCE PLANS:

1. COUNTRY CLUB HEIGHTS ANNEX. NASHUA, N.H. OWNED BY A.H. CHAPMAN LAND COMPANY. BY: EN SHEFFIELD. SCALE 1"=100'. HCRD PLAN #536.
2. FINAL BOUNDARY PLAN–LAND OF SIENKIEWICZ, WEST GLENWOOD STREET, NASHUA, N.H. PREPARED FOR: JOHN & MARILYN SIENKIEWICZ. BY: CUOCO & CORMIER, INC. HCRD PLANS #28735 & 28813.
3. NHDOT PROJECT PLANS OF CENTRAL NEW HAMPSHIRE TURNPIKE PROJECT(S), 10009, 10624–F & 10624–J ON FILE WITH THE NHDOT, CONCORD, NEW HAMPSHIRE.
4. EASEMENT PLAN, MAP 132 LOT 31, 117 WEST GLENWOOD STREET, NASHUA, NEW HAMPSHIRE. DATED: 30 SEPTEMBER 2016. SCALE: 1"=30', PREPARED BY HAYNER/SWANSON INC. HCRD PLAN #39110.
5. PROPOSED VEHICLE STORAGE LOT, 117 WEST GLENWOOD STREET, NASHUA, NEW HAMPSHIRE. DATED 23 JUNE 2016. SCALE: 1"=30'. PREPARED BY HAYNER/SWANSON INC. ON FILE WITH THE CITY OF NASHUA PLAN #WR2200.

GRAPHIC SCALE

80 0 35 80 160 320

(IN FEET)

1 inch = 60 ft.

DIG SAFE

811

UTILITIES UNDERGROUND PLANT DAMAGE PREVENTION SYSTEM

THOMAS E. SOKOLOSKI No. 063 7/29/2020 LICENSED SOIL SCIENTIST

THIS DETAILED SITE–SPECIFIC SOIL MAP, PERFORMED ON JUNE 17, 2020 BY THOMAS E. SOKOLOSKI, CERTIFIED SOIL SCIENTIST #063 OF TES ENVIRONMENTAL CONSULTANTS, L.L.C. IN BOW, NEW HAMPSHIRE WITH ASSISTANCE FROM JOSHUA BRIEN OF KEACH – NORDSTROM ASSOCIATES, CONFORMS TO THE STANDARDS OF SSSNNE PUBLICATION NO. 3, AS AMENDED, "SITE–SPECIFIC SOIL MAPPING STANDARDS FOR NEW HAMPSHIRE AND VERMONT". THIS MAP HAS BEEN PREPARED TO COMPLY WITH SOIL MAPPING REQUIREMENTS OF RSA 485 A: 17 AND NHDES ENV–WQ 1500, ALTERATION OF TERRAIN. SEE ACCOMPANYING REPORT FOR METHODOLOGY, MAP SYMBOL LEGEND, AND INTERPRETATIONS.

JOSHUA M. BRIEN No. 256 6/2/2017 CERTIFIED WETLAND SCIENTIST

JOSHUA BRIEN, CERTIFIED WETLAND SCIENTIST #256 OF KEACH–NORDSTROM ASSOCIATES, INC. OF BEDFORD, NH PERFORMED THE DELINEATION OF JURISDICTIONAL WETLANDS ON NOV. 10, 2017 USING THE TECHNICAL CRITERIA IN THE CORPS OF ENGINEERS WETLAND DELINEATION MANUAL (TECHNICAL REPORT Y–87–1, JANUARY 1987).

UTILITY NOTE

THE UNDERGROUND UTILITIES DEPICTED HEREON HAVE BEEN DRAWN FROM FIELD SURVEY INFORMATION AND OR PLOTTED FROM EXISTING DRAWINGS. KEACH–NORDSTROM ASSOCIATES, INC. MAKES NO GUARANTEES THAT THE UNDERGROUND UTILITIES DEPICTED COMPRISE ALL SUCH UTILITIES IN THE AREA, EITHER IN SERVICE OR ASANDONED. FURTHER, KEACH–NORDSTROM ASSOCIATES, INC. DOES NOT WARRANT THAT THE UNDERGROUND UTILITIES SHOWN ARE IN THE EXACT LOCATION INDICATED ALTHOUGH THEY ARE LOCATED AS ACCURATELY AS POSSIBLE FROM THE INFORMATION AVAILABLE. KEACH–NORDSTROM ASSOCIATES, INC. HAS NOT PHYSICALLY LOCATED THE UNDERGROUND PORTIONS OF THE UTILITIES.

SURVEYOR'S CERTIFICATION:

I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR THOSE UNDER MY DIRECT SUPERVISION. FURTHER, THAT THIS PLAN IS BASED ON AN ACTUAL FIELD SURVEY MADE ON THE GROUND BY THIS OFFICE DURING OCTOBER OF 2017. SAID SURVEY HAS AN ERROR OF CLOSURE BETTER THAN ONE PART IN TEN THOUSAND (1:10,000).

LICENSED LAND SURVEYOR — DATE 10-1-2020

EXISTING CONDITIONS PLAN

AUTO BODY SHOP

MAP 128 LOTS 31, 32 & 84
MAP 132 LOTS 38 & 84
WEST GLENWOOD STREET
NASHUA, NEW HAMPSHIRE
HILLSBOROUGH COUNTY

OWNER/APPLICANT:
ROSCOMMON INVESTMENTS, LLC
147 DANIEL WEBSTER HIGHWAY
NASHUA, NH 03060
(603) 886–5050

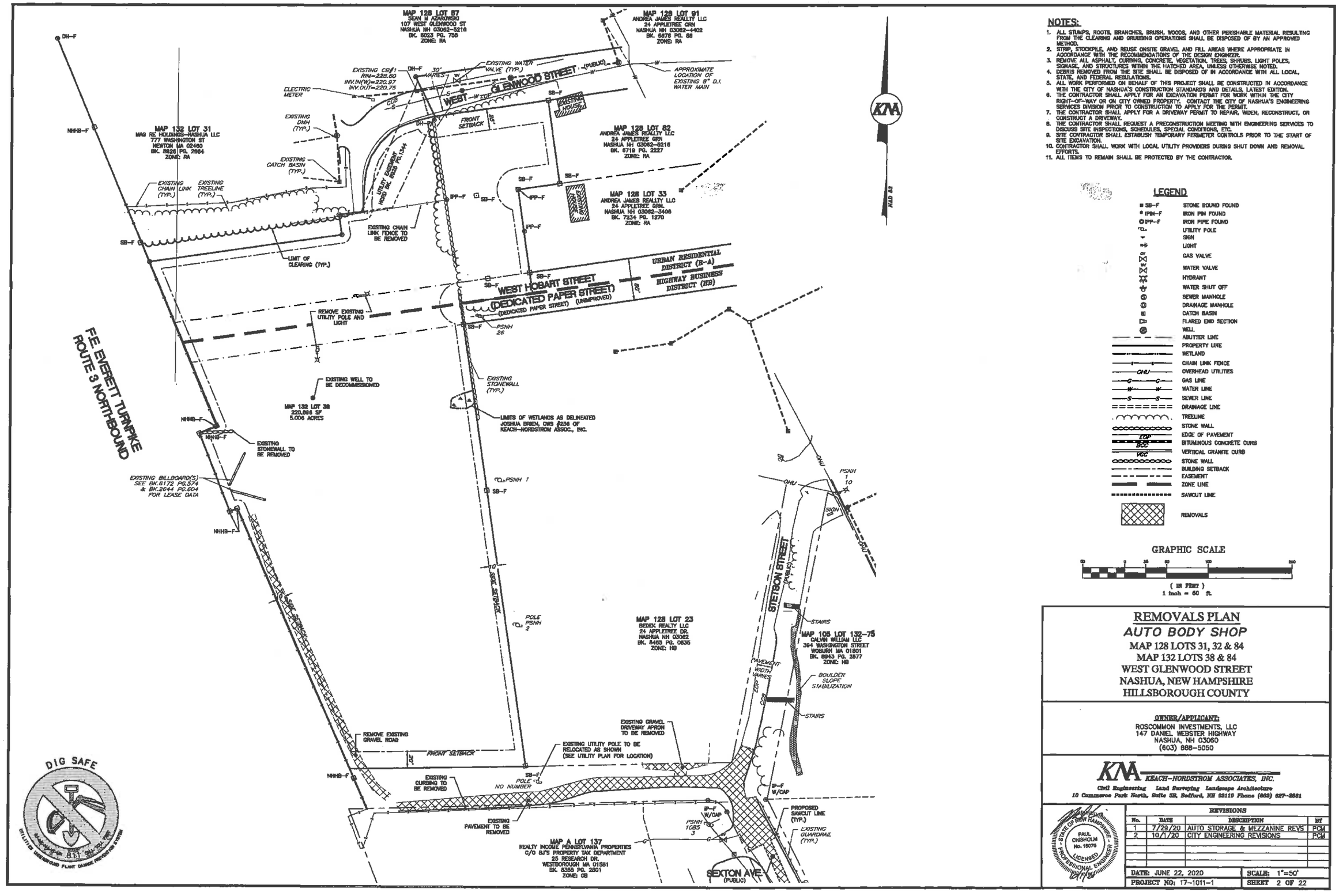
KEACH–NORDSTROM ASSOCIATES, INC.
Civil Engineering Land Surveying Landscape Architecture
10 Commerce Park North, Suite 3B, Bedford, NH 03110 Phone (603) 627–2881

NO. 714 MICHAEL R. DAHLBERG LICENSED LAND SURVEYOR

REVISIONS

No.	DATE	DESCRIPTION	BY
1	7/29/20	AUTO STORAGE & MEZZANINE REVS	PCM
2	10/1/20	CITY ENGINEERING REVISIONS	PCM

DATE: JUNE 22, 2020 — SCALE: 1"=50'
PROJECT NO: 17–1011–1 — SHEET 1 OF 22



NOTES:

1. ALL STUMPS, ROOTS, BRANCHES, BRUSH, WOODS, AND OTHER PERISHABLE MATERIAL RESULTING FROM THE CLEARING AND GRUBBING OPERATIONS SHALL BE DISPOSED OF BY AN APPROVED METHOD.
2. STRIP, STOCKPILE, AND REUSE ONSITE GRAVEL AND FILL AREAS WHERE APPROPRIATE IN ACCORDANCE WITH THE RECOMMENDATIONS OF THE DESIGN ENGINEER.
3. REMOVE ALL ASPHALT, CURBING, CONCRETE, VEGETATION, TREES, SHRUBS, LIGHT POLES, SIGNAGE, AND STRUCTURES WITHIN THE HATCHED AREA, UNLESS OTHERWISE NOTED.
4. DEBRIS REMOVED FROM THE SITE SHALL BE DISPOSED OF IN ACCORDANCE WITH ALL LOCAL, STATE, AND FEDERAL REGULATIONS.
5. ALL WORK PERFORMED ON BEHALF OF THIS PROJECT SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE CITY OF NASHUA'S CONSTRUCTION STANDARDS AND DETAILS, LATEST EDITION.
6. THE CONTRACTOR SHALL APPLY FOR AN EXCAVATION PERMIT FOR WORK WITHIN THE CITY RIGHT-OF-WAY OR ON CITY OWNED PROPERTY. CONTACT THE CITY OF NASHUA'S ENGINEERING SERVICES DIVISION PRIOR TO CONSTRUCTION TO APPLY FOR THE PERMIT.
7. THE CONTRACTOR SHALL APPLY FOR A DRIVEWAY PERMIT TO REPAIR, WIDEN, RECONSTRUCT, OR CONSTRUCT A DRIVEWAY.
8. THE CONTRACTOR SHALL REQUEST A PRECONSTRUCTION MEETING WITH ENGINEERING SERVICES TO DISCUSS SITE INSPECTIONS, SCHEDULES, SPECIAL CONDITIONS, ETC.
9. SITE CONTRACTOR SHALL ESTABLISH TEMPORARY PERIMETER CONTROLS PRIOR TO THE START OF SITE EXCAVATION.
10. CONTRACTOR SHALL WORK WITH LOCAL UTILITY PROVIDERS DURING SHUT DOWN AND REMOVAL EFFORTS.
11. ALL ITEMS TO REMAIN SHALL BE PROTECTED BY THE CONTRACTOR.

LEGEND

- SB-F — STONE BOUND FOUND
- IPIN-F — IRON PIN FOUND
- IPP-F — IRON PIPE FOUND
- UTILITY POLE
- SIGN
- LIGHT
- GAS VALVE
- WATER VALVE
- HYDRANT
- WATER SHUT OFF
- SEWER MANHOLE
- DRAINAGE MANHOLE
- CATCH BASIN
- FLARED END SECTION
- WELL
- ABUTTER LINE
- PROPERTY LINE
- WETLAND
- CHAIN LINK FENCE
- OHU — OVERHEAD UTILITIES
- G — GAS LINE
- W — WATER LINE
- S — SEWER LINE
- DRAINAGE LINE
- TREELINE
- STONE WALL
- EOP — EDGE OF PAVEMENT
- BCC — BITUMINOUS CONCRETE CURB
- VGC — VERTICAL GRANITE CURB
- STONE WALL
- BUILDING SETBACK
- EASEMENT
- ZONE LINE
- SAWCUT LINE
- REMOVALS

GRAPHIC SCALE

50 0 25 50 100 200

(IN FEET)
1 inch = 50 ft.

REMOVALS PLAN
AUTO BODY SHOP
MAP 128 LOTS 31, 32 & 84
MAP 132 LOTS 38 & 84
WEST GLENWOOD STREET
NASHUA, NEW HAMPSHIRE
HILLSBOROUGH COUNTY

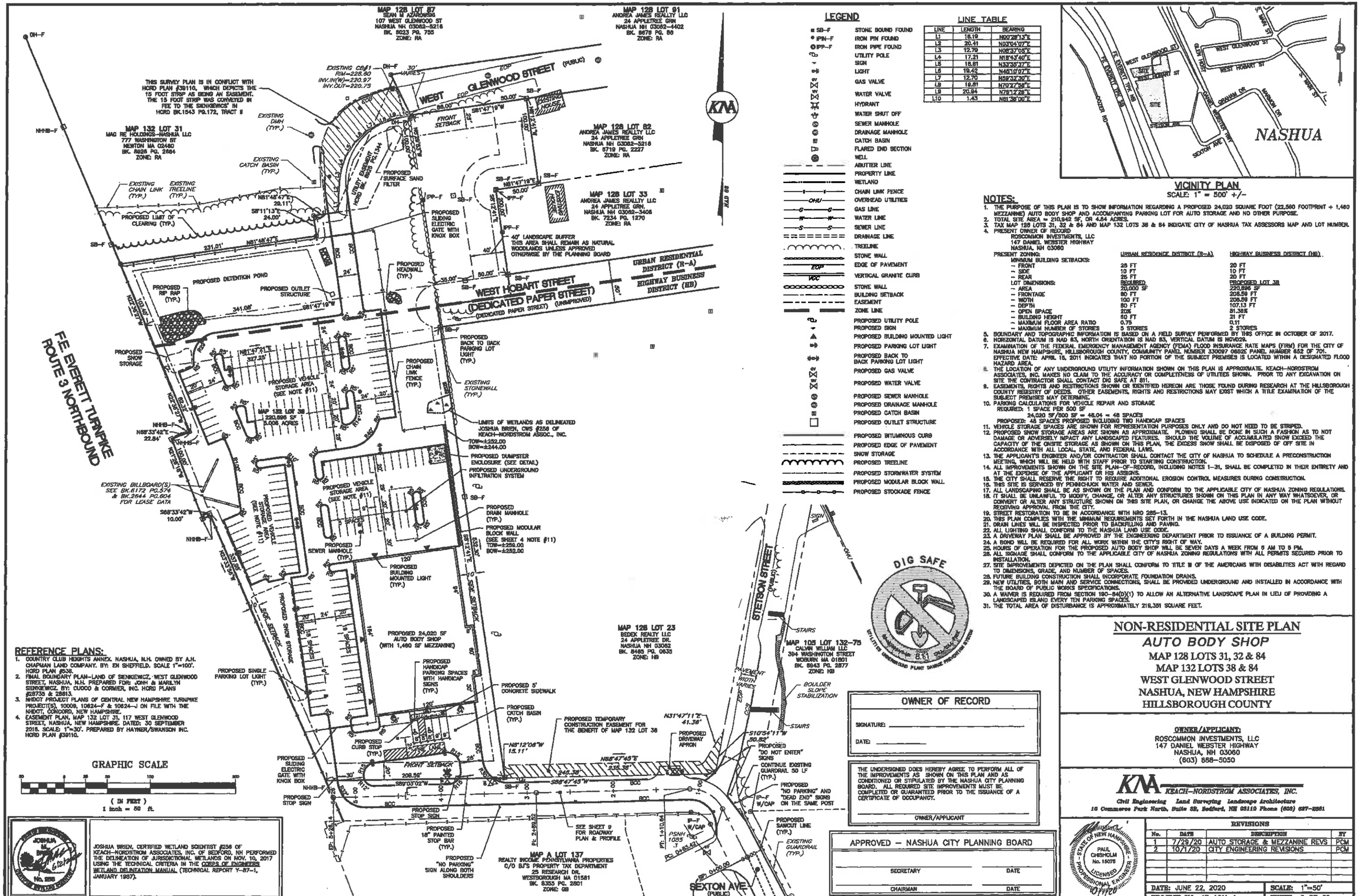
OWNER/APPLICANT:
ROSCOMMON INVESTMENTS, LLC
147 DANIEL WEBSTER HIGHWAY
NASHUA, NH 03060
(603) 888-5050

KEACH-NORDSTROM ASSOCIATES, INC.
Civil Engineering Land Surveying Landscape Architecture
10 Commerce Park North, Suite 3B, Bedford, NH 03110 Phone (603) 627-2881

PAUL CHISHOLM No. 15078 LICENSED PROFESSIONAL ENGINEER STATE OF NEW HAMPSHIRE

REVISIONS			
No.	DATE	DESCRIPTION	BY
1	7/29/20	AUTO STORAGE & MEZZANINE REVS	PCM
2	10/1/20	CITY ENGINEERING REVISIONS	PCM

DATE: JUNE 22, 2020 | SCALE: 1"=50'
PROJECT NO: 17-1011-1 | SHEET 2 OF 22



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2. FINAL BOUNDARY PLAN-LAND OF SIENKIEWICZ. WEST GLENWOOD STREET, NASHUA, N.H. PREPARED FOR: JOHN & MARILYN SIENKIEWICZ. BY: CUOCO & CORMIER, INC. HCRD PLANS #28739 & 28813.
3. NHDOT PROJECT PLANS OF CENTRAL NEW HAMPSHIRE TURNPIKE PROJECT(S), 10009, 10824-F & 10824-J ON FILE WITH THE NHDOT, CONCORD, NEW HAMPSHIRE.
4. EASEMENT PLAN, MAP 132 LOT 31, 117 WEST GLENWOOD STREET, NASHUA, NEW HAMPSHIRE. DATED: 30 SEPTEMBER 2018. SCALE: 1"=30'. PREPARED BY HAYNER/SWANSON INC. HCRD PLAN #39110.

LEGEND

■ SB-F	STONE BOUND FOUND
• IPIN-F	IRON PIN FOUND
⊙ IPP-F	IRON PIPE FOUND
	UTILITY POLE
	SIGN
	LIGHT
	GAS VALVE
	WATER VALVE
	HYDRANT
	WATER SHUT OFF
	SEWER MANHOLE
	DRAINAGE MANHOLE
	CATCH BASIN
	FLARED END SECTION
	WELL
	ABUTTER LINE
	PROPERTY LINE
	WETLAND
	CHAIN LINK FENCE
ONU	OVERHEAD UTILITIES
G G	GAS LINE
W W	WATER LINE
S S	SEWER LINE
	DRAINAGE LINE
	TREELINE
	STONE WALL
EOP	EDGE OF PAVEMENT
VCC	VERTICAL GRANITE CURB
	STONE WALL
	BUILDING SETBACK
	EASEMENT
	ZONE LINE
	PROPOSED UTILITY POLE
	PROPOSED SIGN
	PROPOSED BUILDING MOUNTED LIGHT
	PROPOSED PARKING LOT LIGHT
	PROPOSED BACK TO BACK PARKING LOT LIGHT
	PROPOSED GAS VALVE
	PROPOSED WATER VALVE
	PROPOSED SEWER MANHOLE
	PROPOSED DRAINAGE MANHOLE
	PROPOSED CATCH BASIN
	PROPOSED OUTLET STRUCTURE
	PROPOSED BITUMINOUS CURB
	PROPOSED EDGE OF PAVEMENT
	SNOW STORAGE
	PROPOSED TREELINE
	PROPOSED STORMWATER SYSTEM
	PROPOSED MODULAR BLOCK WALL
	PROPOSED STOCKADE FENCE

LINE TABLE

LINE	LENGTH	BEARING
L1	16.19	N00°28'13"E
L2	20.41	N03°04'07"E
L3	12.79	N08°37'05"E
L4	17.21	N18°43'40"E
L5	18.81	N33°35'37"E
L6	19.42	N45°10'02"E
L7	12.70	N58°32'20"E
L8	19.81	N70°27'38"E
L9	20.94	N78°12'28"E
L10	1.43	N81°36'00"E

VICINITY PLAN
SCALE: 1" = 500' +/-

NOTES:

1. THE PURPOSE OF THIS PLAN IS TO SHOW INFORMATION REGARDING A PROPOSED 24,020 SQUARE FOOT (22,560 FOOTPRINT + 1,460 MEZZANINE) AUTO BODY SHOP AND ACCOMPANYING PARKING LOT FOR AUTO STORAGE AND NO OTHER PURPOSE.
2. TOTAL SITE AREA = 210,940 SF, OR 4.84 ACRES.
3. TAX MAP 128 LOTS 31, 32 & 84 AND MAP 132 LOTS 38 & 84 INDICATE CITY OF NASHUA TAX ASSESSORS MAP AND LOT NUMBER.
4. PRESENT OWNER OF RECORD
   ROSCOMMON INVESTMENTS, LLC
   147 DANIEL WEBSTER HIGHWAY
   NASHUA, NH 03060

PRESENT ZONING:	URBAN RESIDENCE DISTRICT (R-A)	HIGHWAY BUSINESS DISTRICT (HB)
MINIMUM BUILDING SETBACKS:		
- FRONT	25 FT	20 FT
- SIDE	10 FT	10 FT
- REAR	25 FT	20 FT
LOT DIMENSIONS:	REQUIRED	PROPOSED LOT 38
- AREA	20,000 SF	220,898 SF
- FRONTAGE	80 FT	208.59 FT
- WIDTH	100 FT	208.59 FT
- DEPTH	80 FT	107.13 FT
- OPEN SPACE	20%	81.36%
- BUILDING HEIGHT	60 FT	21 FT
- MAXIMUM FLOOR AREA RATIO	0.75	0.11
- MAXIMUM NUMBER OF STORIES	5 STORIES	2 STORIES

5. BOUNDARY AND TOPOGRAPHIC INFORMATION IS BASED ON A FIELD SURVEY PERFORMED BY THIS OFFICE IN OCTOBER OF 2017.
6. HORIZONTAL DATUM IS NAD 83, NORTH ORIENTATION IS NAD 83, VERTICAL DATUM IS NGVD29.
7. EXAMINATION OF THE FEDERAL EMERGENCY MANAGEMENT AGENCY (FEMA) FLOOD INSURANCE RATE MAPS (FIRM) FOR THE CITY OF NASHUA NEW HAMPSHIRE, HILLSBOROUGH COUNTY, COMMUNITY PANEL NUMBER 330097 0652E PANEL NUMBER 652 OF 701, EFFECTIVE DATE: APRIL 15, 2011 INDICATES THAT NO PORTION OF THE SUBJECT PREMISES IS LOCATED WITHIN A DESIGNATED FLOOD HAZARD AREA.
8. THE LOCATION OF ANY UNDERGROUND UTILITY INFORMATION SHOWN ON THIS PLAN IS APPROXIMATE. KEACH-NORDSTROM ASSOCIATES, INC. MAKES NO CLAIM TO THE ACCURACY OR COMPLETENESS OF UTILITIES SHOWN. PRIOR TO ANY EXCAVATION ON SITE THE CONTRACTOR SHALL CONTACT DIG SAFE AT 811.
9. EASEMENTS, RIGHTS AND RESTRICTIONS SHOWN OR IDENTIFIED HEREON ARE THOSE FOUND DURING RESEARCH AT THE HILLSBOROUGH COUNTY REGISTRY OF DEEDS. OTHER EASEMENTS, RIGHTS AND RESTRICTIONS MAY EXIST WHICH A TITLE EXAMINATION OF THE SUBJECT PREMISES MAY DETERMINE.
10. PARKING CALCULATIONS FOR VEHICLE REPAIR AND STORAGE
    REQUIRED: 1 SPACE PER 500 SF
    24,020 SF/500 SF = 48.04 = 48 SPACES
    PROPOSED: 48 SPACES PROPOSED INCLUDING TWO HANDICAP SPACES
11. VEHICLE STORAGE SPACES ARE SHOWN FOR REPRESENTATION PURPOSES ONLY AND DO NOT NEED TO BE STRIPED.
12. PROPOSED SNOW STORAGE AREAS ARE SHOWN AS APPROXIMATE. PLOWING SHALL BE DONE IN SUCH A FASHION AS TO NOT DAMAGE OR ADVERSELY IMPACT ANY LANDSCAPED FEATURES. SHOULD THE VOLUME OF ACCUMULATED SNOW EXCEED THE CAPACITY OF THE ONSITE STORAGE AS SHOWN ON THIS PLAN, THE EXCESS SNOW SHALL BE DISPOSED OF OFF SITE IN ACCORDANCE WITH ALL LOCAL, STATE, AND FEDERAL LAWS.
13. THE APPLICANT'S ENGINEER AND/OR CONTRACTOR SHALL CONTACT THE CITY OF NASHUA TO SCHEDULE A PRECONSTRUCTION MEETING, WHICH WILL BE HELD WITH STAFF PRIOR TO STARTING CONSTRUCTION.
14. ALL IMPROVEMENTS SHOWN ON THE SITE PLAN-OF-RECORD, INCLUDING NOTES 1-31, SHALL BE COMPLETED IN THEIR ENTIRETY AND AT THE EXPENSE OF THE APPLICANT OR HIS ASSIGNS.
15. THE CITY SHALL RESERVE THE RIGHT TO REQUIRE ADDITIONAL EROSION CONTROL MEASURES DURING CONSTRUCTION.
16. THIS SITE IS SERVICED BY PENNICHUCK WATER AND SEWER.
17. ALL LANDSCAPING SHALL BE AS SHOWN ON THE PLAN AND CONFORM TO THE APPLICABLE CITY OF NASHUA ZONING REGULATIONS.
18. IT SHALL BE UNLAWFUL TO MODIFY, CHANGE, OR ALTER ANY STRUCTURES SHOWN ON THIS PLAN IN ANY WAY WHATSOEVER, OR CONVERT OR ALTER ANY STRUCTURE SHOWN ON THIS SITE PLAN, OR CHANGE THE ABOVE USE INDICATED ON THE PLAN WITHOUT RECEIVING APPROVAL FROM THE CITY.
19. STREET RESTORATION TO BE IN ACCORDANCE WITH NRO 285-13.
20. THIS PLAN COMPLIES WITH THE MINIMUM REQUIREMENTS SET FORTH IN THE NASHUA LAND USE CODE.
21. DRAIN LINES WILL BE INSPECTED PRIOR TO BACKFILLING AND PAVING.
22. ALL LIGHTING SHALL CONFORM TO THE NASHUA LAND USE CODE.
23. A DRIVEWAY PLAN SHALL BE APPROVED BY THE ENGINEERING DEPARTMENT PRIOR TO ISSUANCE OF A BUILDING PERMIT.
24. A BOND WILL BE REQUIRED FOR ALL WORK WITHIN THE CITY'S RIGHT OF WAY.
25. HOURS OF OPERATION FOR THE PROPOSED AUTO BODY SHOP WILL BE SEVEN DAYS A WEEK FROM 8 AM TO 5 PM.
26. ALL SIGNAGE SHALL CONFORM TO THE APPLICABLE CITY OF NASHUA ZONING REGULATIONS WITH ALL PERMITS SECURED PRIOR TO INSTALLATION.
27. SITE IMPROVEMENTS DEPICTED ON THE PLAN SHALL CONFORM TO TITLE III OF THE AMERICANS WITH DISABILITIES ACT WITH REGARD TO DIMENSIONS, GRADE, AND NUMBER OF SPACES.
28. FUTURE BUILDING CONSTRUCTION SHALL INCORPORATE FOUNDATION DRAINS.
29. NEW UTILITIES, BOTH MAIN AND SERVICE CONNECTIONS, SHALL BE PROVIDED UNDERGROUND AND INSTALLED IN ACCORDANCE WITH THE BOARD OF PUBLIC WORKS SPECIFICATIONS.
30. A WAIVER IS REQUIRED FROM SECTION 190-84(D)(1) TO ALLOW AN ALTERNATIVE LANDSCAPE PLAN IN LIEU OF PROVIDING A LANDSCAPED ISLAND EVERY TEN PARKING SPACES.
31. THE TOTAL AREA OF DISTURBANCE IS APPROXIMATELY 218,351 SQUARE FEET.

NON-RESIDENTIAL SITE PLAN
AUTO BODY SHOP
MAP 128 LOTS 31, 32 & 84
MAP 132 LOTS 38 & 84
WEST GLENWOOD STREET
NASHUA, NEW HAMPSHIRE
HILLSBOROUGH COUNTY

OWNER OF RECORD

SIGNATURE: _____

DATE: _____

THE UNDERSIGNED DOES HEREBY AGREE TO PERFORM ALL OF THE IMPROVEMENTS AS SHOWN ON THIS PLAN AND AS CONDITIONED OR STIPULATED BY THE NASHUA CITY PLANNING BOARD. ALL REQUIRED SITE IMPROVEMENTS MUST BE COMPLETED OR GUARANTEED PRIOR TO THE ISSUANCE OF A CERTIFICATE OF OCCUPANCY.

_____
OWNER/APPLICANT

APPROVED – NASHUA CITY PLANNING BOARD

_____ _____
SECRETARY DATE

_____ _____
CHAIRMAN DATE

OWNER/APPLICANT:
ROSCOMMON INVESTMENTS, LLC
147 DANIEL WEBSTER HIGHWAY
NASHUA, NH 03060
(603) 888-5050

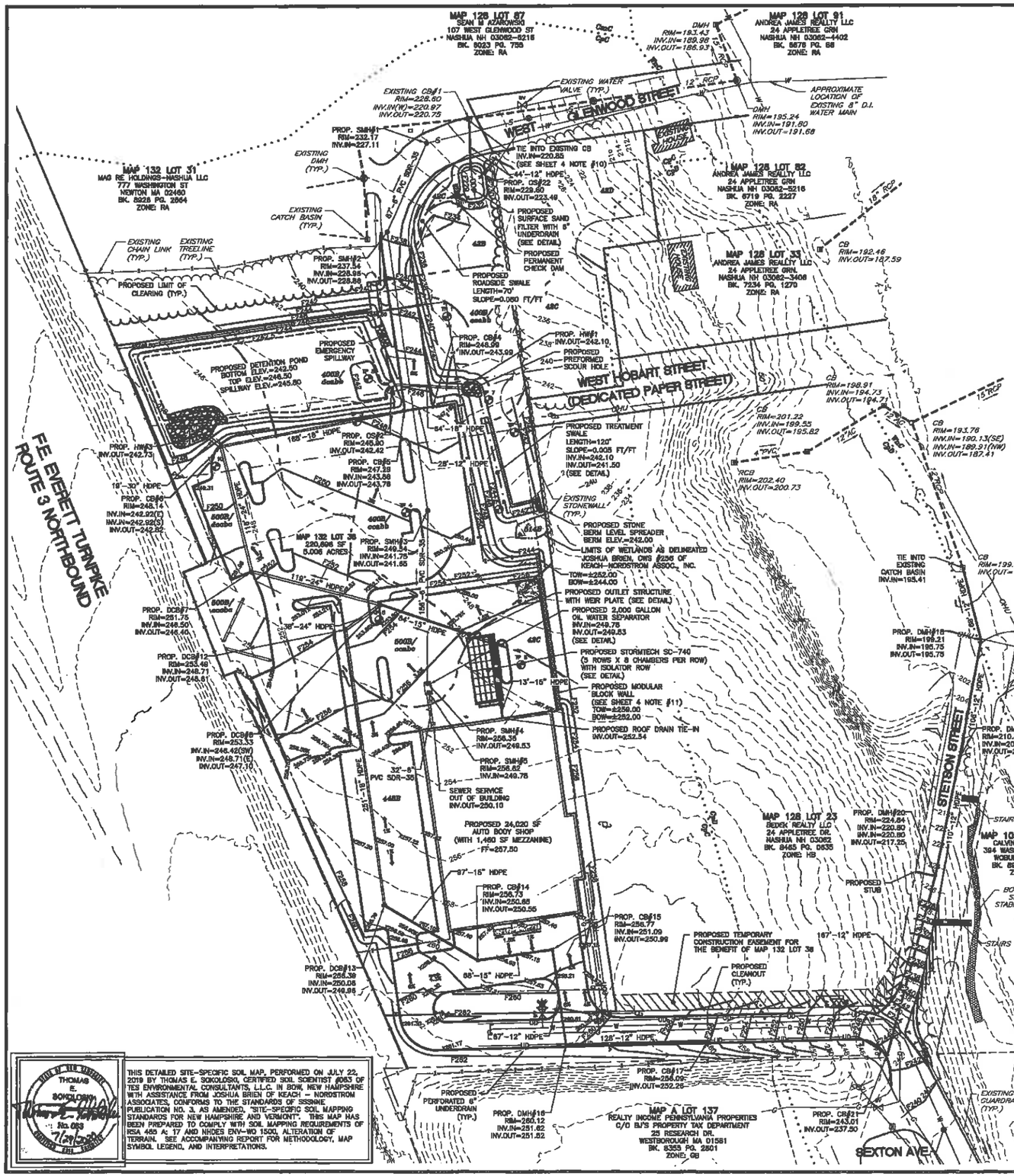
KEACH-NORDSTROM ASSOCIATES, INC.
Civil Engineering Land Surveying Landscape Architecture
16 Commerce Park North, Suite 3B, Bedford, NH 03110 Phone (603) 627-2881

PAUL CHISHOLM No. 15076 LICENSED PROFESSIONAL ENGINEER STATE OF NEW HAMPSHIRE

REVISIONS

No.	DATE	DESCRIPTION	BY
1	7/29/20	AUTO STORAGE & MEZZANINE REVS	PCM
2	10/1/20	CITY ENGINEERING REVISIONS	PCM

DATE: JUNE 22, 2020 | SCALE: 1"=50'
PROJECT NO: 17-1011-1 | SHEET 3 OF 22



LEGEND

- SB-F — STONE BOUND FOUND
- IPIN-F — IRON PIN FOUND
- IPIP-F — IRON PIPE FOUND
- UTILITY POLE
- SIGN
- LIGHT
- GAS VALVE
- WATER VALVE
- HYDRANT
- WATER SHUT OFF
- SEWER MANHOLE
- DRAINAGE MANHOLE
- CATCH BASIN
- FLARED END SECTION
- WELL
- ABUTTER LINE
- PROPERTY LINE
- WETLAND
- CHAIN LINK FENCE
- OHU — OVERHEAD UTILITIES
- G — G — GAS LINE
- W — W — WATER LINE
- S — S — SEWER LINE
- DRAINAGE LINE
- TREELINE
- STONE WALL
- EOP — EDGE OF PAVEMENT
- VGC — VERTICAL GRANITE CURB
- 10' CONTOUR
- 2' CONTOUR
- STONE WALL
- BUILDING SETBACK
- EASEMENT
- ZONE LINE
- USDA SOILS LINE
- TEST PIT LOCATION
- PROPOSED UTILITY POLE
- PROPOSED SIGN
- PROPOSED BUILDING MOUNTED LIGHT
- PROPOSED PARKING LOT LIGHT
- PROPOSED BACK TO BACK PARKING LOT LIGHT
- PROPOSED GAS VALVE
- PROPOSED WATER VALVE
- PROPOSED SEWER MANHOLE
- PROPOSED DRAINAGE MANHOLE
- PROPOSED CATCH BASIN
- PROPOSED OUTLET STRUCTURE
- PROPOSED BITUMINOUS CURB
- PROPOSED EDGE OF PAVEMENT
- PROPOSED TREELINE
- PROPOSED MODULAR BLOCK WALL
- PROPOSED STOCKADE FENCE
- UGU — PROPOSED UNDERGROUND UTILITIES
- PROPOSED GAS LINE
- PROPOSED WATER LINE
- PROPOSED SEWER LINE
- PROPOSED DRAINAGE LINE
- PROPOSED 2' CONTOUR
- PROPOSED SWALE

CONSTRUCTION NOTES:

1. THE PURPOSE OF THIS PLAN IS TO SHOW THE PROPOSED GRADING AND DRAINAGE SYSTEMS FOR THIS SITE.
2. ALL WORK SHALL CONFORM TO THE APPLICABLE REGULATIONS AND STANDARDS OF THE CITY OF NASHUA, AND SHALL BE BUILT IN A WORKMANLIKE MANNER IN ACCORDANCE WITH THE PLANS AND SPECIFICATIONS. ALL WORK PERFORMED IN THE NEW HAMPSHIRE DEPARTMENT OF TRANSPORTATION RIGHT-OF-WAY SHALL CONFORM TO THE STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, STATE OF NEW HAMPSHIRE, DEPARTMENT OF TRANSPORTATION, APPROVED AND ADOPTED 2016 ARE HEREBY INCORPORATED BY REFERENCE.
3. CONSTRUCTION SHALL CONFORM TO THE TYPICAL SECTIONS AND DETAILS SHOWN ON THE PLANS, AND SHALL MEET THE REQUIREMENTS AND SPECIFICATIONS FOR ROAD CONSTRUCTION, PUBLIC WORKS DEPARTMENT, NASHUA, NEW HAMPSHIRE. ALL DRAINAGE PIPES SHOWN SHALL BE HDPE. CATCH BASINS SHALL BE TYPE B, AND HAVE 3' SUMPS UNLESS OTHERWISE NOTED.
4. THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING AND DETERMINING THE LOCATION, SIZE AND ELEVATION OF ALL EXISTING UTILITIES, SHOWN OR NOT SHOWN ON THESE PLANS, PRIOR TO THE START OF ANY CONSTRUCTION THE ENGINEER SHALL BE NOTIFIED IN WRITING OF ANY UTILITIES FOUND INTERFERING WITH THE PROPOSED CONSTRUCTION, AND APPROPRIATE REMEDIAL ACTION TAKEN BEFORE PROCEEDING WITH THE WORK. THE CONTRACTOR SHALL BE RESPONSIBLE FOR CONTACTING "DIG SAFE" AT 811 AT LEAST 72 HOURS BEFORE DIGGING.
5. ALL DRAINAGE PIPE SHALL BE INSTALLED FOLLOWING MANUFACTURER'S INSTALLATION INSTRUCTIONS.
6. ALL WATER UTILITIES SHALL CONFORM TO PENNICHUCK WATER WORKS REGULATIONS.
7. THE WATER, SANITARY SEWER, AND ELECTRICAL UTILITIES SHOWN HERE SHALL BE COORDINATED WITH THE FINAL BUILDING PLANS PRIOR TO CONSTRUCTION. THE DESIGN ENGINEER SHALL BE NOTIFIED OF ANY DISCREPANCIES.
8. ROOF DRAIN TIE-INS ARE SHOWN AS APPROXIMATE. THE CONTRACTOR SHOULD CONSULT WITH THE ENGINEER DURING CONSTRUCTION IF ROOF DRAIN LOCATIONS NEED TO BE MOVED.
9. CATCH BASINS WITH A DOUBLE GRATE SHOULD HAVE A 5 FOOT INNER DIAMETER.
10. EXISTING CATCH BASINS THAT ARE BEING TIED INTO SHALL BE INSPECTED BY THE CONTRACTOR DURING CONSTRUCTION. IF THE STRUCTURES ARE DAMAGED PRIOR TO OR DURING CONSTRUCTION, THE CONTRACTOR SHALL BE RESPONSIBLE FOR REPAIRING OR REPLACING THEM.
11. DESIGN OF THE PROPOSED MODULAR BLOCK WALL SHALL BE APPROVED BY THE NASHUA DEPARTMENT OF PUBLIC WORKS PRIOR TO CONSTRUCTION.

USDA SOIL MAP UNIT KEY

SYMBOL	MAP UNIT	SLOPE CLASS
CanC	CANTON FINE SANDY LOAM	8–15%
CpC	CHATFIELD–HOLLIS–CANTON	8–15%
CpD	CHATFIELD–HOLLIS–CANTON	15–25%
WnC	WINDSOR–URBAN LAND COMPLEX	3–15%

SOURCE: WEB SOIL SURVEY, WWW.WEBSOILSURVEY.SC.EGOV.USDA.GOV

SITE SPECIFIC SOIL MAP UNIT KEY

SYMBOL	MAP UNIT	SLOPE CLASS	DRAINAGE CLASS	HSG
42B	CANTON FINE SANDY LOAM	0–8%	WELL	B
42C	CANTON FINE SANDY LOAM	8–15%	WELL	B
42D	CANTON FINE SANDY LOAM	15–25%	WELL	B
446B	SCITUATE, VERY STONY	0–8%	MODERATELY WELL	C
514B	LEICESTER	0–8%	POORLY DRAINED	C
400B/ccabb	UDORTHENTS	0–8%	MODERATELY WELL	B
400B/dcabb	UDORTHENTS	0–8%+	MODERATELY WELL	B
400B/ecabb	UDORTHENTS	0–8%	MODERATELY WELL	B
500B/ccabc	UDORTHENTS	0–8%+	MODERATELY WELL	C
500B/ccabc	UDORTHENTS	0–8%	MODERATELY WELL	C
500B/dcabc	UDORTHENTS	0–8%+	MODERATELY WELL	C

THIS MAP PRODUCT IS WITHIN THE TECHNICAL STANDARDS OF THE NATIONAL COOPERATIVE SOILS SURVEY. IT IS A SPECIAL PURPOSE PRODUCT, PRODUCED BY A CERTIFIED SOIL SCIENTIST, AND IS NOT A PRODUCT OF THE USDA NATURAL RESOURCE CONSERVATION SERVICE. THERE IS A NARRATIVE REPORT THAT ACCOMPANIES THIS MAP AND MAP KEY.

GRAPHIC SCALE

(IN FEET)
1 inch = 50 ft.

GRADING & DRAINAGE PLAN
AUTO BODY SHOP
MAP 128 LOTS 31, 32 & 84
MAP 132 LOTS 38 & 84
WEST GLENWOOD STREET
NASHUA, NEW HAMPSHIRE
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THOMAS E. SOKOLOSKI — No. 063 — 7/29/2020

THIS DETAILED SITE-SPECIFIC SOIL MAP, PERFORMED ON JULY 22, 2019 BY THOMAS E. SOKOLOSKI, CERTIFIED SOIL SCIENTIST #063 OF TES ENVIRONMENTAL CONSULTANTS, L.L.C. IN BOW, NEW HAMPSHIRE WITH ASSISTANCE FROM JOSHUA BRIEN OF KEACH – NORDSTROM ASSOCIATES, CONFORMS TO THE STANDARDS OF SSSNNE PUBLICATION NO. 3, AS AMENDED. "SITE-SPECIFIC SOIL MAPPING STANDARDS FOR NEW HAMPSHIRE AND VERMONT". THIS MAP HAS BEEN PREPARED TO COMPLY WITH SOIL MAPPING REQUIREMENTS OF RSA 485 A: 17 AND NHDES ENV-WQ 1500, ALTERATION OF TERRAIN. SEE ACCOMPANYING REPORT FOR METHODOLOGY, MAP SYMBOL LEGEND, AND INTERPRETATIONS.

DIG SAFE — 811 — UTILITIES UNDERGROUND PLANT DAMAGE PREVENTION SYSTEMS

PAUL CHISHOLM — No. 15078 — STATE OF NEW HAMPSHIRE — LICENSED PROFESSIONAL ENGINEER — 7/29/20

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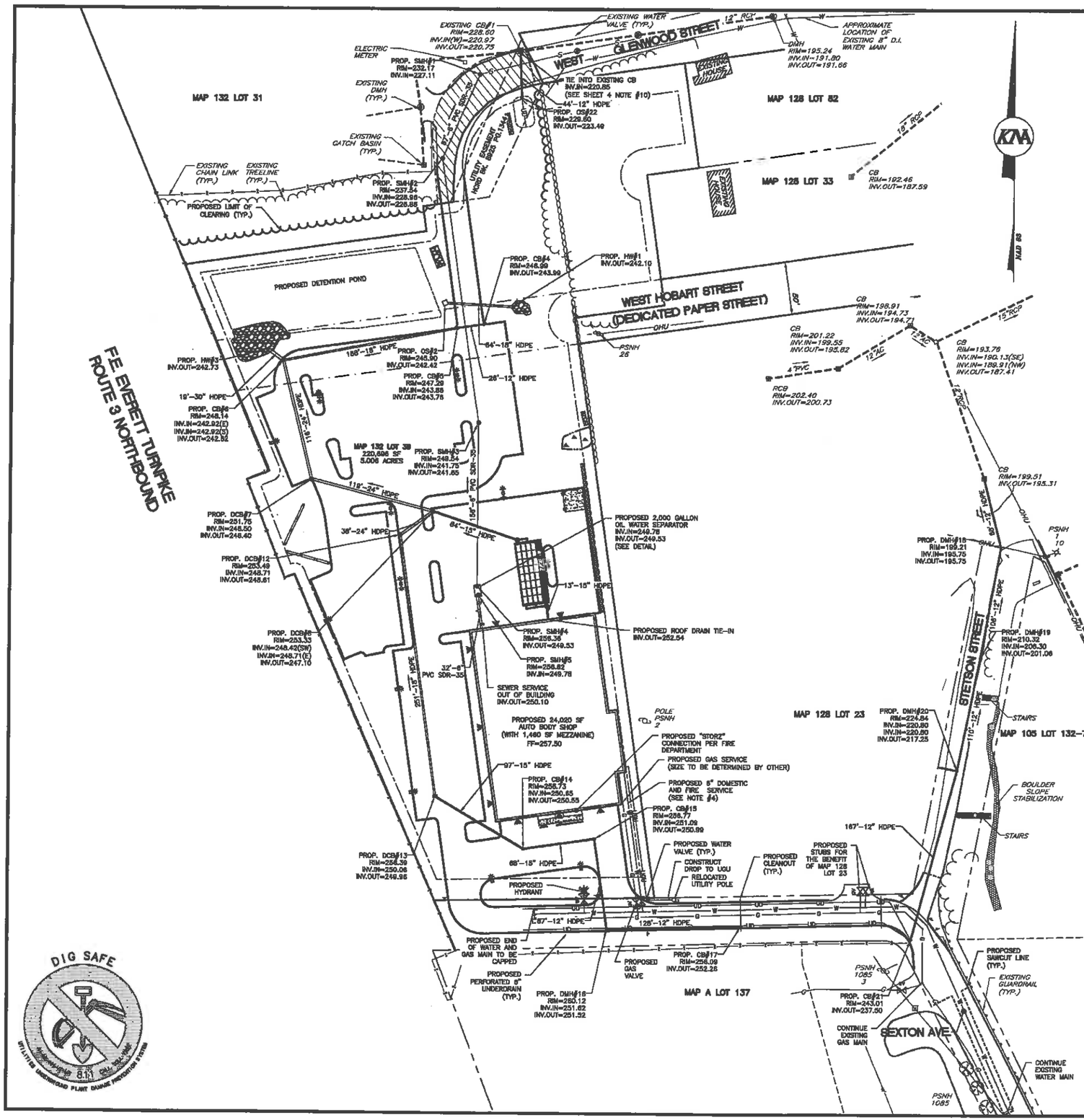

LEGEND

- SB–F STONE BOUND FOUND
- IPIN–F IRON PIN FOUND
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- SIGN
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- UGI PROPOSED UNDERGROUND UTILITIES
- G PROPOSED GAS LINE
- W PROPOSED WATER LINE
- S PROPOSED SEWER LINE
- PROPOSED DRAINAGE LINE
- SAWCUT LINE

CONSTRUCTION NOTES:

1. ALL WORK SHALL CONFORM TO THE CITY OF NASHUA, LATEST EDITION, CONSTRUCTION STANDARDS AND DETAILS. IN THE ABSENCE OF A CITY STANDARD/SPECIFICATION, WORK SHALL CONFORM TO THE STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, AS PUBLISHED BY THE STATE OF NEW HAMPSHIRE, DEPARTMENT OF TRANSPORTATION, ARE HEREBY INCORPORATED BY REFERENCE.
2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING AND DETERMINING THE LOCATION, SIZE AND ELEVATION OF ALL EXISTING UTILITIES, SHOWN OR NOT SHOWN ON THESE PLANS, PRIOR TO THE START OF ANY CONSTRUCTION. THE ENGINEER SHALL BE NOTIFIED IN WRITING OF ANY UTILITIES FOUND INTERFERING WITH THE PROPOSED CONSTRUCTION, AND APPROPRIATE REMEDIAL ACTION TAKEN BEFORE PROCEEDING WITH THE WORK. THE CONTRACTOR SHALL BE RESPONSIBLE FOR CONTACTING "DIG SAFE" AT 811 AT LEAST 72 HOURS BEFORE DIGGING.
3. ALL DRAINAGE PIPE SHALL BE INSTALLED FOLLOWING MANUFACTURER'S INSTALLATION INSTRUCTIONS.
4. CONTRACTOR TO VERIFY SIZE OF WATER AND GAS SERVICE LINES WITH MECHANICAL CONTRACTOR/FIRE SUPPRESSION ENGINEER PRIOR TO THE START OF CONSTRUCTION.
5. THE PROPOSED BUILDING SHALL BE FULLY SPRINKLER PROTECTED AND CONTAIN AN INTERNAL FIRE PUMP.
6. PRIOR TO THE START OF CONSTRUCTION AND PRIOR TO ORDERING ANY WATER SYSTEM/SERVICE PARTS, THE PROPOSED SIZE OF THE VARIOUS WATER SERVICES SHALL BE CONFIRMED BY THE PROJECT FIRE SUPPRESSION ENGINEER. ANY ADJUSTMENTS TO THE DESIGN MUST BE APPROVED BY THE CITY OF NASHUA.
7. FINAL LAYOUT OF UNDERGROUND UTILITIES TO BE APPROVED BY LOCAL PROVIDER PRIOR TO CONSTRUCTION.
8. FINAL OIL/WATER SEPARATOR SIZE SHALL BE DETERMINED BY PLUMBING ENGINEER PRIOR TO CONSTRUCTION.

FIRE DEPARTMENT NOTES

1. THE MASTER FIRE ALARM BOX LOCATION SHALL BE DETERMINED AT TIME OF BUILDING DESIGN BY THE FIRE DEPARTMENT.
2. FINAL KNOX BOX LOCATIONS FOR THE PROPOSED BUILDING SHALL BE DETERMINED BY THE FIRE DEPARTMENT OR FIRE PROTECTION ENGINEER.
3. THERE WILL BE NO FLAMMABLE LIQUID STORAGE ROOM OR SHED LOCATED ON SITE.
4. THE PAINT MIXING ROOM WILL BE MADE EXPLOSION PROOF TO COMPLY WITH NH FIRE CODE.

UTILITY NOTE

THE UNDERGROUND UTILITIES DEPICTED HEREON HAVE BEEN LOCATED FROM FIELD SURVEY INFORMATION AND PLOTTED FROM EXISTING DRAWINGS. THE SURVEYOR MAKES NO GUARANTEES THAT THE UNDERGROUND UTILITIES DEPICTED COMPRISE ALL SUCH UTILITIES IN THE AREA, EITHER IN SERVICE OR ABANDONED. THE SURVEYOR FURTHER DOES NOT WARRANT THAT THE UNDERGROUND UTILITIES SHOWN ARE IN THE EXACT LOCATION INDICATED ALTHOUGH THEY ARE LOCATED AS ACCURATELY AS POSSIBLE FROM THE INFORMATION AVAILABLE. THE SURVEYOR HAS NOT PHYSICALLY LOCATED THE UNDERGROUND PORTIONS OF THE UTILITIES.

GRAPHIC SCALE

50 0 25 50 100 200

(IN FEET)
1 inch = 50 ft.

UTILITY PLAN
AUTO BODY SHOP
MAP 128 LOTS 31, 32 & 84
MAP 132 LOTS 38 & 84
WEST GLENWOOD STREET
NASHUA, NEW HAMPSHIRE
HILLSBOROUGH COUNTY

OWNER/APPLICANT:
ROSCOMMON INVESTMENTS, LLC
147 DANIEL WEBSTER HIGHWAY
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PAUL CHISHOLM No. 15076 LICENSED PROFESSIONAL ENGINEER STATE OF NEW HAMPSHIRE

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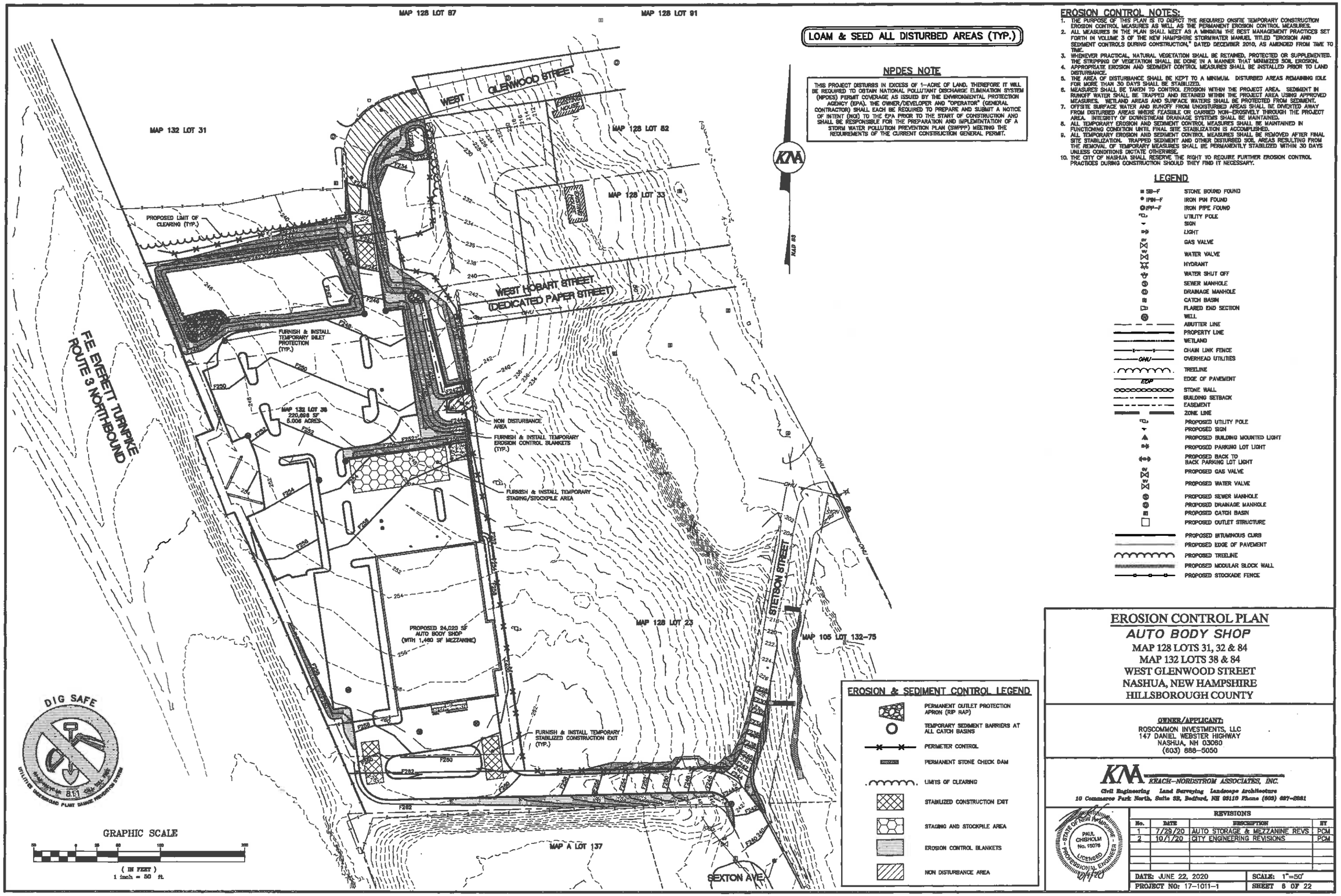

NPDES NOTE

THIS PROJECT DISTURBS IN EXCESS OF 1-ACRE OF LAND. THEREFORE IT WILL BE REQUIRED TO OBTAIN NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) PERMIT COVERAGE AS ISSUED BY THE ENVIRONMENTAL PROTECTION AGENCY (EPA). THE OWNER/DEVELOPER AND "OPERATOR" (GENERAL CONTRACTOR) SHALL EACH BE REQUIRED TO PREPARE AND SUBMIT A NOTICE OF INTENT (NOI) TO THE EPA PRIOR TO THE START OF CONSTRUCTION AND SHALL BE RESPONSIBLE FOR THE PREPARATION AND IMPLEMENTATION OF A STORM WATER POLLUTION PREVENTION PLAN (SWPPP) MEETING THE REQUIREMENTS OF THE CURRENT CONSTRUCTION GENERAL PERMIT.

EROSION CONTROL NOTES:

1. THE PURPOSE OF THIS PLAN IS TO DEPICT THE REQUIRED ONSITE TEMPORARY CONSTRUCTION EROSION CONTROL MEASURES AS WELL AS THE PERMANENT EROSION CONTROL MEASURES.
2. ALL MEASURES IN THE PLAN SHALL MEET AS A MINIMUM THE BEST MANAGEMENT PRACTICES SET FORTH IN VOLUME 3 OF THE NEW HAMPSHIRE STORMWATER MANUEL TITLED "EROSION AND SEDIMENT CONTROLS DURING CONSTRUCTION," DATED DECEMBER 2010, AS AMENDED FROM TIME TO TIME.
3. WHENEVER PRACTICAL, NATURAL VEGETATION SHALL BE RETAINED, PROTECTED OR SUPPLEMENTED. THE STRIPPING OF VEGETATION SHALL BE DONE IN A MANNER THAT MINIMIZES SOIL EROSION.
4. APPROPRIATE EROSION AND SEDIMENT CONTROL MEASURES SHALL BE INSTALLED PRIOR TO LAND DISTURBANCE.
5. THE AREA OF DISTURBANCE SHALL BE KEPT TO A MINIMUM. DISTURBED AREAS REMAINING IDLE FOR MORE THAN 30 DAYS SHALL BE STABILIZED.
6. MEASURES SHALL BE TAKEN TO CONTROL EROSION WITHIN THE PROJECT AREA. SEDIMENT IN RUNOFF WATER SHALL BE TRAPPED AND RETAINED WITHIN THE PROJECT AREA USING APPROVED MEASURES. WETLAND AREAS AND SURFACE WATERS SHALL BE PROTECTED FROM SEDIMENT.
7. OFFSITE SURFACE WATER AND RUNOFF FROM UNDISTURBED AREAS SHALL BE DIVERTED AWAY FROM DISTURBED AREAS WHERE FEASIBLE OR CARRIED NON-EROSIVELY THROUGH THE PROJECT AREA. INTEGRITY OF DOWNSTREAM DRAINAGE SYSTEMS SHALL BE MAINTAINED.
8. ALL TEMPORARY EROSION AND SEDIMENT CONTROL MEASURES SHALL BE MAINTAINED IN FUNCTIONING CONDITION UNTIL FINAL SITE STABILIZATION IS ACCOMPLISHED.
9. ALL TEMPORARY EROSION AND SEDIMENT CONTROL MEASURES SHALL BE REMOVED AFTER FINAL SITE STABILIZATION. TRAPPED SEDIMENT AND OTHER DISTURBED SOIL AREAS RESULTING FROM THE REMOVAL OF TEMPORARY MEASURES SHALL BE PERMANENTLY STABILIZED WITHIN 30 DAYS UNLESS CONDITIONS DICTATE OTHERWISE.
10. THE CITY OF NASHUA SHALL RESERVE THE RIGHT TO REQUIRE FURTHER EROSION CONTROL PRACTICES DURING CONSTRUCTION SHOULD THEY FIND IT NECESSARY.

LEGEND

- SB-F — STONE BOUND FOUND
- IPIN-F — IRON PIN FOUND
- IPP-F — IRON PIPE FOUND
- UTILITY POLE
- SIGN
- LIGHT
- GAS VALVE
- WATER VALVE
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- WATER SHUT OFF
- SEWER MANHOLE
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- PROPOSED BITUMINOUS CURB
- PROPOSED EDGE OF PAVEMENT
- PROPOSED TREELINE
- PROPOSED MODULAR BLOCK WALL
- PROPOSED STOCKADE FENCE

EROSION & SEDIMENT CONTROL LEGEND

- PERMANENT OUTLET PROTECTION APRON (RIP RAP)
- TEMPORARY SEDIMENT BARRIERS AT ALL CATCH BASINS
- PERIMETER CONTROL
- PERMANENT STONE CHECK DAM
- LIMITS OF CLEARING
- STABILIZED CONSTRUCTION EXIT
- STAGING AND STOCKPILE AREA
- EROSION CONTROL BLANKETS
- NON DISTURBANCE AREA

EROSION CONTROL PLAN

AUTO BODY SHOP

MAP 128 LOTS 31, 32 & 84
MAP 132 LOTS 38 & 84
WEST GLENWOOD STREET
NASHUA, NEW HAMPSHIRE
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PAUL CHISHOLM No. 19078 LICENSED PROFESSIONAL ENGINEER - STATE OF NEW HAMPSHIRE - 10/1/20

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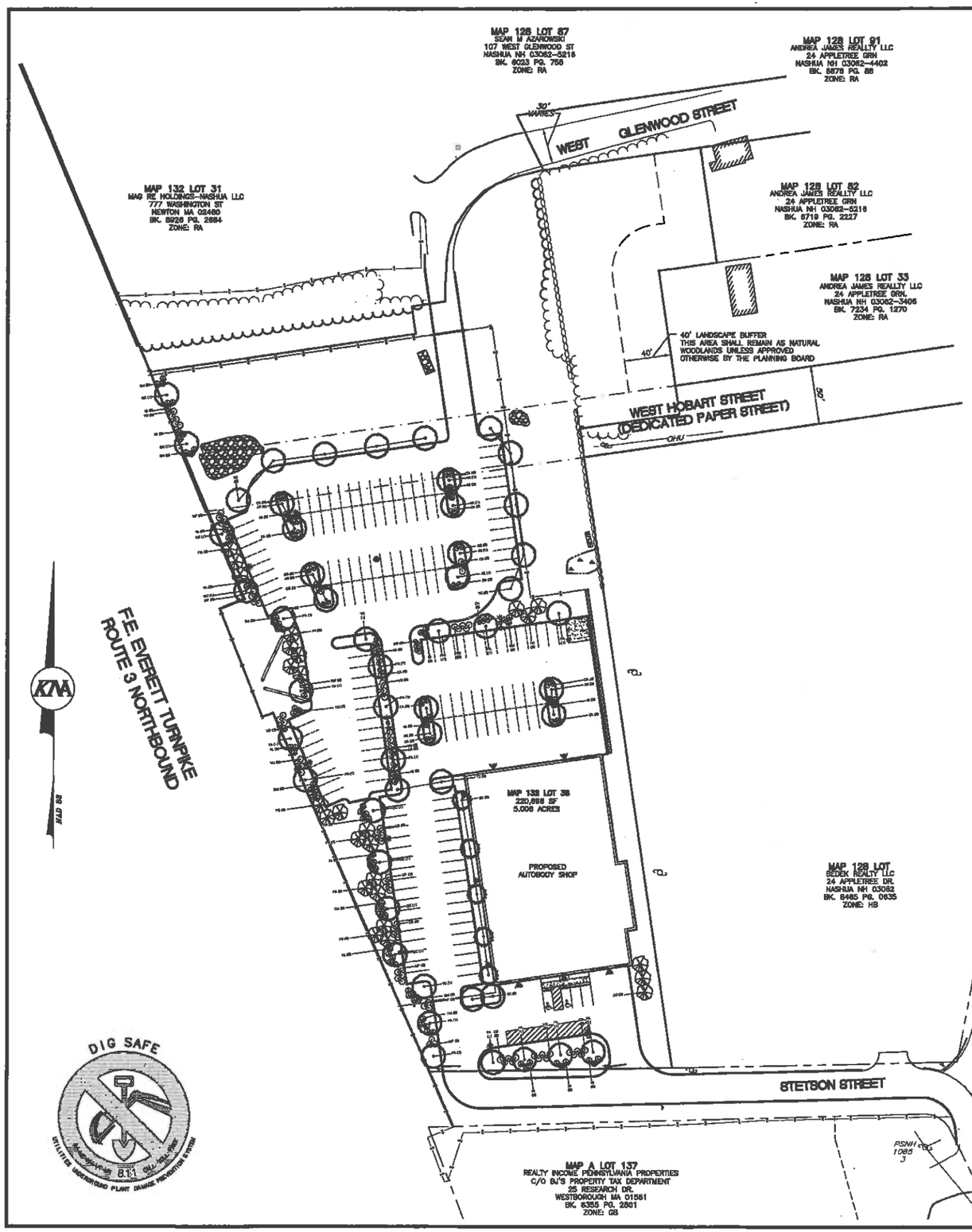

PLANTING SCHEDULE

Botanical Name/ Common Name	Size	Label	Quantity	Mature Height
Trees				
Abies concolor / White Fir	6-7' B&B	AC	6	30-40'
Acer rubrum 'Redpointe' / Redpointe Red Maple	2.5-3" CAL.	AR	12	40-60'
Picea glauca / White Spruce	6-7' B&B	PG	9	40-60
Pinus nigra / Austrian Pine	6-7' B&B	PN	11	40-60'
Platanus x acerifolia 'Exclamation' / Exclamation Planetree	2.5-3" CAL.	PA	16	40-60'
Quercus coccinea / Scarlet Oak	2.5-3" CAL.	QC	8	60'+
Syringa reticulata / Japanese Lilac Tree	2.5-3" CAL.	SR	5	20-30'
Tilia cordata 'Greenspire' / Greenspire Littleleaf Linden	2.5-3" CAL.	TC	16	40-60'
Shrubs				
Clethra alnifolia 'Compacta' / Compact Summersweet	2-2.5'	CA	42	3-4'
Cornus sericea 'Arctic Fire' / Arctic Fire Red-Osier Dogwood	2-2.5'	CS	26	5-6'
Hydrangea paniculata 'Grandiflora' / PeeGee Panicle Hydrangea	2-2.5'	HP	6	10-15'
Ilex glabra 'Compacta' / Compact Inkberry	2.5-3' B&B	IG	33	5-6'
Kalmia latifolia / Mountain Laurel	2-3' B&B	KL	19	6-8'
Myrica pensylvanica / Northern Bayberry	2-3' B&B	MP	20	6-8'
Rhododendron maximum / Rosebay Rhododendron	2-3' B&B	RM	22	10-15'
Spiraea bumalda 'Goldflame' / Goldflame Spirea	2-2.5'	SB	18	2-3'
Taxus media 'L C Bobbink' / Bobbink Yew	2-3' B&B	TM	23	6-8'
Viburnum dentatum / Arrowwood Viburnum	2-3' B&B	VD	15	8-10'

LANDSCAPE CALCULATIONS

INTERIOR LANDSCAPE AREA:

MEDIAN:
LENGTH = 135'
TREES REQUIRED: 1 TREE + 1 TREE / 40' OF MEDIAN LENGTH
= 135 / 40 = 3.4 + 1 = 5 TREES REQUIRED
TREES PROPOSED: 5 TREES PROVIDED
SHRUBS REQUIRED: 1 SHRUB + 1 SHRUB / 5' OF MEDIAN LENGTH
= 135 / 5 = 27 + 1 = 28 SHRUBS REQUIRED
SHRUBS PROPOSED: 28 SHRUBS PROVIDED

ISLANDS:
6 ISLANDS (40' LENGTH EACH)
SHADE TREES REQUIRED = 2 SHADE TREES / ISLAND
= 2 x 6 = 12 SHADE TREES REQUIRED
SHADE TREES PROPOSED: 12 SHADE TREES PROVIDED
SHRUBS REQUIRED: 1 SHRUB + 1 SHRUB / 5' OF ISLAND LENGTH
= 40 / 5 = 8 + 1 = 9 SHRUBS REQUIRED PER ISLAND
SHRUBS PROPOSED: 9 SHRUBS PROVIDED PER ISLAND

LANDSCAPE YARD REQUIREMENTS:
SHADE TREES REQUIRED: 1 SHADE TREE / 40 LF OF FRONTAGE
SHRUBS REQUIRED: 1 SHRUB + 1 SHRUB / 5' OF FRONTAGE
MAP 132 LOT 84
79 LINEAR FEET OF FRONTAGE ON EVERETT TURNPIKE
SHADE TREES REQUIRED = 79 / 40 = 2 SHADE TREES REQUIRED
SHADE TREES PROPOSED: 2 SHADE TREES PROVIDED
SHRUBS = 79 / 5 = 15.8 + 1 = 17 SHRUBS REQUIRED
SHRUBS PROPOSED: 17 SHRUBS PROVIDED
MAP 132 LOT 38
175 LINEAR FEET OF FRONTAGE ON STETSON STREET (MINUS DRIVEWAY)
SHADE TREES REQUIRED = 175 / 40 = 4 SHADE TREES REQUIRED
SHADE TREES PROPOSED: 4 SHADE TREES PROVIDED
SHRUBS = 175 / 5 = 35 + 1 = 36 SHRUBS REQUIRED
SHRUBS PROPOSED: 40 SHRUBS PROVIDED
520 LINEAR FEET OF FRONTAGE ON EVERETT TURNPIKE
SHADE TREES REQUIRED = 520 / 40 = 13 SHADE TREES REQUIRED
SHADE TREES PROPOSED: 13 SHADE TREES PROVIDED
SHRUBS = 520 / 5 = 104 + 1 = 105 SHRUBS REQUIRED
SHRUBS PROPOSED: 108 SHRUBS PROVIDED

LANDSCAPE CALCULATIONS

REQUIRED BUFFER YARDS:
BUFFER TYPE E:
REQUIREMENTS: 40' WIDE
2 LARGE TREES + 4 MEDIUM/SMALL TREES + 20 SHRUBS / 100 LF
MAP 132 LOT 38 (HB) BUFFER FOR MAP A LOT 994 (R-18):
20 LINEAR FEET / 100 = .5
LARGE TREES REQUIRED = 5 x 2 = 10 LARGE TREES REQUIRED
LARGE TREES PROPOSED: 13 LARGE TREES PROVIDED
MEDIUM/SMALL TREES REQUIRED = 5 x 4 = 20 MEDIUM/LARGE TREES REQUIRED
MEDIUM/LARGE TREES PROPOSED = 20 MEDIUM/LARGE TREES PROVIDED
SHRUBS = 5 x 20 = 100 SHRUBS REQUIRED
SHRUBS PROPOSED: 108 SHRUBS PROVIDED
MAP 132 LOT 38 (HB) BUFFER FOR MAP 128 LOTS 82 & 33 (R-18):

BUFFER TYPE E	REQUIRED	PROPOSED
	40' BUFFER	NATURAL BUFFER TO REMAIN INTACT

GRAPHIC SCALE
0 25 50 100 200
(IN FEET)
1 inch = 50 ft.

LANDSCAPE PLAN
AUTO BODY SHOP
MAP 128 LOTS 31, 32 & 84
MAP 132 LOTS 38 & 84
WEST GLENWOOD STREET
NASHUA, NEW HAMPSHIRE
HILLSBOROUGH COUNTY

OWNER/APPLICANT:
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hopkinton nh 03229
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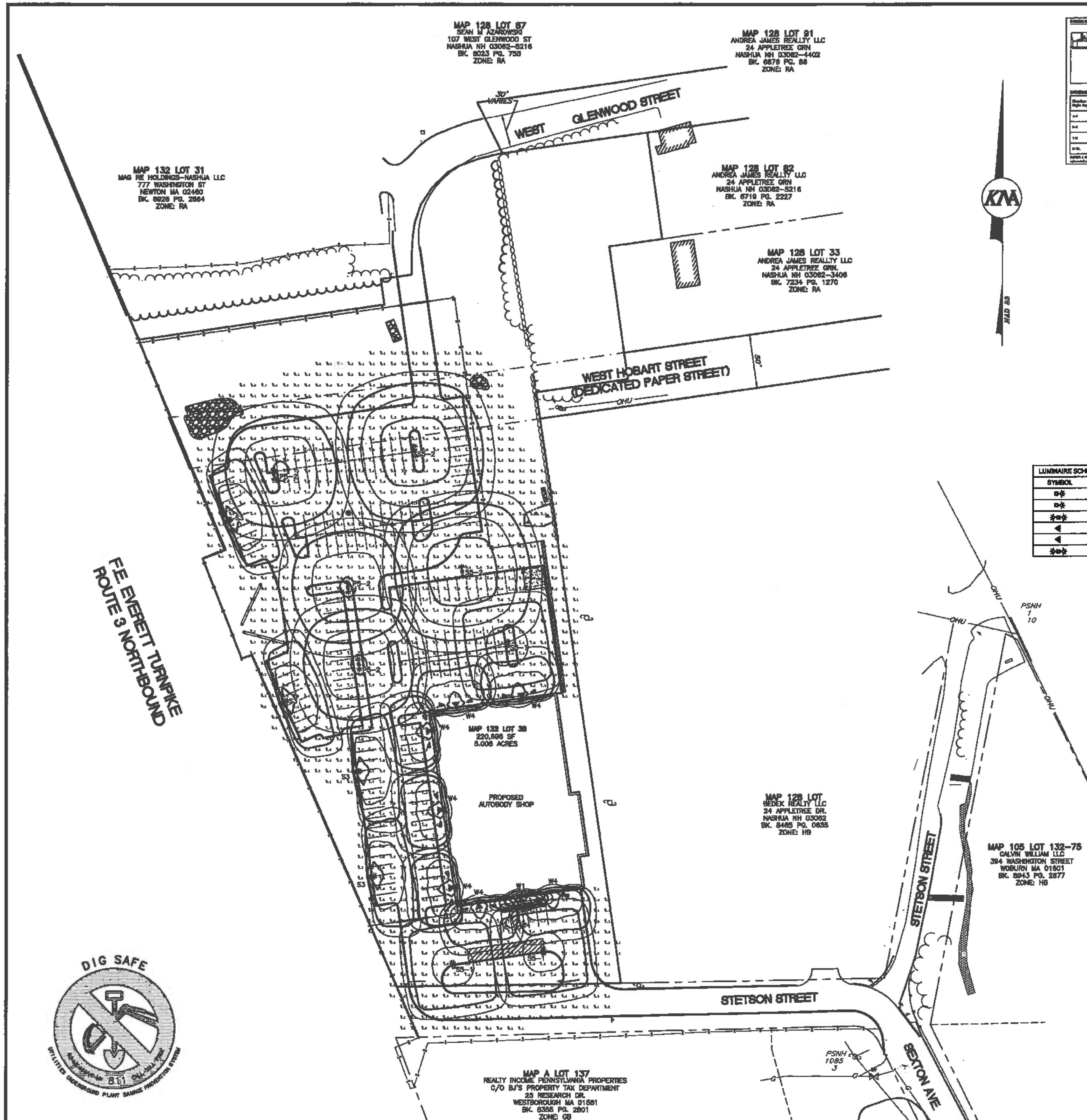
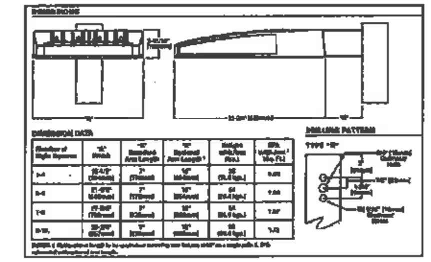
STATE OF NEW HAMPSHIRE
PAUL CHISHOLM
No. 19076
LICENSED
PROFESSIONAL ENGINEER
10/1/20

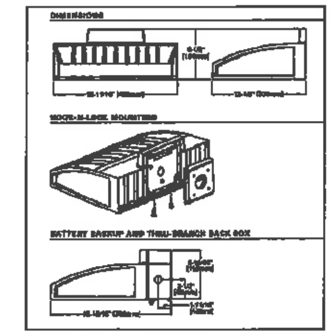
REVISIONS			
No.	DATE	DESCRIPTION	BY
1	7/29/20	AUTO STORAGE & MEZZANINE REVS	PCM
2	10/1/20	CITY ENGINEERING REVISIONS	PCM

DATE: JUNE 22, 2020 | SCALE: 1"=50'
PROJECT NO: 17-1011-1 | SHEET 7 OF 22

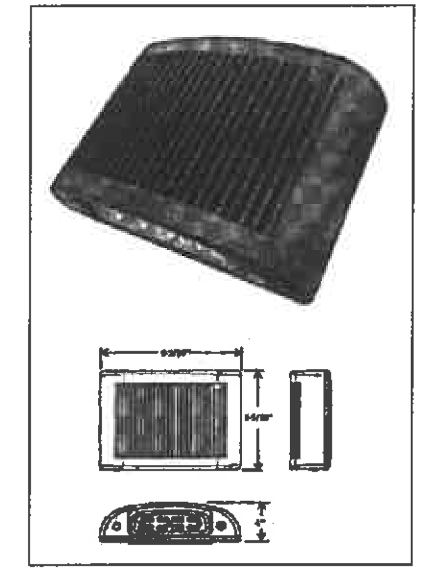




GLEON AERIAL/SITE LUMINAIRE



GWC WALL MOUNT LUMINAIRE



MERU LED

LIGHTING NOTES:

1. ALL LIGHTS/FIXTURES SHALL BE AS SPECIFIED BY CHARRON LIGHTING.
2. ALL PROPOSED LIGHTS/FIXTURES ARE TO BE FULL CUTOFF.
3. FIXTURES SHALL BE MOUNTED AT HEIGHTS AS SPECIFIED IN TABLE.
4. PRIOR TO CONSTRUCTION, THE SITE CONTRACTOR SHALL COORDINATE WITH THE PROJECT ELECTRICIAN FOR THE EXACT LOCATION, LAYOUT, CONDUIT SIZE AND CIRCUITS ASSOCIATED WITH THE SITE LIGHTING.

LUMINAIRE SCHEDULE

SYMBOL	QTY	LABEL	ARRANGEMENT	DESCRIPTION
	4	S3	SINGLE	GLEON-AF-01-LED-E1-SL3-HSS/ SSS4A20SFN1 (20' AFG)
	3	S5-1	SINGLE	GLEON-AF-01-LED-E1-5MQ/ SSS4A20SFN1 (20' AFG)
	2	S5-2	BACK-BACK	GLEON-AF-02-LED-E1-5WQ/ SSS4A20SFN2 (20' AFG)
	1	W1	SINGLE	MERU-LEDLACEM-DS-IH / WALL MTD (10' AFG)
	7	W4	SINGLE	GWC-AF-01-LED-E1-SL4-600/ WALL MTD (16' AFG)
	3	P5-2	BACK-BACK	GLEON-AF-01-LED-E1-5WQ/ SSS4A20SFN2 (20' AFG)

LARGE PARKING AREAS
Illuminance (Fc)
Average = 1.45
Maximum = 4.3
Minimum = 0.4
Avg/Min Ratio = 3.70
Max/Min Ratio = 10.75

PARKING AREAS ADJACENT BUILDING
Illuminance (Fc)
Average = 1.45
Maximum = 7.7
Minimum = 0.4
Avg/Min Ratio = 3.63
Max/Min Ratio = 19.25

GRAPHIC SCALE
50 0 25 50 100 200
(IN FEET)
1 inch = 50 ft.

IN ASSOCIATION WITH:

CHARRON
BRIGHTER.

P.O. BOX 4550
MANCHESTER, NH 03108
(603) 624-4827
FAX (603) 624-9764
SALES@CHARRONINC.COM

LIGHTING PLAN
AUTO BODY SHOP
MAP 128 LOTS 31, 32 & 84
MAP 132 LOTS 38 & 84
WEST GLENWOOD STREET
NASHUA, NEW HAMPSHIRE
HILLSBOROUGH COUNTY

OWNER/APPLICANT:
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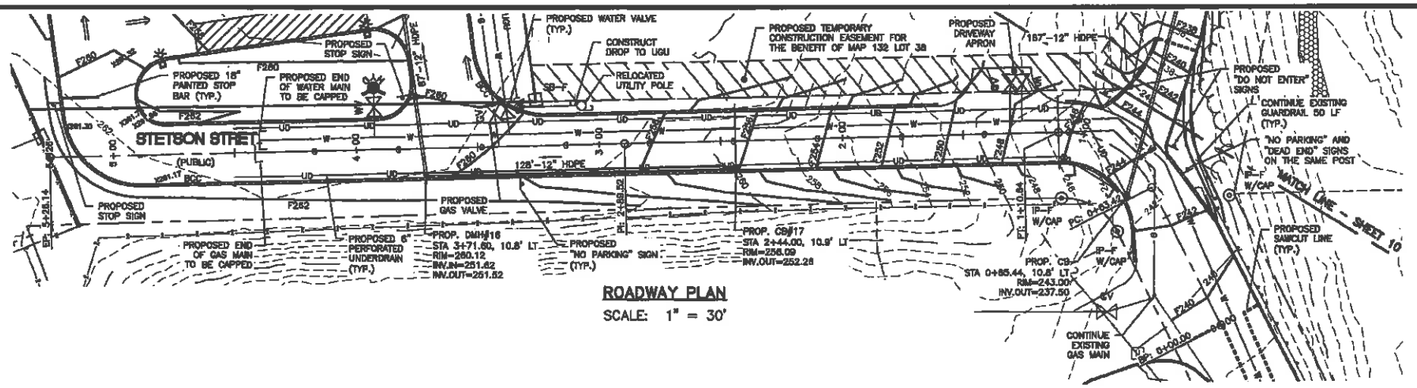
STATE OF NEW HAMPSHIRE - PAUL CHISHOLM No. 15035 - LICENSED - PROFESSIONAL ENGINEER
10/1/20

REVISIONS

No.	DATE	DESCRIPTION	BY
1	7/29/20	AUTO STORAGE & MEZZANINE REVS	PCM
2	10/1/20	CITY ENGINEERING REVISIONS	PCM

DATE: JUNE 22, 2020 | SCALE: 1"=50'
PROJECT NO: 17-1011-1 | SHEET 8 OF 22



ROADWAY PLAN

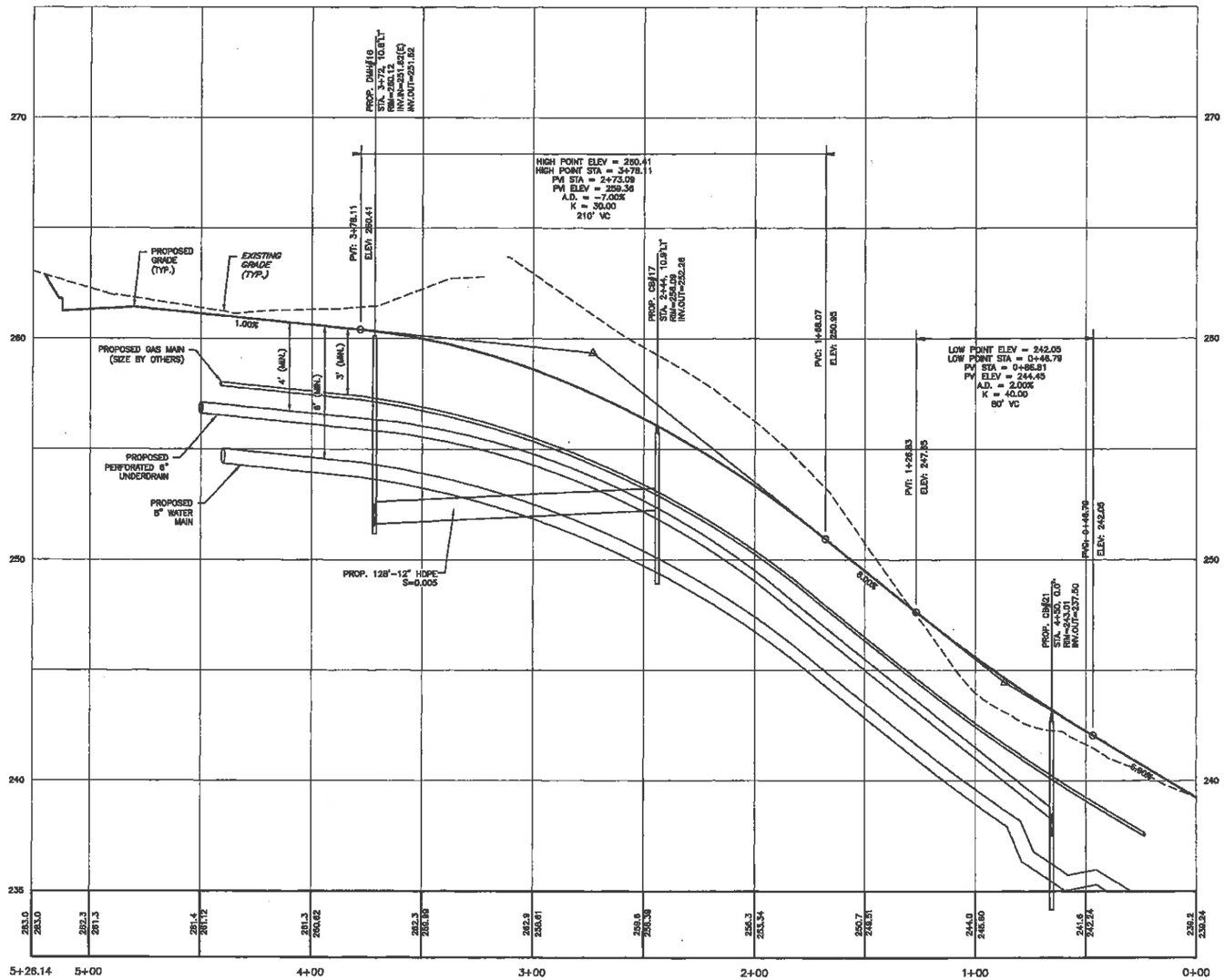
SCALE: 1" = 30'

CONSTRUCTION NOTES:

1. THE PURPOSE OF THIS PLAN IS TO SHOW THE PROPOSED RECONSTRUCTION OF STETSON STREET.
2. ALL WORK SHALL CONFORM TO THE APPLICABLE REGULATIONS AND STANDARDS OF THE CITY OF NASHUA, AND SHALL BE BUILT IN A WORKMANLIKE MANNER IN ACCORDANCE WITH THE PLANS AND SPECIFICATIONS. ALL WORK PERFORMED IN THE NEW HAMPSHIRE DEPARTMENT OF TRANSPORTATION RIGHT-OF-WAY SHALL CONFORM TO THE STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, STATE OF NEW HAMPSHIRE, DEPARTMENT OF TRANSPORTATION, APPROVED AND ADOPTED 2016 ARE HEREBY INCORPORATED BY REFERENCE.
3. CONSTRUCTION SHALL CONFORM TO THE TYPICAL SECTIONS AND DETAILS SHOWN ON THE PLANS, AND SHALL MEET THE REQUIREMENTS AND SPECIFICATIONS FOR ROAD CONSTRUCTION, PUBLIC WORKS DEPARTMENT, NASHUA, NEW HAMPSHIRE.
4. THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING AND DETERMINING THE LOCATION, SIZE AND ELEVATION OF ALL EXISTING UTILITIES, SHOWN OR NOT SHOWN ON THESE PLANS, PRIOR TO THE START OF ANY CONSTRUCTION THE ENGINEER SHALL BE NOTIFIED IN WRITING OF ANY UTILITIES FOUND INTERFERING WITH THE PROPOSED CONSTRUCTION, AND APPROPRIATE REMEDIAL ACTION TAKEN BEFORE PROCEEDING WITH THE WORK. THE CONTRACTOR SHALL BE RESPONSIBLE FOR CONTACTING "DIG SAFE" AT 811 AT LEAST 72 HOURS BEFORE DIGGING.
5. THE GAS AND ELECTRICAL UTILITIES SHOWN HERE SHALL BE COORDINATED WITH THE FINAL BUILDING PLANS PRIOR TO CONSTRUCTION. THE DESIGN ENGINEER SHALL BE NOTIFIED OF ANY DISCREPANCIES.

LEGEND

- ABUTTER LINE
- PROPERTY LINE
- EDP — EDGE OF PAVEMENT
- 10' CONTOUR
- 2' CONTOUR
- PROPOSED UTILITY POLE
- PROPOSED SIGN
- PROPOSED BITUMINOUS CURB
- PROPOSED EDGE OF PAVEMENT
- UGU — PROPOSED UNDERGROUND UTILITIES
- PROPOSED GAS LINE
- PROPOSED 2' CONTOUR



ROADWAY PROFILE

SCALE: 1" = 30' (HORIZ.)
1" = 3' (VERT.)

GRAPHIC SCALE

(IN FEET)
1 inch = 20 ft.

ROADWAY PLAN & PROFILE

AUTO BODY SHOP

MAP 128 LOTS 31, 32 & 84
MAP 132 LOTS 38 & 84
WEST GLENWOOD STREET
NASHUA, NEW HAMPSHIRE
HILLSBOROUGH COUNTY

OWNER/APPLICANT:
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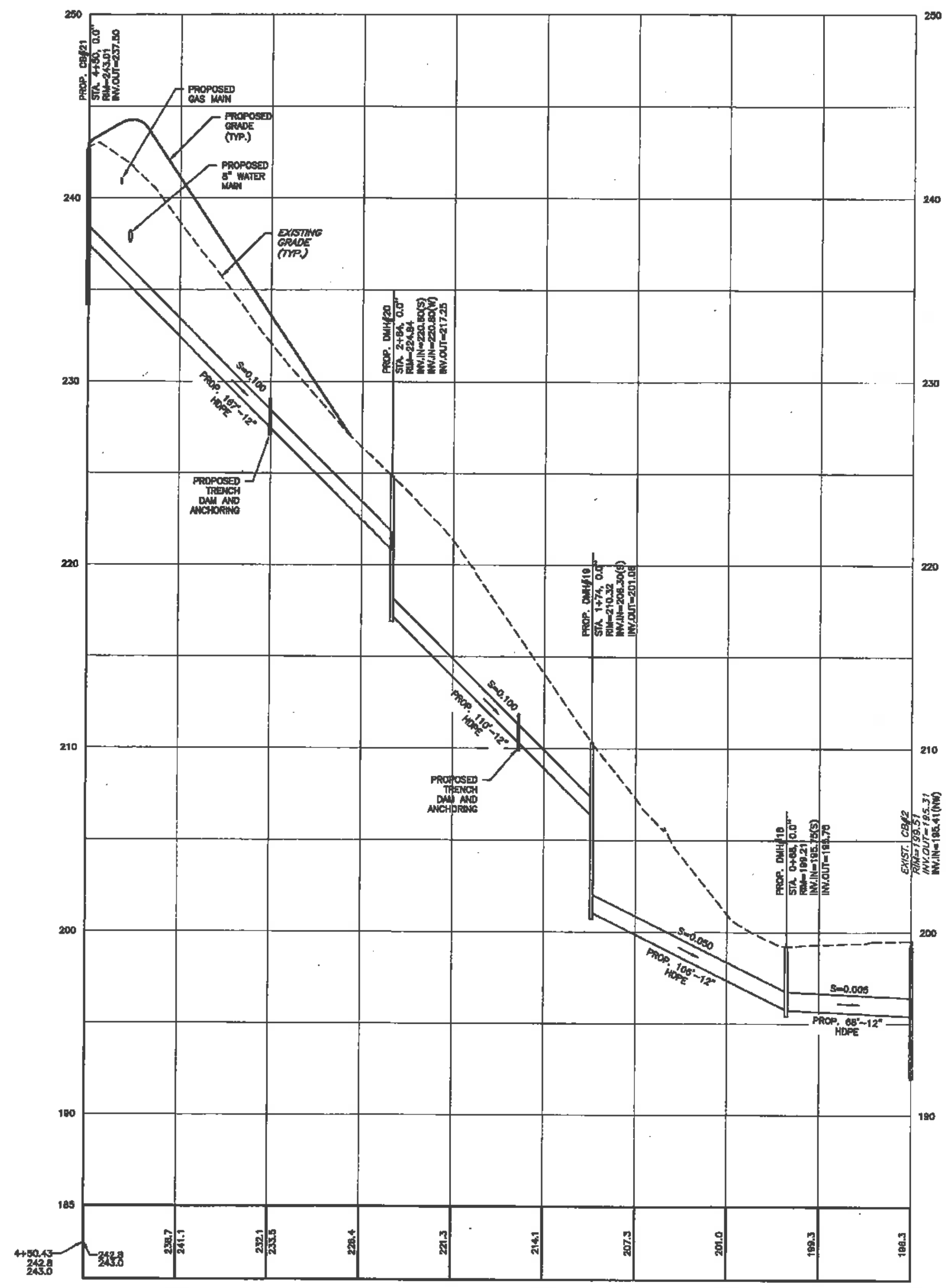
PAUL OHSHOLM No. 15076 LICENSED PROFESSIONAL ENGINEER STATE OF NEW HAMPSHIRE

REVISIONS			
No.	DATE	DESCRIPTION	BY
1	7/29/20	AUTO STORAGE & MEZZANINE REVS	PCM
2	10/1/20	CITY ENGINEERING REVISIONS	PCM

DATE: JUNE 22, 2020 SCALE: 1"=20'
PROJECT NO: 17-1011-1 SHEET 9 OF 22

DIG SAFE 811 CALL BEFORE YOU DIG UTILITIES UNDERGROUND PLANT DAMAGE PREVENTION SYSTEM

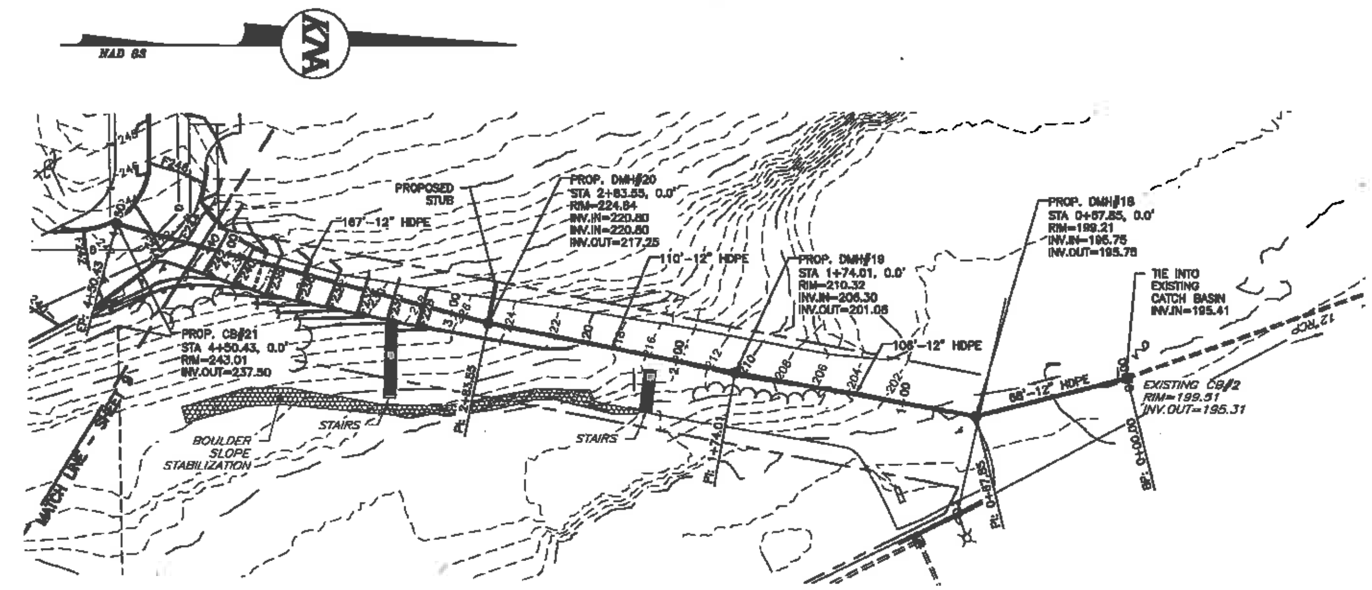


DRIVEWAY DRAINAGE PROFILE

SCALE: 1" = 40' (HORIZ.)
1" = 4' (VERT.)

LEGEND

— — —	ABUTTER LINE
———	PROPERTY LINE
EOP	EDGE OF PAVEMENT
———	10' CONTOUR
- - - -	2' CONTOUR
	PROPOSED UTILITY POLE
	PROPOSED SIGN
———	PROPOSED BITUMINOUS CURB
———	PROPOSED EDGE OF PAVEMENT
▒▒▒	PROPOSED MODULAR BLOCK WALL
—UGU—	PROPOSED UNDERGROUND UTILITIES
—G—G—	PROPOSED GAS LINE
———	PROPOSED 2' CONTOUR



DRIVEWAY PLAN

SCALE: 1" = 40'

GRAPHIC SCALE

40 0 20 40 80 160

(IN FEET)
1 inch = 40 ft.

DRIVEWAY DRAINAGE PLAN & PROFILE

AUTO BODY SHOP

MAP 128 LOTS 31, 32 & 84
MAP 132 LOTS 38 & 84
WEST GLENWOOD STREET
NASHUA, NEW HAMPSHIRE
HILLSBOROUGH COUNTY

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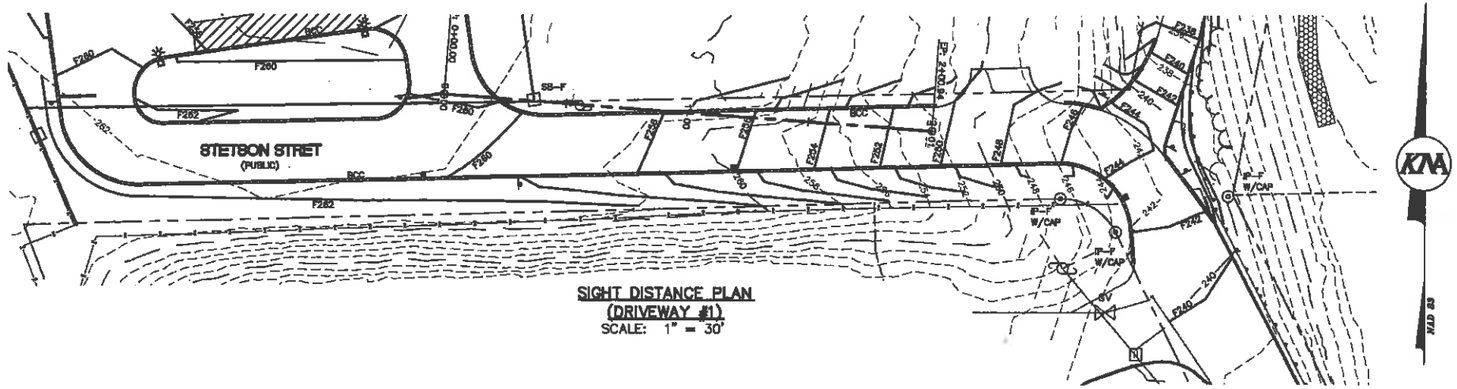
STATE OF NEW HAMPSHIRE – PAUL CHISHOLM No. 15079 LICENSED PROFESSIONAL ENGINEER – 10/1/20

REVISIONS

No.	DATE	DESCRIPTION	BY
1	7/29/20	AUTO STORAGE & MEZZANINE REVS	PCM
2	10/1/20	CITY ENGINEERING REVISIONS	PCM

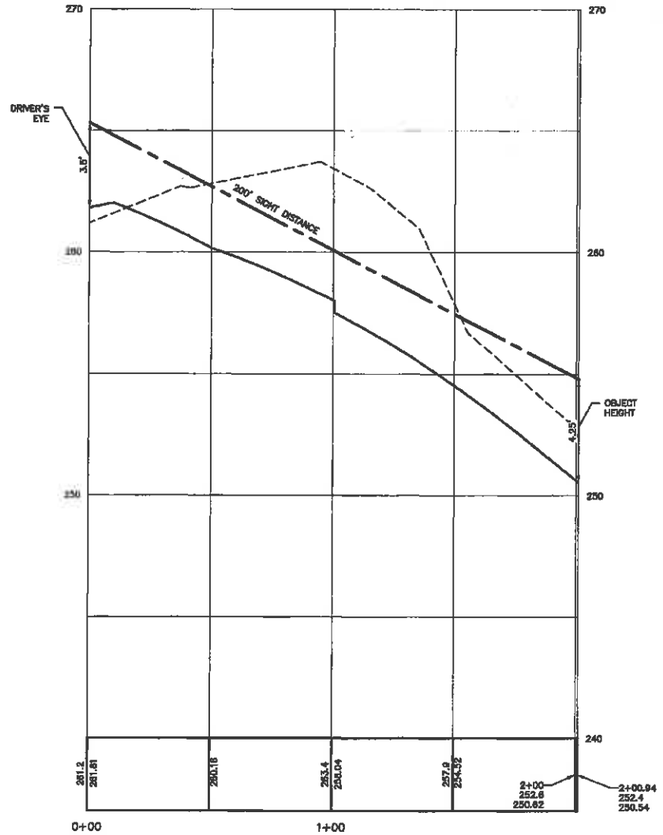
DATE: JUNE 22, 2020	SCALE: 1"=40'
PROJECT NO: 17-1011-1	SHEET 10 OF 22



SIGHT DISTANCE PLAN
(DRIVEWAY #1)
SCALE: 1" = 30'

LEGEND

- ABUTTER LINE
- PROPERTY LINE
- EOP — EDGE OF PAVEMENT
- 10' CONTOUR
- 2' CONTOUR
- PROPOSED UTILITY POLE
- PROPOSED SIGN
- PROPOSED BITUMINOUS CURB
- PROPOSED EDGE OF PAVEMENT
- PROPOSED 2' CONTOUR



SIGHT DISTANCE PROFILE
SCALE: 1" = 30' (HORIZ.)
1" = 3' (VERT.)

GRAPHIC SCALE
30 0 15 30 60 120
(IN FEET)
1 inch = 60 ft.

SIGHT DISTANCE PLAN & PROFILE
AUTO BODY SHOP

MAP 128 LOTS 31, 32 & 84
MAP 132 LOTS 38 & 84
WEST GLENWOOD STREET
NASHUA, NEW HAMPSHIRE
HILLSBOROUGH COUNTY

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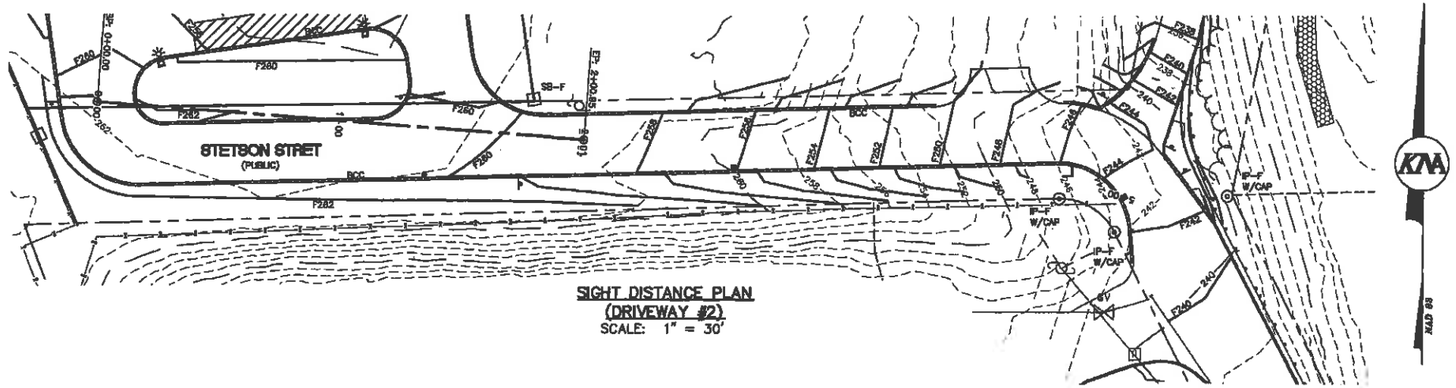
DIG SAFE
811 Call Before You Dig
UTILITIES UNDERGROUND PLANT DAMAGE PREVENTION SYSTEM

PAUL CHISHOLM No. 15076 LICENSED PROFESSIONAL ENGINEER STATE OF NEW HAMPSHIRE

REVISIONS

No.	DATE	DESCRIPTION	BY
1	7/29/20	AUTO STORAGE & MEZZANINE REVS	PCM
2	10/1/20	CITY ENGINEERING REVISIONS	PCM

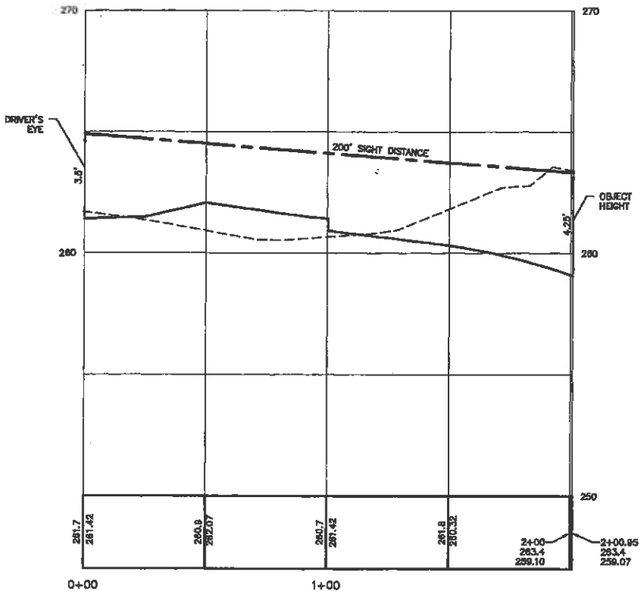
DATE: JUNE 22, 2020 | SCALE: 1"=30'
PROJECT NO: 17-1011-1 | SHEET 11 OF 22



SIGHT DISTANCE PLAN
(DRIVEWAY #2)
SCALE: 1" = 30'

LEGEND

- ABUTTER LINE
- PROPERTY LINE
- EOP — EDGE OF PAVEMENT
- 10' CONTOUR
- 2' CONTOUR
- PROPOSED UTILITY POLE
- PROPOSED SIGN
- PROPOSED BITUMINOUS CURB
- PROPOSED EDGE OF PAVEMENT
- PROPOSED 2' CONTOUR



SIGHT DISTANCE PROFILE
SCALE: 1" = 30' (HORIZ.)
1" = 3' (VERT.)

GRAPHIC SCALE

30 0 15 30 60 120

(IN FEET)
1 inch = 30 ft.

DIG SAFE
811
UTILITIES MARKED-CLEAR PLANT DAMAGE PREVENTION SAVES

SIGHT DISTANCE PLAN & PROFILE

AUTO BODY SHOP

MAP 128 LOTS 31, 32 & 84
MAP 132 LOTS 38 & 84
WEST GLENWOOD STREET
NASHUA, NEW HAMPSHIRE
HILLSBOROUGH COUNTY

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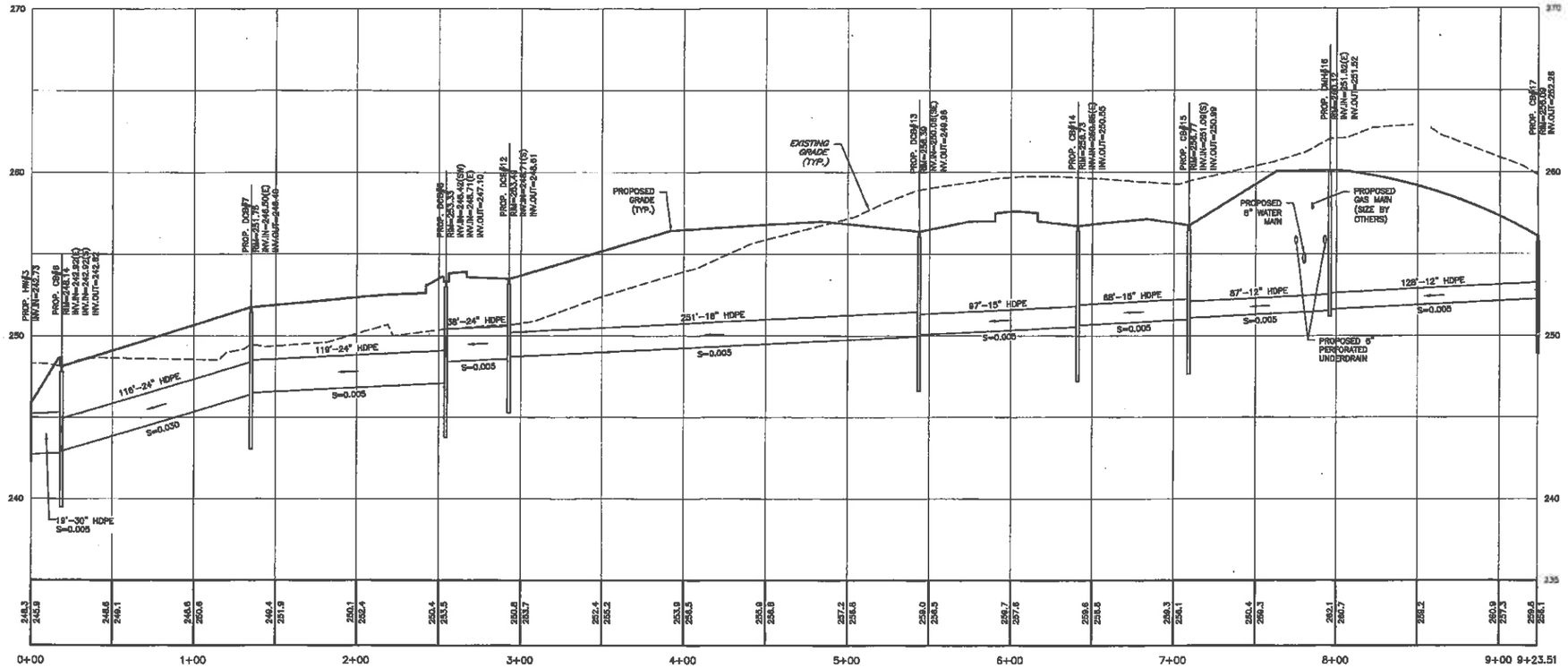
STATE OF NEW HAMPSHIRE — PAUL CHISHOLM No. 15078 — LICENSED PROFESSIONAL ENGINEER

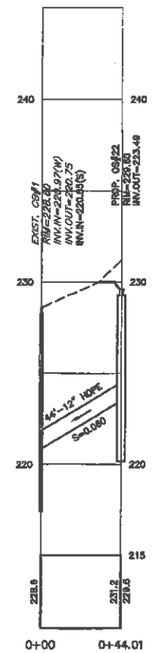
REVISIONS

No.	DATE	DESCRIPTION	BY
1	7/29/20	AUTO STORAGE & MEZZANINE REVS	PCM
2	10/1/20	CITY ENGINEERING REVISIONS	PCM

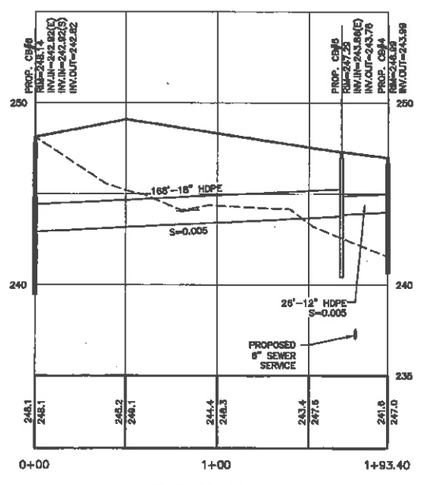
DATE: JUNE 22, 2020 | SCALE: 1"=30'
PROJECT NO: 17-1011-1 | SHEET 12 OF 22



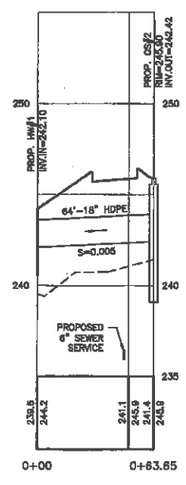
HW#3 TO CB#17
SCALE: 1" = 40' (HORIZ.)
1" = 4' (VERT.)



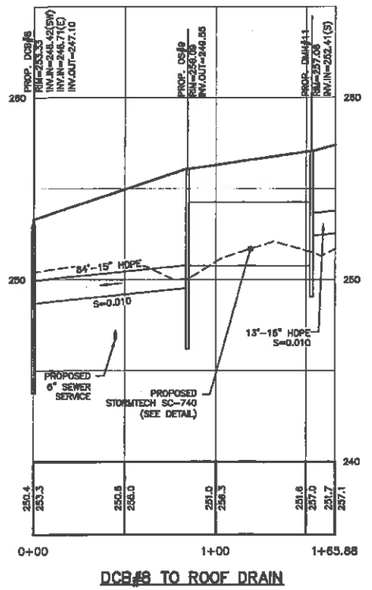
EXISTING CB TO OS#22
SCALE: 1" = 40' (HORIZ.)
1" = 4' (VERT.)



CB#6 TO CB#4
SCALE: 1" = 40' (HORIZ.)
1" = 4' (VERT.)



HW#1 TO OS#2
SCALE: 1" = 40' (HORIZ.)
1" = 4' (VERT.)



DCB#5 TO ROOF DRAIN
SCALE: 1" = 40' (HORIZ.)
1" = 4' (VERT.)

GRAPHIC SCALE
0 20 40 80
(IN FEET)
1 inch = 40 ft.

DRAINAGE PROFILES
AUTO BODY SHOP
MAP 128 LOTS 31, 32 & 84
MAP 132 LOTS 38 & 84
WEST GLENWOOD STREET
NASHUA, NEW HAMPSHIRE
HILLSBOROUGH COUNTY

OWNER/APPLICANT:
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UTILITIES NEIGHBORHOOD PLANT DAMAGE PREVENTION SYSTEM

STATE OF NEW HAMPSHIRE
PAUL CHISHOLM
No. 15076
LICENSED
PROFESSIONAL ENGINEER

REVISIONS

No.	DATE	DESCRIPTION	BY
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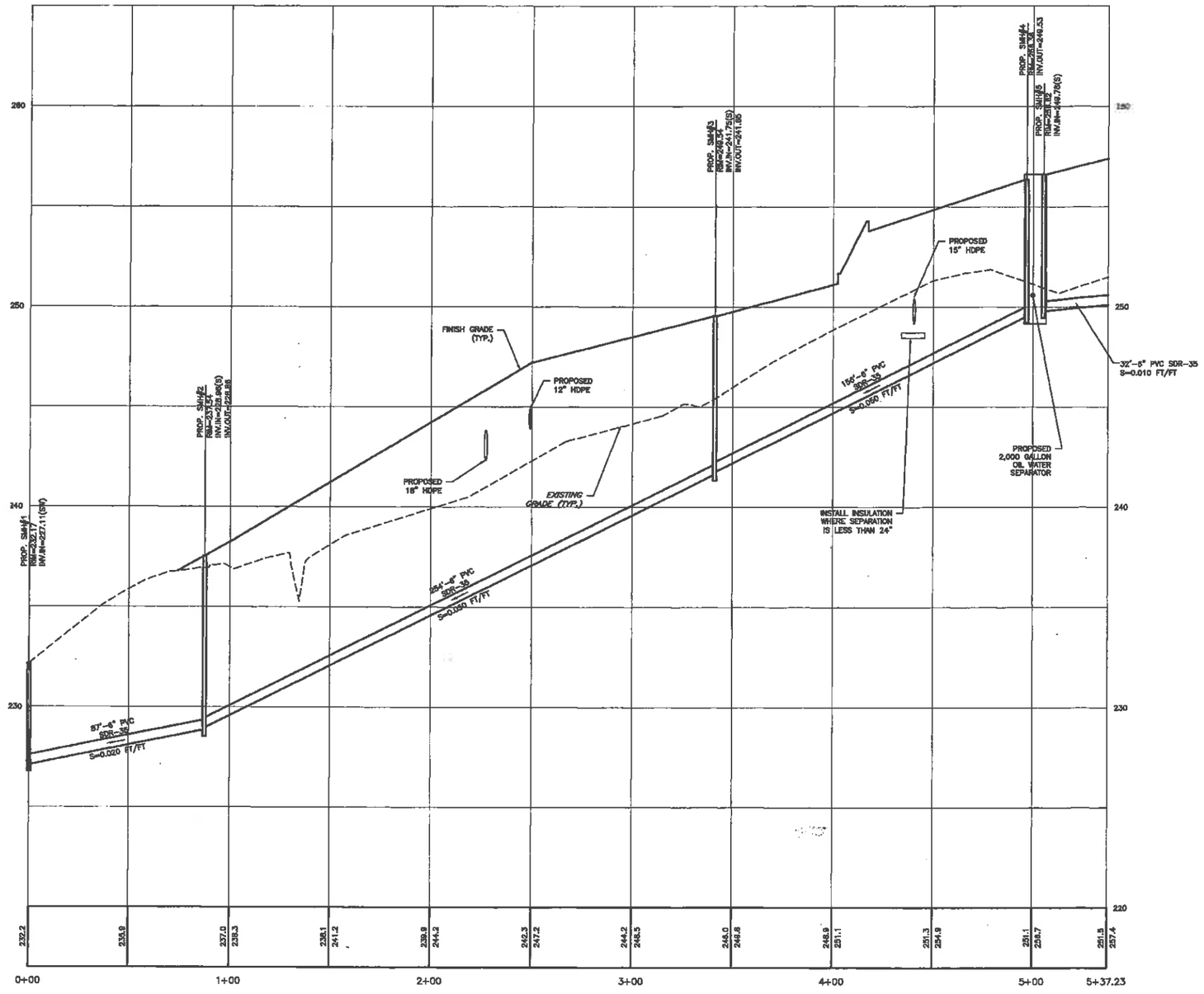
2	10/1/20	CITY ENGINEERING REVISIONS	PCM

DATE: JUNE 22, 2020 SCALE: 1"=40'
PROJECT NO: 17-1011-1 SHEET 13 OF 22



SEWER PROFILE
SCALE: 1" = 30' (HORIZ.)
1" = 3' (VERT.)

GRAPHIC SCALE

(IN FEET)
1 inch = 30 ft.

SEWER PROFILE
AUTO BODY SHOP
MAP 128 LOTS 31, 32 & 84
MAP 132 LOTS 38 & 84
WEST GLENWOOD STREET
NASHUA, NEW HAMPSHIRE
HILLSBOROUGH COUNTY

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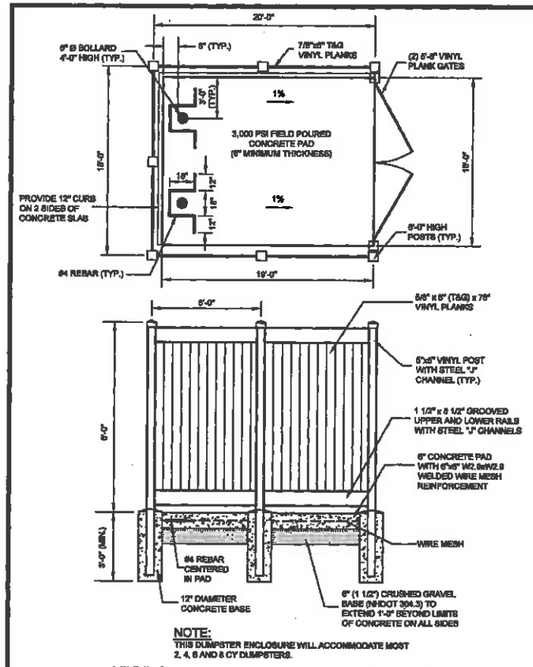
DIG SAFE
811 CALL BEFORE YOU DIG
UTILITIES UNDERGROUND PLANT DAMAGE PREVENTION SYSTEM

STATE OF NEW HAMPSHIRE
PAUL CHISHOLM
No. 15078
LICENSED
PROFESSIONAL ENGINEER

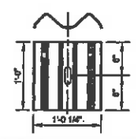
REVISIONS			
No.	DATE	DESCRIPTION	BY
1	7/29/20	AUTO STORAGE & MEZZANINE REVS	PCM
2	10/1/20	CITY ENGINEERING REVISIONS	PCM

DATE: JUNE 22, 2020 | SCALE: 1"=30'
PROJECT NO: 17-1011-1 | SHEET 14 OF 22

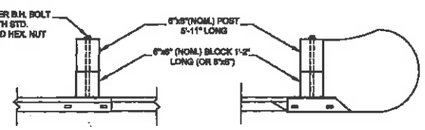


NOTE:
THIS DUMPSTER ENCLOSURE WILL ACCOMMODATE MOST 2, 4, 6 AND 8 CY DUMPSTERS.

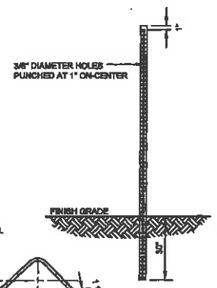
VINYL STOCKADE TRASH ENCLOSURE DETAIL
NOT TO SCALE



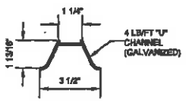
W-BEAM BACK-UP PLATE (STEEL POST ONLY)



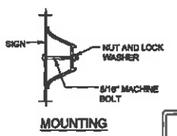
PLAN FOR WOOD POST AND OFFSET BLOCK



POST



POST SECTION

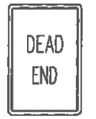


MOUNTING

NOTE:
POST SHALL CONFORM TO NHDOT 616.2.5.3

STEEL SIGN POST DETAIL
NOT TO SCALE
(MARCH 2008)

HANDICAP STRIPING DETAIL
NOT TO SCALE
(MARCH 2012)

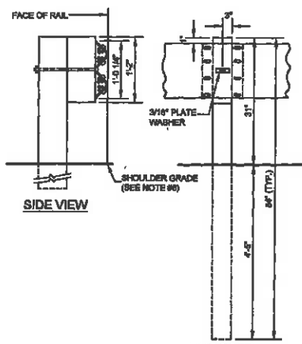


STOP SIGN DETAIL
NOT TO SCALE
(MARCH 2008)

STOP BAR

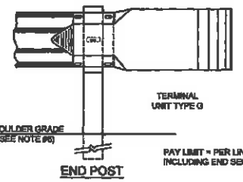
HANDICAP PARKING SIGN DETAIL
NOT TO SCALE
(MARCH 2008)

VAN ACCESSIBLE HANDICAP PARKING SIGN DETAIL
NOT TO SCALE
(NOVEMBER 2016)



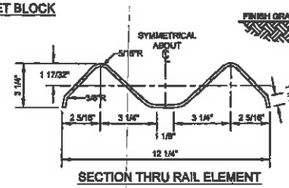
SIDE VIEW

LINE POST



END POST

PAY LIMIT = PER LINEAR FOOT INCLUDING END SECTION



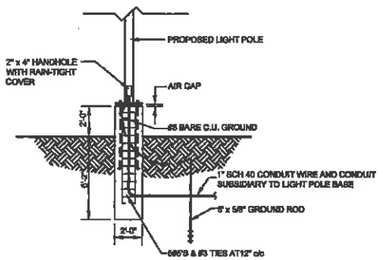
SECTION THRU RAIL ELEMENT

NOTES:
1. STEEL POSTS, OFFSET BLOCKS, ANCHORS, PLATES AND ALL FITTINGS TO BE GALVANIZED.
2. ALL DIMENSIONS SUBJECT TO MANUFACTURERS TOLERANCES.
3. RAIL PANELS AND END SECTIONS TO BE 12 GAUGE STEEL.
4. BACK-UP PLATE TO BE PLACED BEHIND RAIL ELEMENTS AT INTERMEDIATE STEEL POSTS.
5. ALL PARTS SHALL CONFORM TO CURRENT STANDARD SPECIFICATIONS.
6. WHEN GUARDRAIL IS CONSTRUCTED AT UP TO FOUR FEET FROM THE EDGE OF PAVEMENT, THE GUARDRAIL HEIGHT WILL BE SET FROM THE GRADE AT THE EDGE OF PAVEMENT. WHEN GUARDRAIL IS CONSTRUCTED MORE THAN FOUR FEET FROM THE EDGE OF PAVEMENT, THE GUARDRAIL WILL BE SET FROM THE GRADE AT FACE OF RAIL.

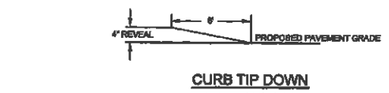
BEAM GUARDRAIL DETAIL
NOT TO SCALE
(MARCH 2008)

NOTES:
1. AS PERMISSIBLE, THE STRUCTURAL ENGINEER CHARGED WITH RETAINING WALL DESIGN SHALL SPECIFY SALT RESISTANT BLOCK CONSTRUCTION WHERE WALLS ARE TO BE CONSTRUCTED NEAR ROADWAYS OR PARKING AREAS.
2. RETAINING WALL DRAIN TO "DAYLIGHT" AT LOW POINT OR TIE TO DRAIN STRUCTURE AS SHOWN IN PLAN VIEW.
3. FINAL WALL DESIGN IS TO BE BY OTHERS. KEACH-NORDSTROM ASSOCIATES INC. ASSUMES NO RESPONSIBILITY OF THE WALL DESIGN.

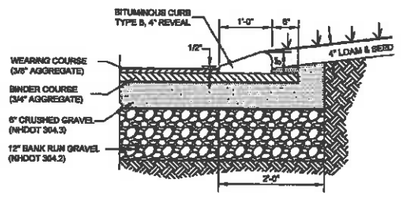
MODULAR BLOCK RETAINING WALL
(TO BE DESIGNED BY OTHERS)
NOT TO SCALE



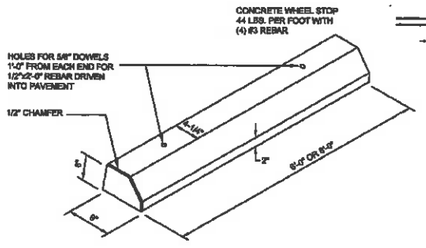
CONCRETE LIGHT POLE BASE DETAIL
NOT TO SCALE
(MARCH 2008)



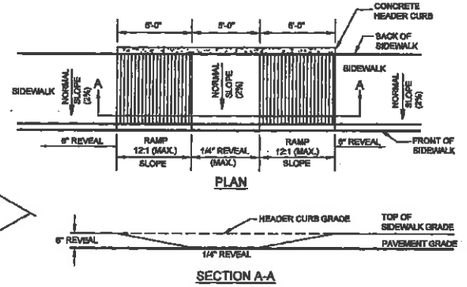
CURB TIP DOWN
NOT TO SCALE



BITUMINOUS CURB TYPE B DETAIL
NOT TO SCALE
(MARCH 2008)

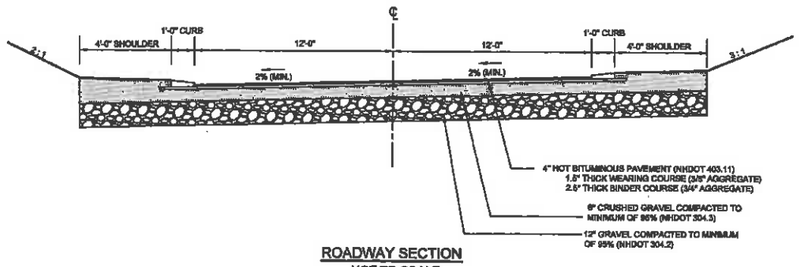


PRECAST CONCRETE WHEEL STOP
NOT TO SCALE
(MARCH 2008)

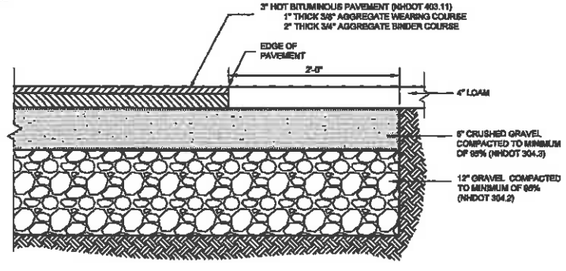


NOTES:
1. A BROOM FINISH TRANSVERSE TO THE SLOPE OF THE RAMP SHALL BE USED ON PORTLAND CEMENT CONCRETE RAMPS.
2. MAINTAIN THE NORMAL PAVEMENT PROFILE THROUGHOUT THE RAMP AREA.
3. MAINTAIN A MAXIMUM 1/4" OF CURB REVEAL AT THE RAMP, SEE SECTION A-A

SIDEWALK RAMP
NOT TO SCALE
(JUNE 2012)



ROADWAY SECTION
NOT TO SCALE
(MARCH 2008)



DRIVEWAY AND PARKING LOT SECTION
NOT TO SCALE
(MARCH 2008)

CONSTRUCTION DETAILS
AUTO BODY SHOP
MAP 128 LOTS 31, 32 & 84
MAP 132 LOTS 38 & 84
WEST GLENWOOD STREET
NASHUA, NEW HAMPSHIRE
HILLSBOROUGH COUNTY

OWNER/APPLICANT:
ROSCOMMON INVESTMENTS, LLC
147 DANIEL WEBSTER HIGHWAY
NASHUA, NH 03060
(603) 888-5050

KNA KEACH-NORDSTROM ASSOCIATES, INC.
Civil Engineering Land Surveying Landscape Architecture
10 Commerce Park North, Suite 3B, Bedford, NH 03110 Phone (603) 627-2881

STATE OF NEW HAMPSHIRE – PAUL CHISHOLM No. 15078 LICENSED PROFESSIONAL ENGINEER – 10/1/20

REVISIONS

No.	DATE	DESCRIPTION	BY
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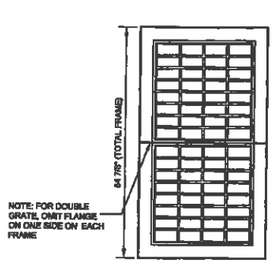
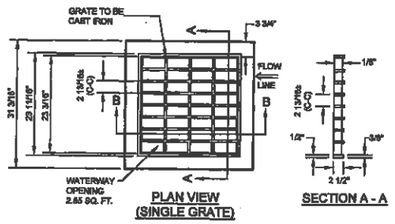
2	10/1/20	CITY ENGINEERING REVISIONS	PCM

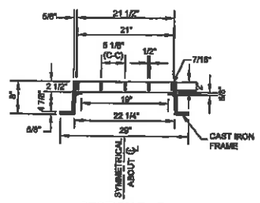
DATE: JUNE 22, 2020 SCALE: AS NOTED
PROJECT NO: 17-1011-1 SHEET 15 OF 22



PLAN VIEW
(DOUBLE GRATE)

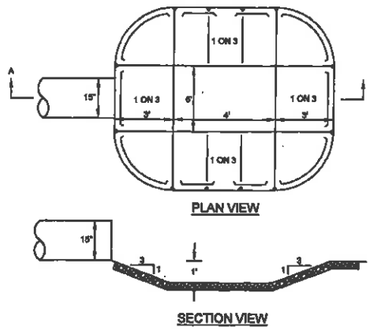


PLAN VIEW
(SINGLE GRATE)

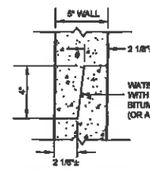


SECTION B - B

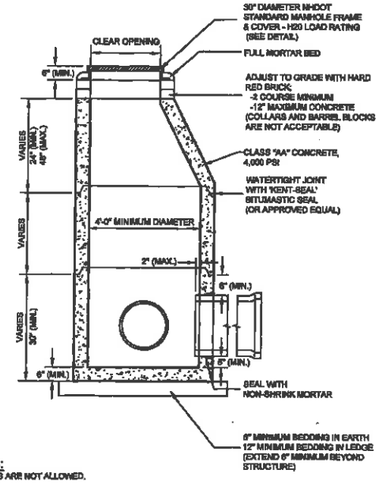
TYPE B FRAME & GRATE DETAIL
NOT TO SCALE
(MARCH 2008)



PREFORMED SCOUR HOLE DETAIL
NOT TO SCALE
(MARCH 2008)

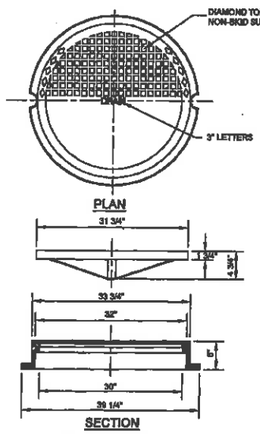


DETAIL OF TONGUE AND GROOVE JOINT



NOTES:
1. STEPS ARE NOT ALLOWED.
2. ALL SECTIONS SHALL BE CONCRETE CLASS AA (4,000 PSI). CIRCUMFERENTIAL REINFORCEMENT SHALL BE 0.12 SQ. IN. PER L.F. IN ALL SECTIONS AND SHALL BE PLACED IN THE CENTER OF THE WALL.
3. THE TONGUE OR THE GROOVE OF THE JOINT SHALL CONTAIN ONE LINE OF CIRCUMFERENTIAL REINFORCEMENT EQUAL TO 0.12 SQ. IN. PER L.F.
4. MATERIALS AND CONSTRUCTION TO NHDOT STANDARDS.

PRECAST REINFORCED DRAIN MANHOLE DETAIL
NOT TO SCALE
(MARCH 2008)

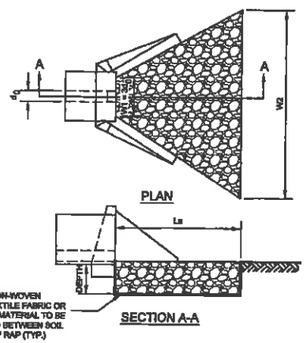


NOTES:
NEW HAMPSHIRE MAINTAINS A CLEAR OPENING DESIGNATION OF 30" FOR ITS MANHOLE CASTINGS.

FEATURES:
- 3" LETTERING
- COVERS MARKED DRAIN
- NONROCKING COVER
- DIAMOND SURFACE DESIGN

SPECIFICATIONS:
- FULLY MACHINED FRAME AND COVER
- H-20 LOAD RATED
- GRAY CAST IRON MEETS ASTM A48 CLASS 30

DRAIN MANHOLE FRAME AND COVER DETAIL
NOT TO SCALE



PIPE OUTLET TO FLAT AREA WITH NO DEFINED CHANNEL
NOT TO SCALE
(MARCH 2008)

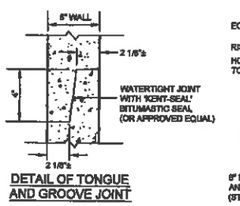
LOCATION	La	W1	W2	d50	DEPTH
PROP. HW#3	23'	6'	30'	4"	10"

TABLE 7-34 – RECOMMENDED RIP RAP GRADATION RANGES	
PERCENT OF WEIGHT SMALLER THAN THE GIVEN SIZE	SIZE OF STONE
100%	1.5 TO 2.0 d50
85%	1.3 TO 1.8 d50
50%	1.0 TO 1.5 d50
15%	0.3 TO 0.5 d50

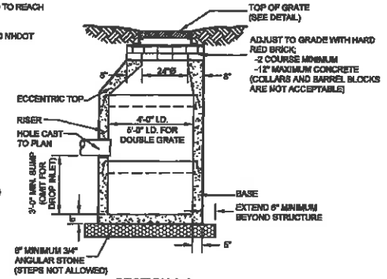
CONSTRUCTION SPECIFICATIONS:
1. THE SUBGRADE FOR THE FILTER MATERIAL, GEOTEXTILE FABRIC AND RIP RAP SHALL BE PREPARED TO THE LINES AND GRADES SHOWN ON THE PLANS.
2. FRACTURED ROCK USED FOR FILTER OR RIP RAP SHALL CONFORM TO THE SPECIFIED GRADATION.
3. GEOTEXTILE FABRICS SHALL BE PROTECTED FROM PUNCTURE OR TEARING DURING THE PLACEMENT OF THE ROCK RIP RAP. DAMAGED AREAS IN THE FABRIC SHALL BE REPAIRED BY PLACING A PIECE OF FABRIC OVER THE DAMAGED AREA OR BY COMPLETE REPLACEMENT OF THE FABRIC. ALL OVERLAPS REQUIRED FOR REPAIRS OR JOINING TWO PIECES OF FABRIC SHALL BE A MINIMUM OF 12 INCHES.
4. STONE FOR THE RIP RAP MAY BE PLACED BY EQUIPMENT AND SHALL BE CONSTRUCTED TO THE FULL LAYER THICKNESS IN ONE OPERATION AND IN SUCH A MANNER AS TO PREVENT SEGREGATION OF THE STONE SIZES.

MAINTENANCE:
THE OUTLET PROTECTION SHOULD BE CHECKED AT LEAST ANNUALLY AND AFTER EVERY MAJOR RAIN EVENT. IF THE RIP RAP HAS BEEN DISPLACED, UNDERMINED, OR DAMAGED, IT SHOULD BE REPAIRED IMMEDIATELY. THE CHANNEL IMMEDIATELY BELOW THE OUTLET SHOULD BE CHECKED TO SEE THAT EROSION IS NOT OCCURRING. THE DOWNSTREAM CHANNEL SHOULD BE KEPT CLEAR OF OBSTRUCTIONS SUCH AS FALLEN TREES, DEBRIS, AND SEDIMENT THAT COULD CHANGE FLOW PATTERNS AND/OR TAILWATER DEPTHS ON THE PIPES. REPAIRS MUST BE CARRIED OUT IMMEDIATELY TO AVOID ADDITIONAL DAMAGE TO THE OUTLET PROTECTION APRON.

NOTES:
1. ALL SECTIONS SHALL BE CONCRETE CLASS AA(4000 PSI). CIRCUMFERENTIAL REINFORCEMENT SHALL BE 0.12 SQUARE INCH PER LINEAR FOOT IN ALL SECTIONS AND SHALL BE PLACED IN THE CENTER THIRD OF THE WALL.
2. THE TONGUE OR GROOVE OF THE JOINT SHALL CONTAIN ONE LINE OF CIRCUMFERENTIAL REINFORCEMENT EQUAL TO 0.12 SQUARE INCH PER LINEAR FOOT.
3. RISER OF 1', 2', 3' & 4' CAN BE USED TO REACH DESIRED DEPTH.
4. MATERIALS AND CONSTRUCTION TO NHDOT STANDARDS.



DETAIL OF TONGUE AND GROOVE JOINT

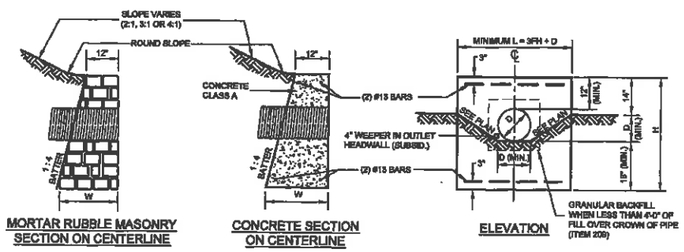


SECTION A-A

PRECAST REINFORCED CATCH BASIN
NOT TO SCALE
(MAY 2012)

NOTES
1. THOROUGHLY COMPACTED SCREENED GRAVEL FOR RCP PIPE. SCREENED GRAVEL TO EXTEND TO SELECT FILL LINE.
2. FOR HDPE OR PVC PIPE, BEDDING SHALL BE 3/4" STONE TO THE TOP OF THE PIPE.

STORM DRAINAGE TRENCH DETAIL
NOT TO SCALE
(MARCH 2008)

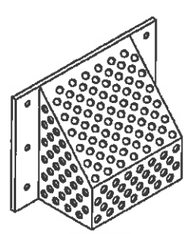


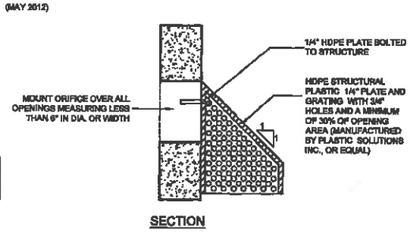
NOTE:
DIMENSIONS SHOWN ARE TO PAYMENT LINES. MORTAR RUBBLE MASONRY TO BE STEPPED OUTSIDE PAYMENT LINES ON SLOPING FACES.

DIAMETER D (INCH)	AREA OF PIPE (SF)	MASONRY PER FOOT OF WALL (CU. YD.)	MASONRY PER HOLE (CU. FT.)	MASONRY PER STANDARD HEADER (CU. YD.)	STEEL PER STANDARD HEADER (LB)	LENGTH OF BARS	PIPE EXC. PER 1' DEPTH 1' LENGTH (CU. YD.)	HEADER EXC. PER HEADER 1' DEPTH (CU. YD.)	ITEM 209 PER LINEAR FOOT	HEADER LENGTH L	HEADER HEIGHT H	FILL HEIGHT FH	WIDTH AT BOTTOM OF HEADER W	"L" HEADWALL MASONRY IN CORNER FRUSTRUM (CU. YD)	"L" HEADWALL HEADER EXC. PER HEADER 1' DEPTH (CU. YD.)
12"	0.79	0.196	1.06	0.81	8	3'-2"	0.111	0.789	0.30	3'-6"	3'-6"	10"	1'-10 1/2"	0.28	1.557
15"	1.23	0.302	1.78	0.85	11	3'-10"	0.120	0.947	0.35	4'-6"	3'-9"	1'-1"	1'-11 1/4"	0.31	1.232
18"	1.77	0.222	2.52	1.13	14	5'-2"	0.136	1.111	0.39	5'-6"	4'-0"	1'-6"	2'-0"	0.35	1.408
24"	3.14	0.280	4.71	1.78	20	7'-2"	0.148	1.481	0.48	7'-6"	4'-6"	1'-10"	2'-1 1/2"	0.43	1.776
30"	4.91	0.301	7.07	2.56	25	9'-2"	0.182	1.810	0.85	9'-6"	5'-0"	2'-4"	2'-3"	0.81	2.154

NOTE: STEEL QUANTITIES ARE FOR CONCRETE HEADWALLS ONLY.

MORTAR RUBBLE MASONRY AND CONCRETE HEADWALLS
NOT TO SCALE
(MARCH 2008)





TRASH RACK DETAIL
NOT TO SCALE

CONSTRUCTION DETAILS
AUTO BODY SHOP
MAP 128 LOTS 31, 32 & 84
MAP 132 LOTS 38 & 84
WEST GLENWOOD STREET
NASHUA, NEW HAMPSHIRE
HILLSBOROUGH COUNTY

OWNER/APPLICANT:
ROSCOMMON INVESTMENTS, LLC
147 DANIEL WEBSTER HIGHWAY
NASHUA, NH 03060
(603) 888-5050

KNA KEACH-NORDSTROM ASSOCIATES, INC.
Civil Engineering Land Surveying Landscape Architecture
10 Commerce Park North, Suite 3B, Bedford, NH 03110 Phone (603) 627-2881

STATE OF NEW HAMPSHIRE – PAUL CHISHOLM No. 15076 LICENSED PROFESSIONAL ENGINEER – 10/1/20

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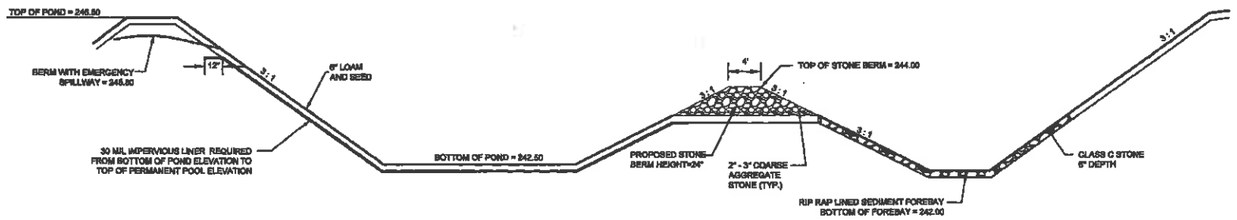
2	10/1/20	CITY ENGINEERING REVISIONS	PCM

DATE: JUNE 22, 2020 SCALE: AS NOTED
PROJECT NO: 17-1011-1 SHEET 16 OF 22



TYPICAL DETENTION POND SECTION

NOT TO SCALE

MAINTENANCE REQUIREMENTS:

SEDIMENT FOREBAYS:

- INSPECT AT LEAST ANNUALLY;
- CONDUCT PERIODIC MOWING OF EMBANKMENTS (GENERALLY TWO TIMES PER YEAR) TO CONTROL GROWTH OF WOODY VEGETATION ON EMBANKMENTS;
- REMOVE DEBRIS FROM OUTLET STRUCTURES AT LEAST ONCE ANNUALLY;
- REMOVE AND DISPOSE OF ACCUMULATED SEDIMENT BASED ON INSPECTION;
- INSTALL AND MAINTAIN A STAFF GAGE OR OTHER MEASURING DEVICE, TO INDICATE DEPTH OF SEDIMENT ACCUMULATION AND LEVEL AT WHICH CLEAN-OUT IS REQUIRED.

DETENTION POND:

- THE BOTTOMS, INTERIOR AND EXTERIOR SIDE SLOPES AND CREST OF EARTHEN DETENTION BASINS SHOULD BE MOWED, AND THE VEGETATION MAINTAINED IN HEALTHY CONDITION, AS APPROPRIATE TO THE FUNCTION OF THE FACILITY AND TYPE OF VEGETATION.
- VEGETATED EMBANKMENTS THAT SERVE AS "BERMS" OR "DAMS" THAT IMPOUND WATER SHOULD BE MOWED AT LEAST ONCE ANNUALLY TO PREVENT THE ESTABLISHMENT OF WOODY VEGETATION;
- INLET AND OUTLET PIPES, INLET AND OUTLET STRUCTURES, ENERGY DISSIPATION STRUCTURES OR PRACTICES AND OTHER STRUCTURAL APPURTENANCES SHOULD BE INSPECTED AT LEAST ANNUALLY BY A QUALIFIED PROFESSIONAL AND CORRECTIVE ACTION IMPLEMENTED (EG. MAINTENANCE, REPAIRS OR REPLACEMENT) AS INDICATED BY SUCH INSPECTION;
- TRASH AND DEBRIS SHOULD BE REMOVED FROM THE BASIN AND ANY INLET OR OUTLET STRUCTURES WHENEVER OBSERVED BY INSPECTION;
- ACCUMULATED SEDIMENT SHOULD BE REMOVED WHEN IT SIGNIFICANTLY AFFECTS BASIN CAPACITY.

SUBSURFACE:

- INSPECT SUB-SURFACE CHAMBER OR PIPE SYSTEM TWO (2) TIMES PER YEAR (PREFERABLY IN SPRING AND FALL) VIA THE INSPECTION PORTS, CLEANOUTS OR OTHER ACCESS STRUCTURE. CLEAN SYSTEM PER MANUFACTURER'S RECOMMENDATIONS. INSPECT OUTLET CONTROL STRUCTURES TO ENSURE THEY ARE IN GOOD WORKING ORDER AND ARE UNOBSTRUCTED FROM TRASH AND DEBRIS. REMOVE AND DISPOSE OF ANY SEDIMENTS OR DEBRIS.

ISOLATOR ROW:

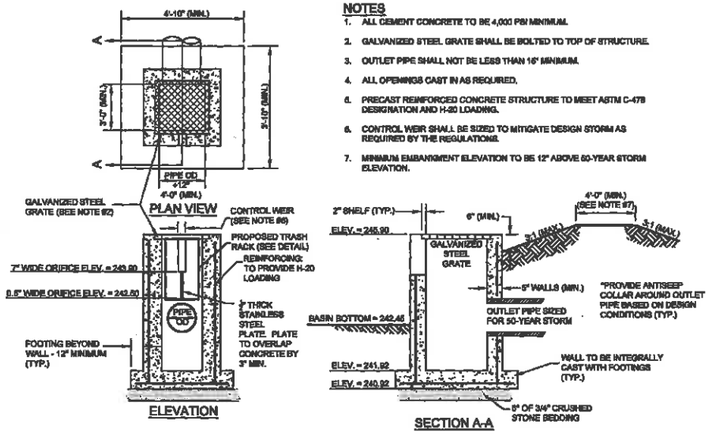
- INSPECT ALL UPSTREAM PRE-TREATMENT MEASURES FOR SEDIMENT AND FLOATABLE ACCUMULATION. REMOVE AND DISPOSE OF SEDIMENTS OR DEBRIS AS NEEDED. INSPECT ISOLATOR ROW ON A SEMI-ANNUAL BASIS BY USING INSPECTION PORT AND/OR ACCESS STRUCTURE. REMOVE SEDIMENT AS NEEDED WHEN AVERAGE DEPTHS REACH 1" PER THE MANUFACTURER'S RECOMMENDATION.

SWALE:

- INSPECT AT LEAST TWICE ANNUALLY
- CONDUCT PERIODIC MOWING OF EMBANKMENTS (GENERALLY TWO TIMES PER YEAR) TO CONTROL GROWTH OF WOODY VEGETATION ON EMBANKMENTS;
- REMOVE TRASH AND DEBRIS AT LEAST EACH INSPECTION;
- REMOVE AND DISPOSE OF ACCUMULATED SEDIMENT BASED ON INSPECTION;

CONSTRUCTION PRACTICE REQUIREMENTS:

1. STORMWATER PONDS, INFILTRATION BASINS, AND SWALES MUST BE INSTALLED BEFORE ROUGH GRADING TO SITE.
2. RUNOFF MUST BE DIRECTED TO TEMPORARY PRACTICES UNTIL STORMWATER BMPs ARE STABILIZED.
3. STORMWATER PONDS, INFILTRATION BASINS, AND SWALES MUST BE STABILIZED PRIOR TO DIRECTING RUNOFF TO THEM.
4. DO NOT TRAFFIC EXPOSED SOIL SURFACE WITH CONSTRUCTION EQUIPMENT. IF FEASIBLE, PERFORM EXCAVATION WITH EQUIPMENT POSITIONED OUTSIDE THE LIMITS OF THE INFILTRATION SYSTEM.



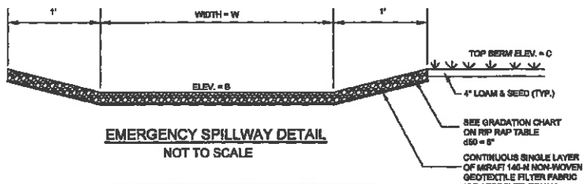
NOTES

1. ALL CEMENT CONCRETE TO BE 4,000 PSI MINIMUM.
2. GALVANIZED STEEL GRATE SHALL BE BOLTED TO TOP OF STRUCTURE.
3. OUTLET PIPE SHALL NOT BE LESS THAN 16" MINIMUM.
4. ALL OPENINGS CAST IN AS REQUIRED.
5. PRECAST REINFORCED CONCRETE STRUCTURE TO MEET ASTM C-478 DESIGNATION AND H-20 LOADING.
6. CONTROL WEIR SHALL BE SIZED TO MITIGATE DESIGN STORM AS REQUIRED BY THE REGULATIONS.
7. MINIMUM EMBANKMENT ELEVATION TO BE 12" ABOVE 50-YEAR STORM ELEVATION.

OUTLET STRUCTURE #2 AT DETENTION POND

NOT TO SCALE

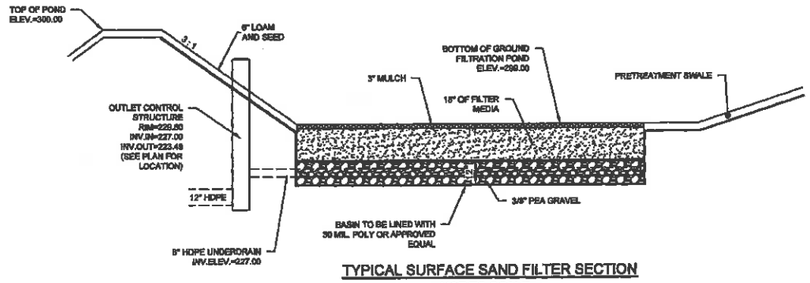
(AUGUST 2011)



EMERGENCY SPILLWAY DETAIL

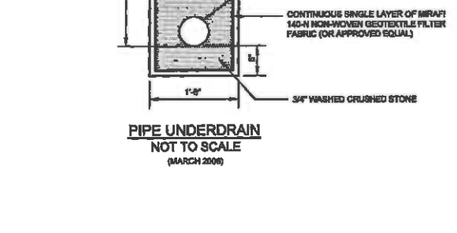
NOT TO SCALE

LOCATION	WIDTH "W"	ELEV. "B"	ELEV. "C"
DETENTION POND	20'	245.50	246.50
INFILTRATION POND	8'	238.50	237.00



TYPICAL SURFACE SAND FILTER SECTION

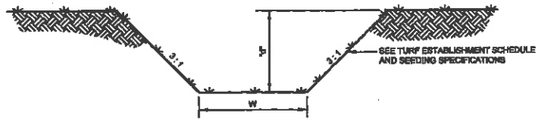
NOT TO SCALE



PIPE UNDERDRAIN

NOT TO SCALE

(MARCH 2008)



LOCATION	SWALE WIDTH "W"	SWALE LENGTH	SWALE SLOPE	DEPTH "D"
SWALE #1	6'	120'	0.005 FT/FT	2'

MAINTENANCE

1. TIMELY MAINTENANCE IS IMPORTANT TO KEEP THE VEGETATION IN THE SWALE IN GOOD CONDITION. MOWING SHOULD BE DONE FREQUENTLY ENOUGH TO KEEP THE VEGETATION IN VIGOROUS CONDITION AND TO CONTROL ENCROACHMENT OF WEEDS AND WOODY VEGETATION, HOWEVER IT SHOULD NOT BE MOWED TOO CLOSELY SO AS TO REDUCE THE FILTERING EFFECT. FERTILIZE ON AN "AS NEEDED" BASIS TO KEEP THE GRASS HEALTHY. OVER FERTILIZATION CAN RESULT IN THE SWALE BECOMING A SOURCE OF POLLUTION.
2. THE SWALE SHOULD BE INSPECTED PERIODICALLY AND AFTER EVERY MAJOR STORM TO DETERMINE THE CONDITION OF THE SWALE. RILLS AND DAMAGED AREAS SHOULD BE PROMPTLY REPAIRED AND RE-VEGETATED AS NECESSARY TO PREVENT FURTHER DETERIORATION.

TREATMENT SWALE DETAIL

NOT TO SCALE

(MARCH 2008)

CONSTRUCTION DETAILS

AUTO BODY SHOP

MAP 128 LOTS 31, 32 & 84
MAP 132 LOTS 38 & 84
WEST GLENWOOD STREET
NASHUA, NEW HAMPSHIRE
HILLSBOROUGH COUNTY

OWNER/APPLICANT:
ROSCOMMON INVESTMENTS, LLC
147 DANIEL WEBSTER HIGHWAY
NASHUA, NH 03060
(603) 886-5050

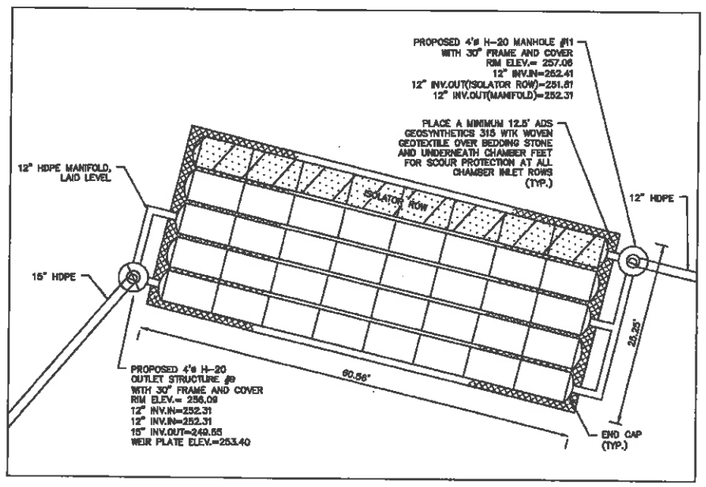
KNA KEACH-NORDSTROM ASSOCIATES, INC.
Civil Engineering Land Surveying Landscape Architecture
10 Commerce Park North, Suite 3B, Bedford, NH 03110 Phone (603) 627-2881

STATE OF NEW HAMPSHIRE PAUL CHISHOLM No. 15076 LICENSED PROFESSIONAL ENGINEER

REVISIONS

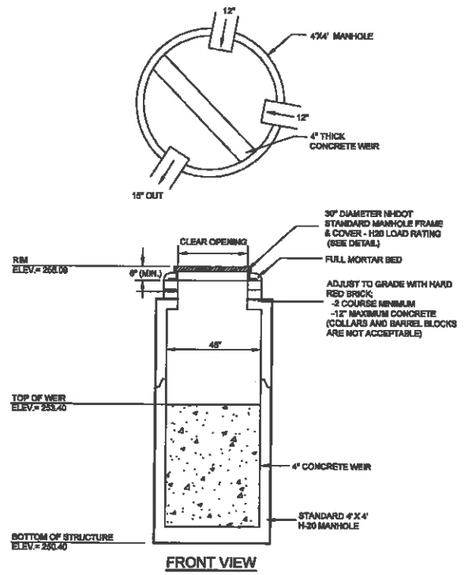
No.	DATE	DESCRIPTION	BY
1	7/29/20	AUTO STORAGE & MEZZANINE REVS	PCM
2	10/1/20	CITY ENGINEERING REVISIONS	PCM

DATE: JUNE 22, 2020 | SCALE: AS NOTED
PROJECT NO: 17-1011-1 | SHEET 17 OF 22



STORMTECH SC-740 CHAMBER SYSTEM

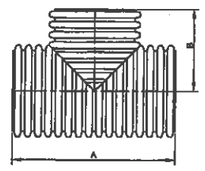
SCALE 1" = 10'



FRONT VIEW

OUTLET STRUCTURE #9

NOT TO SCALE



SC-740 SINGLE MANIFOLD

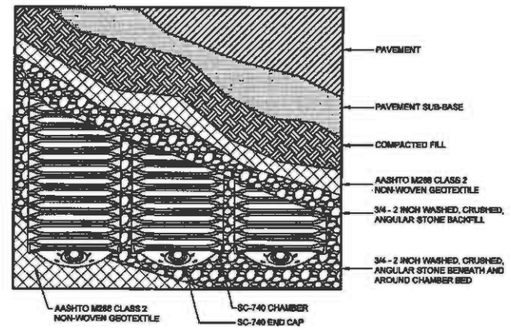
NOT TO SCALE

(OCTOBER 2012)

PIPE SIZE	A	B
8" (150 mm)	56.96" (1447 mm)	28.49" (724 mm)
8" (200 mm)	56.64" (1439 mm)	28.32" (719 mm)
10" (250 mm)	56.70" (1440 mm)	28.35" (720 mm)
12" (300 mm)	57.60" (1463 mm)	28.80" (732 mm)
15" (375 mm)	56.96" (1447 mm)	28.48" (724 mm)
18" (450 mm)	56.25" (1430 mm)	28.14" (715 mm)
24" (600 mm)	56.70" (1440 mm)	28.35" (720 mm)

STORMTECH GENERAL NOTES:

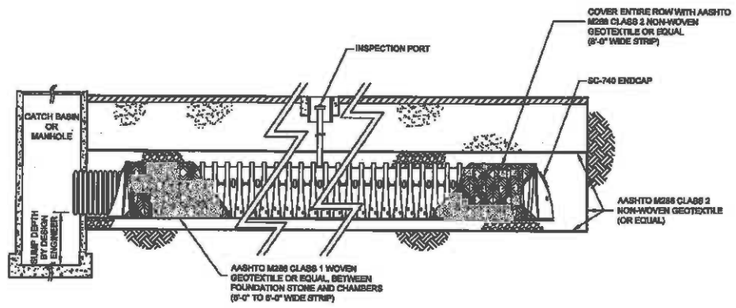
1. INSTALLING CONTRACTORS ARE REQUIRED TO USE AND UNDERSTAND STORMTECH'S LATEST INSTALLATION INSTRUCTIONS PRIOR TO BEGINNING SYSTEM INSTALLATION.
2. OUR TECHNICAL SERVICES DEPARTMENT OFFERS INSTALLATION CONSULTATIONS TO INSTALLING CONTRACTORS. CONTACT OUR TECHNICAL SERVICES REPRESENTATIVE AT LEAST 30 DAYS PRIOR TO SYSTEM INSTALLATION TO ARRANGE A PRE-INSTALLATION CONSULTATION. OUR REPRESENTATIVES CAN THEN ANSWER QUESTIONS OR ADDRESS COMMENTS ON THE STORMTECH CHAMBER SYSTEM AND INFORM THE INSTALLING CONTRACTOR OF THE MINIMUM INSTALLATION REQUIREMENTS BEFORE BEGINNING THE SYSTEM'S CONSTRUCTION. CALL 1-888-892-2694 TO SPEAK TO A TECHNICAL SERVICE REPRESENTATIVE OR VISIT WWW.ADS-PIPE.COM TO RECEIVE A COPY OF OUR INSTALLATION INSTRUCTIONS.
3. STORMTECH'S REQUIREMENTS FOR SYSTEMS WITH PAVEMENT DESIGN (ASPHALT, CONCRETE PAVERS, ETC.): MINIMUM COVER IS 18 INCHES NOT INCLUDING PAVEMENT; MAXIMUM COVER IS 96 INCHES INCLUDING PAVEMENT. FOR INSTALLATIONS THAT DO NOT INCLUDE PAVEMENT, WHERE RUTTING FROM VEHICLES MAY OCCUR, MINIMUM REQUIRED COVER IS 24 INCHES, MAXIMUM COVER IS 96 INCHES.
4. THE CONTRACTOR MUST REPORT ANY DISCREPANCIES WITH CHAMBER FOUNDATION MATERIALS BEARING CAPACITIES TO THE DESIGN ENGINEER.
5. AASHTO M288 CLASS 2 NON-WOVEN GEOTEXTILE (FILTER FABRIC) MUST BE USED AS INDICATED IN THE PROJECT PLANS.
6. STONE PLACEMENT BETWEEN CHAMBERS ROWS AND AROUND PERIMETER MUST FOLLOW INSTRUCTIONS AS INDICATED IN THE MOST CURRENT VERSION OF STORMTECH'S INSTALLATION INSTRUCTIONS.
7. BACKFILLING OVER THE CHAMBERS MUST FOLLOW REQUIREMENTS AS INDICATED IN THE MOST CURRENT VERSION OF STORMTECH'S INSTALLATION INSTRUCTIONS.
8. THE CONTRACTOR MUST REFER TO STORMTECH'S INSTALLATION INSTRUCTIONS FOR A TABLE OF ACCEPTABLE VEHICLE LOADS AT VARIOUS DEPTHS OF COVER. THIS INFORMATION IS ALSO AVAILABLE AT STORMTECH'S WEBSITE: WWW.ADS-PIPE.COM. THE CONTRACTOR IS RESPONSIBLE FOR PREVENTING VEHICLES THAT EXCEED STORMTECH'S REQUIREMENTS FROM TRAVELING ACROSS OR PARKING OVER THE STORMWATER SYSTEM. TEMPORARY FENCING, WARNING TAPE, AND APPROPRIATELY LOCATED SIGNS ARE COMMONLY USED TO PREVENT UNAUTHORIZED VEHICLES FROM ENTERING SENSITIVE CONSTRUCTION AREAS.
9. THE CONTRACTOR MUST APPLY EROSION AND SEDIMENT CONTROL MEASURES TO PROTECT THE STORMWATER SYSTEM DURING ALL PHASES OF SITE CONSTRUCTION PER LOCAL CODES AND DESIGN ENGINEER'S SPECIFICATIONS.
10. STORMTECH PRODUCT WARRANTY IS LIMITED. SEE CURRENT PRODUCT WARRANTY FOR DETAILS. TO ACQUIRE A COPY CALL STORMTECH AT 1-888-892-2694 OR VISIT WWW.ADS-PIPE.COM.



SC-740 CHAMBER SYSTEM PLAN VIEW DETAIL

NOT TO SCALE

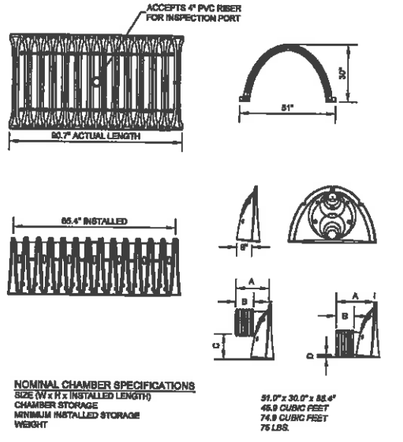
(OCTOBER 2012)



SC-740 ISOLATOR ROW PROFILE

NOT TO SCALE

(OCTOBER 2012)



NOMINAL CHAMBER SPECIFICATIONS

SIZE (W x H x INSTALLED LENGTH) — 51.0" x 30.0" x 85.4"

CHAMBER STORAGE — 45.9 CUBIC FEET

MINIMUM INSTALLED STORAGE — 74.9 CUBIC FEET

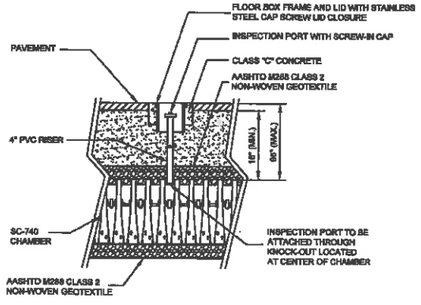
WEIGHT — 75 LBS.

PIPE SIZE	A	B	C	D
6 in (150 mm)	10.90 in (277 mm)	3.85 in (98 mm)	18.50 in (470 mm)	N/A
6 in (150 mm)	10.90 in (277 mm)	3.55 in (98 mm)	N/A	0.50 in (13 mm)
12 in (300 mm)	14.70 in (373 mm)	7.70 in (196 mm)	12.50 in (318 mm)	N/A
12 in (300 mm)	14.70 in (373 mm)	7.70 in (196 mm)	N/A	1.20 in (30 mm)
18 in (375 mm)	18.40 in (467 mm)	10.38 in (263 mm)	9.00 in (229 mm)	N/A
15 in (375 mm)	18.40 in (467 mm)	10.35 in (263 mm)	N/A	1.20 in (33 mm)
18 in (450 mm)	19.70 in (500 mm)	10.72 in (272 mm)	5.00 in (127 mm)	N/A
18 in (450 mm)	19.70 in (500 mm)	10.72 in (272 mm)	N/A	1.50 in (41 mm)
24 in (600 mm)	16.50 in (470 mm)	9.46 in (240 mm)	N/A	0.10 in (3 mm)

SC-740 TECHNICAL SPECIFICATIONS

NOT TO SCALE

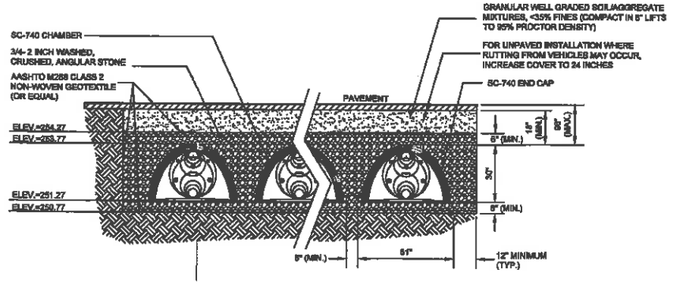
(OCTOBER 2012)



SC-740 INSPECTION PORT DETAIL

NOT TO SCALE

(OCTOBER 2012)



SC-740 CROSS SECTION

NOT TO SCALE

(OCTOBER 2012)

CONSTRUCTION DETAILS

AUTO BODY SHOP

MAP 128 LOTS 31, 32 & 84
MAP 132 LOTS 38 & 84
WEST GLENWOOD STREET
NASHUA, NEW HAMPSHIRE
HILLSBOROUGH COUNTY

OWNER/APPLICANT:
ROSCOMMON INVESTMENTS, LLC
147 DANIEL WEBSTER HIGHWAY
NASHUA, NH 03060
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KEACH-NORDSTROM ASSOCIATES, INC.
Civil Engineering Land Surveying Landscape Architecture
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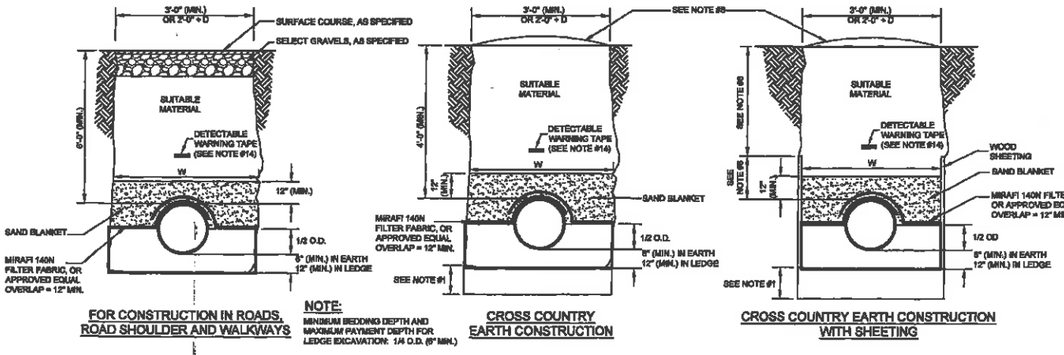
PAUL CHISHOLM No. 15078 LICENSED PROFESSIONAL ENGINEER STATE OF NEW HAMPSHIRE

REVISIONS			
No.	DATE	DESCRIPTION	BY
1	7/29/20	AUTO STORAGE & MEZZANINE REVS	PCM
2	10/1/20	CITY ENGINEERING REVISIONS	PCM

DATE: JUNE 22, 2020 — SCALE: AS NOTED

PROJECT NO: 17-1011-1 — SHEET 18 OF 22

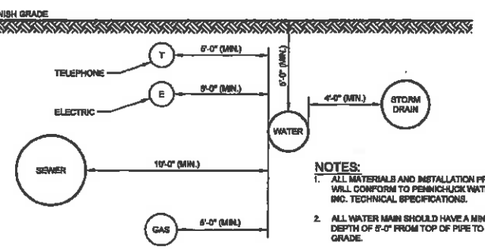


NOTE: MINIMUM BEDDING DEPTH AND MAXIMUM PAYMENT DEPTH FOR LEDGE EXCAVATION: 1/4 O.D. (6" MIN.)

SANITARY SEWER TRENCH DETAIL
NOT TO SCALE
(NOVEMBER 2018)

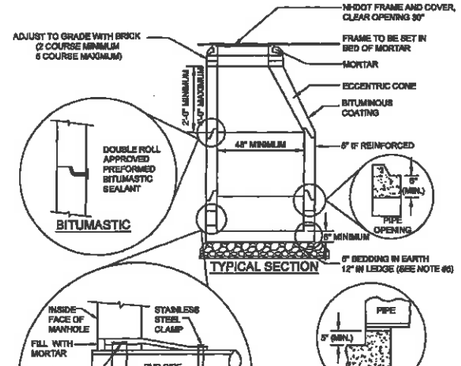
NOTES:

1. ORDERED EXCAVATION OF UNSUITABLE MATERIAL BELOW GRADE. REFILL WITH BEDDING MATERIAL, ALSO SEE NOTE #7.
   BEDDING: CRUSHED STONE FREE FROM CLAY, LOAM, ORGANIC MATTER AND MEETING ASTM C33/C33M STONE SIZE NO. 67.
   100% PASSING 1 INCH SCREEN
   90 - 100% PASSING 3/4 INCH SCREEN
   20 - 55% PASSING 3/8 INCH SCREEN
   0 - 10% PASSING # 4 SIEVE
   0 - 5% PASSING # 8 SIEVE
   WHERE ORDERED BY THE ENGINEER TO STABILIZE THE TRENCH BASE, GRADED CRUSHED STONE 1/2 INCH TO 1-1/2 INCHES SHALL BE USED.
2. SAND BLANKET: GRADED CLEAN SAND FREE FROM ORGANIC MATTER, SO THAT 100% PASSES A 1/2 INCH SIEVE AND NOT MORE THAN 10% WILL PASS A # 200 SIEVE. BLANKET MAY BE OMITTED FOR CAST IRON, DUCTILE IRON AND REINFORCED CONCRETE PIPE PROVIDED, HOWEVER, THAT NO STONE LARGER THAN 2 INCHES IS IN CONTACT WITH THE PIPE.
3. MIRAFI 140 N FILTER FABRIC, OR APPROVED EQUAL, SHALL BE INSTALLED ABOVE PIPE.
4. SUITABLE MATERIAL: IN ROADS, ROAD SHOULDERS, WALKWAYS AND TRAVELED WAYS SUITABLE MATERIAL FOR TRENCH BACKFILL SHALL BE THE NATURAL MATERIAL EXCAVATED DURING THE COURSE OF CONSTRUCTION, BUT SHALL EXCLUDE DEBRIS, PIECES OF PAVEMENT, ORGANIC MATTER, TOP SOIL, ALL WET OR SOFT MUCK, PEAT OR CLAY, ALL EXCAVATED LEDGE MATERIAL AND ALL ROCKS OVER 6 INCHES IN LARGEST DIMENSION, OR ANY MATERIAL WHICH, AS DETERMINED BY THE ENGINEER, WILL NOT PROVIDE SUFFICIENT SUPPORT OR MAINTAIN THE COMPLETED CONSTRUCTION IN A STABLE CONDITION.
   IN CROSS COUNTRY CONSTRUCTION, SUITABLE MATERIAL SHALL BE AS DESCRIBED ABOVE, EXCEPT THAT THE ENGINEER MAY PERMIT THE USE OF TOP SOIL, LOAM, MUCK OR PEAT IF HE/SHE IS SATISFIED THAT THE COMPLETED CONSTRUCTION WILL BE ENTIRELY STABLE AND PROVIDED THAT EASY ACCESS TO THE SEWER WILL BE PRESERVED FOR MAINTENANCE AND POSSIBLY RECONSTRUCTION, WHEN NECESSARY. .
5. BASE COURSE, IF ORDERED BY THE ENGINEER, SHALL MEET THE REQUIREMENTS OF DIVISION 300 OF THE LATEST EDITION OF THE "STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION OF THE STATE OF NEW HAMPSHIRE, DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS."
6. WOOD SHEETING, IF REQUIRED, WHERE PLACED ALONGSIDE THE PIPE AND EXTENDING BELOW MID-DIAMETER, SHALL BE CUT OFF AND LEFT IN PLACE TO AN ELEVATION NOT LESS THAN 1 FOOT ABOVE THE TOP OF THE PIPE. WHERE SHEETING IS ORDERED BY THE ENGINEER TO BE LEFT IN PLACE, IT SHALL BE CUT OFF AT LEAST 3 FEET BELOW FINISHED GRADE, BUT NOT LESS THAN 1 FOOT ABOVE THE TOP OF THE PIPE.
7. W = MAXIMUM ALLOWABLE TRENCH WIDTH TO A PLANE 12 INCHES ABOVE THE PIPE. FOR PIPES 15 INCHES NOMINAL DIAMETER OR LESS, W SHALL BE NO MORE THAN 36 INCHES. FOR PIPES GREATER THAN 15 INCHES NOMINAL DIAMETER, W SHALL BE 24 INCHES PLUS PIPE O.D. W SHALL ALSO BE THE PAYMENT WIDTH FOR LEDGE EXCAVATION AND FOR ORDERED EXCAVATION BELOW GRADE.
8. FOR CROSS COUNTRY CONSTRUCTION, BACKFILL OR FILL SHALL BE MOUNDED TO A HEIGHT OF 6 INCHES ABOVE THE ORIGINAL GROUND SURFACE.
9. NEW HAMPSHIRE DEPARTMENT OF ENVIRONMENTAL SERVICES DESIGN STANDARDS REQUIRE 10 FEET OF SEPARATION BETWEEN WATER AND SEWER. HOWEVER, SHOULD CONSTRUCTION REVEAL OR EXPOSE A WATERLINE (MAIN OR SERVICE) RUNNING APPROXIMATELY PARALLEL AND LESS THAN 10 FEET HORIZONTALLY FROM THE PROPOSED SEWER INSTALLATION AND WHERE IT IS NOT PRACTICAL TO RELOCATE THE SEWER, A DEVIATION MAY BE GRANTED PROVIDED THAT THE SEWER IS CONSTRUCTED IN ACCORDANCE WITH THE FORCE MAIN CONSTRUCTION REQUIREMENT SPECIFIED BELOW:
   A. FORCE MAINS SHALL BE CONSTRUCTED FROM DUCTILE IRON, HIGH DENSITY POLYETHYLENE, OR PVC PER ENV-WQ 704.08(e).
      PVC SHALL CONFORM TO ASTM D2241-05 OR ASTM D1785-06
      HDPE SHALL CONFORM TO ASTM D3035-03a
   B. SHALL BE CORROSION PROTECTED IN CORROSIVE ENVIRONMENTS
10. WHERE WATER LINES AND SEWER LINES CROSS, THEY SHOULD CROSS AS PERPENDICULAR AS POSSIBLE AND THE WATER MAIN SHALL CROSS AT LEAST 18" INCHES ABOVE THE SEWER. FURTHER, THE SEWER JOINTS SHALL BE LOCATED AT LEAST 6 FEET HORIZONTALLY FROM THE WATER MAIN.
11. ALL SEWERS AT 8 PERCENT SLOPE, OR GREATER, SHALL HAVE IMPERVIOUS TRENCH DAMS CONSTRUCTED EVERY 300 FEET.
12. UNLESS OTHERWISE NOTED, ALL GRANULAR MATERIAL SHALL BE PLACED IN 12" LIFTS AND COMPACTED TO 95% OF THE MODIFIED PROCTOR TEST.
13. WHERE WATER MAINS CROSS UNDER SEWER MAINS, BOTH THE SEWER AND WATER MAINS SHALL BE PRESSURE RATED PIPE PER ENV-WQ 704.09 AND TESTED PER AWWA C600-05 AT 1.5 TIMES DESIGN PRESSURE OR 100 PSI, WHICHEVER IS GREATER, WITH NO JOINTS WITHIN 9 FEET OF THE CROSSING POINT AND 18" MINIMUM VERTICAL SEPARATION.
14. ALL SEWERS SHALL BE MARKED USING METAL IMPREGNATED MARKING TAPE OR TRACER WIRE THAT CAN BE LOCATED USING METAL DETECTION EQUIPMENT.
15. GRAVITY PIPE SEWER TESTING:
   A. ALL NEW GRAVITY SEWERS SHALL BE TESTED FOR WATER TIGHTNESS BY THE USE OF LOW-PRESSURE AIR TESTS.
   B. LOW-PRESSURE AIR TESTING SHALL BE IN CONFORMANCE WITH:
16. ASTM F1417-92(2005) "STANDARD TEST METHOD FOR INSTALLATION ACCEPTANCE OF PLASTIC GRAVITY SEWER LINES USING LOW-PRESSURE AIR," OR
17. UNI-BELL PVC PIPE ASSOCIATION UNI-B-6, "LOW-PRESSURE AIR TESTING OF INSTALLED SEWER PIPE" (1998).
   C. ALL NEW GRAVITY SEWERS SHALL BE CLEANED AND VISUALLY INSPECTED USING A LAMP TEST AND BY INTRODUCING WATER TO DETERMINE THAT THERE IS NO STANDING WATER IN THE SEWER AND SHALL BE TRUE TO LINE AND GRADE FOLLOWING INSTALLATION AND PRIOR TO USE.
   D. ALL PLASTIC SEWER PIPE SHALL BE DEFLECTION TESTED NOT LESS THAN 30 DAYS NOR MORE THAN 90 DAYS FOLLOWING INSTALLATION.
   E. THE MAXIMUM ALLOWABLE DEFLECTION OF FLEXIBLE SEWER PIPE SHALL BE 5 PERCENT OF AVERAGE INSIDE DIAMETER. A RIGID BALL OR MANDREL WITH A DIAMETER OF AT LEAST 95 PERCENT OF THE AVERAGE INSIDE PIPE DIAMETER SHALL BE USED FOR TESTING PIPE DEFLECTION. THE DEFLECTION TEST SHALL BE CONDUCTED WITHOUT MECHANICAL PULLING DEVICES.



NOTES:

1. ALL MATERIALS AND INSTALLATION PROCEDURES WILL CONFORM TO PENNICHUCK WATER WORKS, INC. TECHNICAL SPECIFICATIONS.
2. ALL WATER MAIN SHOULD HAVE A MINIMUM DEPTH OF 5'-0" FROM TOP OF PIPE TO FINISH GRADE.
3. SEE DETAIL FOR TRENCH SPECIFICATIONS.
4. SEE DETAIL FOR OUTSIDE SERVICE ENTRANCE SPECIFICATIONS.

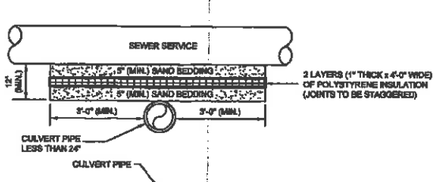


SANITARY SEWER MANHOLE

NOTES: (NHDES ENV WQ700 - 2015)

1. ALL COMPONENT PARTS OF MANHOLE STRUCTURES SHALL HAVE THE STRENGTH, LEAK RESISTANCE AND SPACE NECESSARY FOR THE INTENDED SERVICE.
2. MANHOLE STRUCTURES SHALL HAVE A LIFE EXPECTANCY IN EXCESS OF 25 YEARS.
3. MANHOLE STRUCTURES SHALL BE DESIGNED TO WITHSTAND H-20 LOADING AND SHALL NOT LEAK IN EXCESS OF ONE GPD PER VERTICAL FOOT OF MANHOLE FOR THE LIFE OF THE STRUCTURE.
4. BARRELS, CONCRETE GRADE RINGS AND CONE SECTIONS SHALL BE CONSTRUCTED OF PRECAST REINFORCED CONCRETE AND SHALL CONFORM TO ASTM C478.
5. BEDDING: CRUSHED STONE FREE FROM CLAY, LOAM, ORGANIC MATTER AND MEETING ASTM C33
   100% PASSING 1 INCH SCREEN
   90% PASSING 3/4 INCH SCREEN
   20-55% PASSING 3/8 INCH SCREEN
   0-10% PASSING #4 SIEVE
   0-5% PASSING #8 SIEVE
   WHERE ORDERED BY THE ENGINEER TO STABILIZE THE BASE, CRUSHED STONE 1/2 INCH TO 1-1/2 INCH SHALL BE USED.
6. BASE SECTIONS SHALL BE OF MONOLITHIC CONSTRUCTION TO A POINT AT LEAST 6 INCHES ABOVE THE CROWN OF THE INCOMING PIPE.
7. HORIZONTAL JOINTS BETWEEN SECTIONS OF PRECAST CONCRETE BARRELS SHALL BE OF AN OVERLAPPING TYPE, SEALED FOR WATER-TIGHTNESS USING A DOUBLE ROW OF AN ELASTOMERIC OR MASTIC-LIKE SEALANT.
8. PIPE TO MANHOLE JOINTS SHALL BE AS FOLLOWS:
   A. ELASTOMERIC, RUBBER SLEEVE WITH WATERTIGHT JOINTS AT THE MANHOLE OPENING AND PIPE SURFACES;
   B. CAST INTO THE WALL OR SECURED WITH STAINLESS STEEL CLAMPS;
   C. ELASTOMERIC SEALING RING CAST IN THE MANHOLE OPENING WITH SEAL FORMED ON THE SURFACE OF THE PIPE BY COMPRESSION OF THE RING; AND
   D. NON-SHRINK GROUTED JOINTS WHERE WATERTIGHT BONDING TO THE MANHOLE AND PIPE CAN BE OBTAINED.
9. MANHOLE CONE SECTIONS SHALL BE ECCENTRIC IN SHAPE.
10. ALL PRECAST SECTIONS AND BASES SHALL HAVE THE DATE OF MANUFACTURE AND THE NAME OR TRADEMARK OF THE MANUFACTURER IMPRESSED OR INDELIBLY MARKED ON THE INSIDE WALL.
11. ALL PRECAST SECTIONS AND BASES SHALL BE COATED ON THE EXTERIOR WITH A BITUMINOUS DAMP-PROOFING COATING.
12. MANHOLES SHALL HAVE A BRICK PAVED SHELF AND INVERT CONSTRUCTED TO CONFORM TO THE SIZE OF PIPE AND FLOW. AT CHANGES IN DIRECTION, THE INVERTS SHALL BE LAID OUT IN CURVES OF THE LONGEST RADIUS POSSIBLE TANGENT TO THE CENTER LINE OF THE SEWER PIPES. SHELVES SHALL BE CONSTRUCTED TO THE ELEVATION OF THE HIGHEST PIPE CROWN AND SLOPED TO DRAIN TOWARD THE FLOWING THROUGH CHANNEL. UNDERLAYMENT OF INVERT AND SHELF SHALL CONSIST OF BRICK MASONRY. INVERTS AND SHELVES SHALL BE PLACED AFTER TESTING.
13. MATERIALS OF CONSTRUCTION FOR MANHOLES SHALL BE AS FOLLOWS:
   A. CONCRETE FOR PRECAST BASES OR GRADE RINGS SHALL CONFORM TO THE REQUIREMENTS FOR CLASS AA CONCRETE IN THE NEW HAMPSHIRE DEPARTMENT OF TRANSPORTATION'S "STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION";
   B. REINFORCING FOR PRECAST CONCRETE SHALL BE STEEL OR STRUCTURAL FIBERS THAT CONFORM TO THE REQUIREMENTS OF THE NEW HAMPSHIRE DEPARTMENT OF TRANSPORTATION'S "STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION";
   C. PRECAST CONCRETE BARREL SECTIONS, CONES AND BASES SHALL BE CERTIFIED BY THEIR MANUFACTURER(S) AS CONFORM TO ASTM C478;
   D. THE MANHOLE FRAME AND COVER SHALL PROVIDE A 30-INCH DIAMETER CLEAR OPENING;
   E. THE MANHOLE COVER SHALL HAVE THE WORD "SEWER" IN 3-INCH LETTERS CAST INTO THE TOP SURFACE;
   F. THE CASTINGS SHALL BE OF EVEN-GRAINED CAST IRON, SMOOTH AND FREE FROM SCALE, LUMPS, BLISTERS, SAND HOLES AND DEFECTS;
   G. CONTACT SURFACES OF COVERS AND FRAMES SHALL BE MACHINED AT THE FOUNDRY TO PREVENT ROCKING OF COVERS IN ANY ORIENTATION;
   H. CASTINGS SHALL BE EQUAL TO CLASS 30, BE CERTIFIED BY THEIR MANUFACTURER(S) AS CONFORMING TO ASTM A48/A48M;
   I. BRICK MASONRY FOR SHELF, INVERT AND GRADE ADJUSTMENT SHALL BE CERTIFIED BY THEIR MANUFACTURER(S) AS CONFORMING TO ASTM C32, CLAY OR SHALE, FOR GRADE SS HARD BRICK;
   J. MORTAR SHALL BE COMPOSED OF TYPE II PORTLAND CEMENT AND SAND WITH OR WITHOUT HYDRATED LIME ADDITIONS;
   K. PROPORTIONS IN MORTAR OF PARTS BY VOLUMES SHALL BE:
      1. 4.5 PARTS SAND AND 1.8 PARTS CEMENT; OR
      2. 4.5 PARTS SAND, ONE PART CEMENT AND 0.5 PARTS HYDRATED LIME;
   L. CEMENT SHALL BE TYPE II PORTLAND CEMENT CONFORMING TO ASTM C150/C150M;
   M. HYDRATED LIME SHALL BE TYPE S CONFORMING TO THE ASTM C207 "STANDARD SPECIFICATIONS FOR HYDRATED LIME FOR MASONRY PURPOSES";
   N. SAND SHALL CONSIST OF INERT NATURAL SAND CONFORMING TO THE ASTM C33 "STANDARD SPECIFICATIONS FOR CONCRETE, FINE AGGREGATES";
   O. CONCRETE FOR DROP SUPPORTS SHALL CONFORM TO THE REQUIREMENT FOR CLASS AAA CONCRETE OF THE NEW HAMPSHIRE DEPARTMENT OF TRANSPORTATION'S "STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION";
   P. SUBJECT TO (Q) BELOW, A FLEXIBLE PIPE JOINT SHALL BE PROVIDED WITHIN THE FOLLOWING DISTANCES FROM ANY MANHOLE CONNECTION:
      1. WITHIN 48-INCHES FOR REINFORCED CONCRETE (RC) PIPE; AND
      2. WITHIN 60-INCHES FOR PVC PIPE LARGER THAN 15-INCH DIAMETER;
   Q. NO FLEXIBLE JOINT SHALL BE REQUIRED FOR D.I. PIPE OR FOR PVC PIPE UP THROUGH 15-INCH DIAMETER; AND
   R. WHEN MANHOLE DEPTH IS LESS THAN 8 FEET, A REINFORCED CONCRETE SLAB COVER MAY BE USED IN LIEU OF A CONE SECTION, PROVIDED THE SLAB HAS AN ECCENTRIC ENTRANCE OPENING AND IS CAPABLE OF SUPPORTING H-20 LOADS.
14. MANHOLE TESTING:
   15. MANHOLES SHALL BE TESTED FOR LEAKAGE USING A VACUUM TEST.
   16. THE MANHOLE VACUUM TEST SHALL CONFORM TO THE FOLLOWING:
   17. 1. THE INITIAL VACUUM GAUGE TEST PRESSURE SHALL BE 10 INCHES Hg; AND
   18. 2. THE MINIMUM ACCEPTABLE TEST HOLD TIME FOR A 1-INCH Hg PRESSURE DROP TO 9 INCH Hg SHALL BE:
   19. a. NOT LESS THAN 2 MINUTES FOR MANHOLES LESS THAN 10 FEET DEEP IN DEPTH;
   20. b. NOT LESS THAN 2.5 MINUTES FOR MANHOLES 10 TO 15 FEET DEEP; AND
   21. c. NOT LESS THAN 3 MINUTES FOR MANHOLES MORE THAN 15 FEET DEEP.
   22. THE MANHOLE SHALL BE REPAIRED AND RETESTED IF THE TEST HOLD TIMES FAIL TO ACHIEVE THE ACCEPTANCE LIMITS SPECIFIED IN (20) ABOVE.
   23. FOLLOWING COMPLETION OF THE LEAKAGE TEST, THE FRAME AND COVER SHALL BE PLACED ON THE TOP OF THE MANHOLE OR SOME OTHER MEANS USED TO PREVENT ACCIDENTAL ENTRY BY UNAUTHORIZED PERSONS, CHILDREN OR ANIMALS UNTIL THE CONTRACTOR IS READY TO MAKE FINAL ADJUSTMENTS TO GRADE.

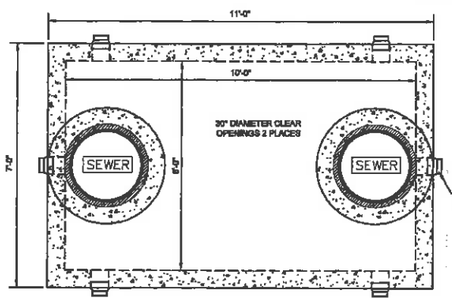
UTILITY SEPARATION (MAIN) DETAIL
(A-01)
NOT TO SCALE
(MARCH 2003)



NOTES:

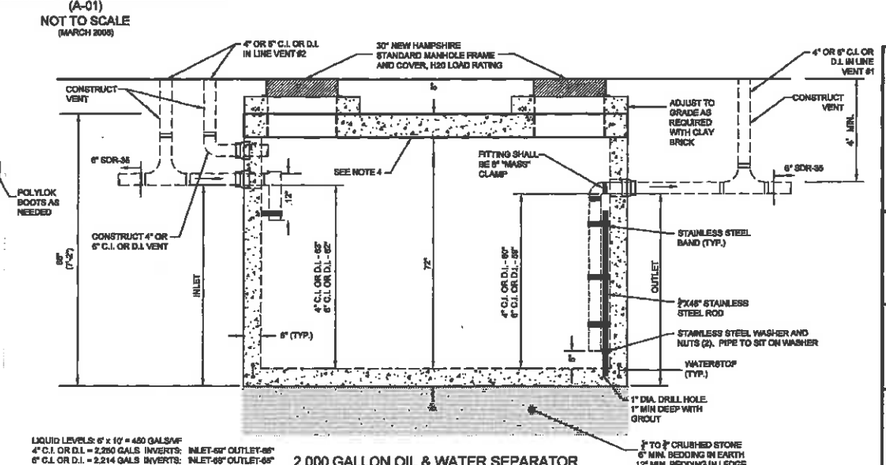
1. INSULATION TO BE USED WHERE PIPE SEPARATION IS 24" OR LESS.

SEWER PIPE CROSSING INSULATION DETAIL
NOT TO SCALE
(JUNE 2012)



OIL & WATER SEPARATOR NOTES:

1. STEEL REINFORCEMENT CONFORMS TO LATEST ASTM. SPECIFICATIONS: ASTM-A615 GRADE 60 REBAR.
2. CONCRETE: F'C = 5,000 PSI @ 28 DAYS MINIMUM.
3. FLEXIBLE SLEEVES PROVIDED ON ALL PIPE CONNECTIONS.
4. BUTYL RUBBER JOINT SEALANT PROVIDED.
5. INTERNAL PVC BAFFLES AVAILABLE UPON REQUEST.
   INLET: SHALL PENETRATE AT LEAST 6" BELOW THE LIQUID LEVEL, BUT NOT DEEPER THAN THE OUTLET BAFFLE.
   OUTLET: SHALL EXTEND BELOW THE SURFACE OF THE LIQUID TO 6" FROM THE FLOOR. (SMV_WQ 1013.02)
6. DESIGN LOADING: AASHTO-HS20-44, ASTM C-890-05.
7. DESIGN SPECIFIED AS: ASTM C-1227-08, ASTM C-913-08.
8. STEPS ARE NOT ALLOWED.
9. TWO INLINE VENTS MAY BE MERGED INTO SINGLE RISER



LIQUID LEVELS: 6' x 10' = 480 GALS/vF
4" C.I. OR D.I. = 2.250 GALS INVERTS: INLET-65° OUTLET-85°
6" C.I. OR D.I. = 2.214 GALS INVERTS: INLET-65° OUTLET-85°

2,000 GALLON OIL & WATER SEPARATOR
NOT TO SCALE

CONSTRUCTION DETAILS
AUTO BODY SHOP
MAP 128 LOTS 31, 32 & 84
MAP 132 LOTS 38 & 84
WEST GLENWOOD STREET
NASHUA, NEW HAMPSHIRE
HILLSBOROUGH COUNTY

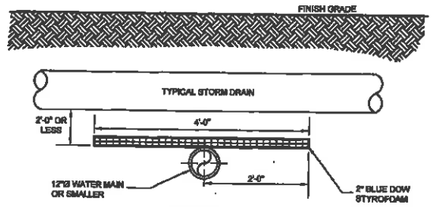
OWNER/APPLICANT:
ROSCOMMON INVESTMENTS, LLC
147 DANIEL WEBSTER HIGHWAY
NASHUA, NH 03060
(603) 888--5050

KEACH--NORDSTROM ASSOCIATES, INC.
Civil Engineering Land Surveying Landscape Architecture
10 Commerce Park North, Suite 3B, Bedford, NH 03110 Phone (603) 627--2881

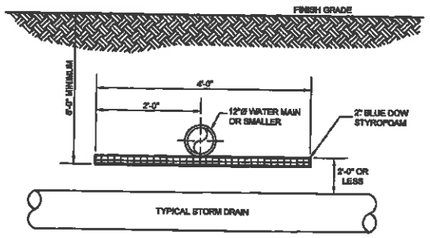
STATE OF NEW HAMPSHIRE - PAUL CHISHOLM No. 15078 - LICENSED PROFESSIONAL ENGINEER - 10/1/20

REVISIONS			
No.	DATE	DESCRIPTION	BY
1	7/29/20	AUTO STORAGE & MEZZANINE REVS	PCM
2	10/1/20	CITY ENGINEERING REVISIONS	PCM

DATE: JUNE 22, 2020 SCALE: AS NOTED
PROJECT NO: 17-1011-1 SHEET 19 OF 22



CONDITION I



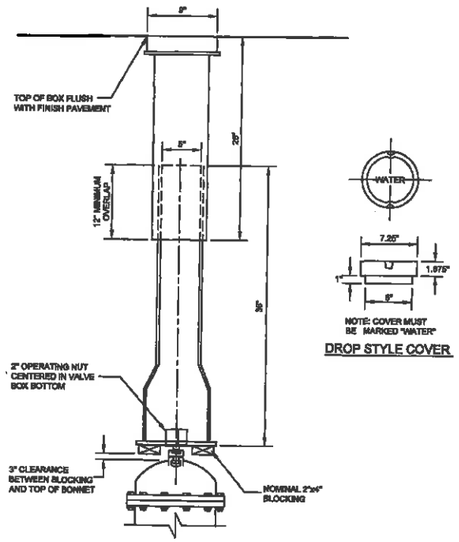
CONDITION II

NOTES:

1. PENNICHUCK WATER WORKS, INC. RESERVES THE RIGHT TO MODIFY INSULATION REQUIREMENTS AS NECESSARY BASED ON FIELD CONDITIONS, ETC.
2. THE LENGTH OR WIDTH OF INSULATION SHALL EXTEND 1 STORM DRAIN PIPE DIAMETER BEYOND THE EDGE OF STORM DRAIN PIPE IN EACH DIRECTION OR A MINIMUM OF 2' BEYOND THE CENTERLINE OF THE STORM DRAIN PIPE, WHICHEVER IS GREATER.
3. ALL BUTT JOINT SEAMS TO BE OVERLAPPED WITH A 1" PIECE OF INSULATION CENTERED OVER SEAM.

STORM DRAIN/WATER MAIN INTERSECTION RUNS - ELEVATION VIEW

(A-18)
NOT TO SCALE



BOTTOM DETAIL

NOTES:

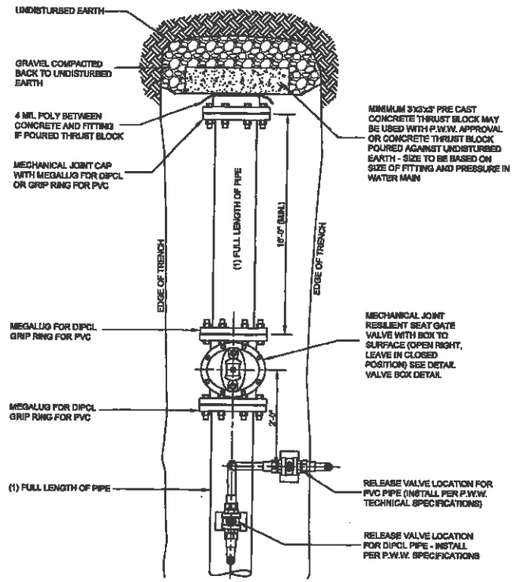
1. ALL MATERIALS AND INSTALLATION PROCEDURES WILL CONFORM TO PENNICHUCK WATER WORKS, INC. TECHNICAL SPECIFICATIONS.
2. ALL PIPE SHOULD HAVE A MINIMUM DEPTH OF 5'-0" FROM TOP OF PIPE TO FINISH GRADE.

VALVE BOX DETAIL

(A-09)
NOT TO SCALE
(MARCH 2008)

NOTE: COVER MUST BE MARKED "WATER"

DROP STYLE COVER



NOTES:

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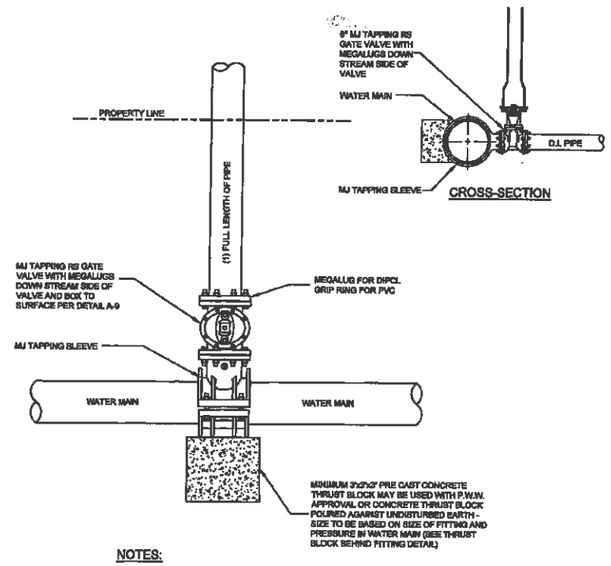
2. ALL PIPE SHOULD HAVE A MINIMUM DEPTH OF 5'-0" FROM TOP OF PIPE TO FINISH GRADE.

END OF MAIN INSTALLATION

(A-08)
NOT TO SCALE
(MARCH 2008)



NOTES:

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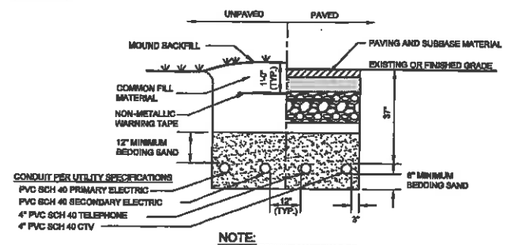
2. ALL PIPE SHOULD HAVE A MINIMUM DEPTH OF 5'-0" FROM TOP OF PIPE TO FINISH GRADE.

LARGE SERVICE AND/OR TAPPING SLEEVE DETAIL

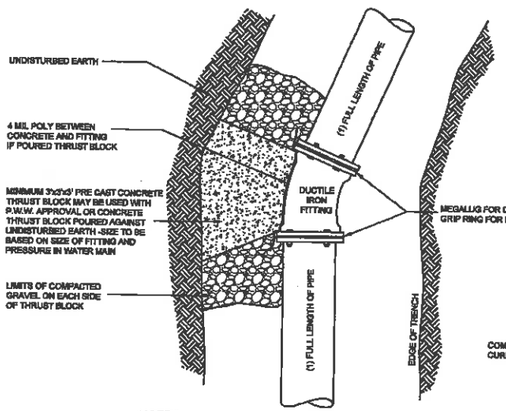
(A-21)
NOT TO SCALE
(MARCH 2008)



NOTE:
INSTALLATION AND MATERIALS OF UNDERGROUND UTILITIES SHALL CONFORM TO LOCAL UTILITY COMPANY SPECIFICATIONS.

UTILITY TRENCH DETAIL

NOT TO SCALE
(MARCH 2008)

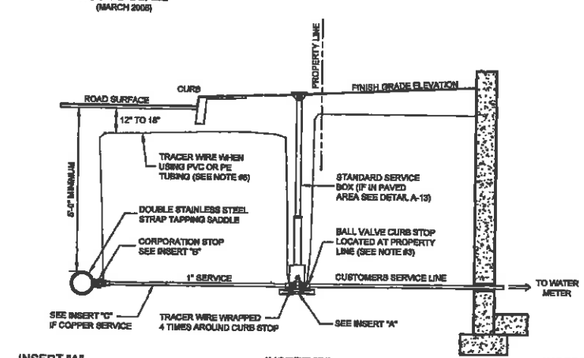


NOTES:

1. ALL MATERIAL AND INSTALLATION PROCEDURES WILL CONFORM TO PENNICHUCK WATER WORKS, INC. TECHNICAL SPECIFICATIONS.
2. ALL PIPE SHOULD HAVE A MINIMUM DEPTHS OF 5'-0" FROM TOP OF PIPE TO FINISH GRADE.
3. 3/4"Ø S.S. RODS SHALL BE USED IN CONJUNCTION WITH RESQUIRED S.S. NUTS. RODS ARE TO BE ATTACHED TO FITTINGS WITH EITHER STAR BOLTS OR DUC LUGS.
   10" FITTING OR SMALLER = (2) 3/4"Ø S.S. RODS & ASSOCIATED HARDWARE.
   12" FITTING OR LARGER = (4) 3/4"Ø S.S. RODS & ASSOCIATED HARDWARE.
4. MIN 3'x3'x3' PRE CAST CONCRETE THRUST BLOCK MAY BE USED WITH PENNICHUCK WATER WORKS, INC. APPROVAL OR CONCRETE THRUST BLOCK POURED AGAINST UNDISTURBED EARTH - SIZE TO BE BASED ON SIZE OF FITTING AND PRESSURE IN WATER MAIN.

THRUST BLOCK BEHIND FITTINGS INSTALLATION

(A-07)
NOT TO SCALE
(MARCH 2008)



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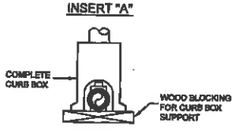

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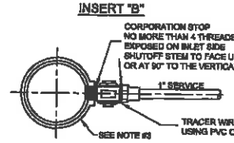
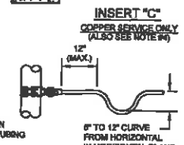


INSERT "C"
COPPER SERVICE ONLY (ALSO SEE NOTE #4)

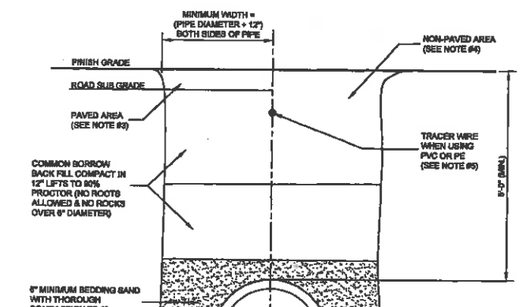


NOTES:

1. ALL MATERIALS AND INSTALLATION PROCEDURES WILL CONFORM TO PENNICHUCK WATER WORKS, INC. TECHNICAL SPECIFICATIONS.
2. ALL PIPE SHOULD HAVE A MINIMUM DEPTH OF 5'-0" FROM TOP OF PIPE TO FINISH GRADE.
3. IF WATER MAIN IS PVC OR TRANSITE, A DOUBLE STAINLESS STEEL STRAP TAPPING SADDLE MUST BE USED TO CONNECT THE CORPORATION TO THE WATER MAIN.
4. IF WATER MAIN IS PVC OR TRANSITE, AND THE NEW WATER SERVICE IS COPPER THEN SEE DETAIL A-13.
5. IF WATER MAIN IS A FIRE SERVICE, THEN SEE DETAIL A-24.
6. 10 GAUGE TRACER WIRE AS MANUFACTURED BY BMS, DIVISION OF ALBESTAR CORP., AVON, MA OR EQUIVALENT.

1" SERVICE AND VALVE BOX INSTALLATION DETAIL

(A-20)
NOT TO SCALE
(MARCH 2008)



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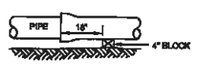
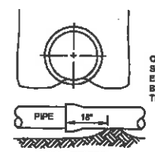


NOTES:

1. ALL MATERIALS AND INSTALLATION PROCEDURES WILL CONFORM TO PENNICHUCK WATER WORKS, INC. TECHNICAL SPECIFICATIONS.
2. ALL PIPE SHOULD HAVE A MINIMUM DEPTH OF 5'-0" FROM TOP OF PIPE TO FINISH GRADE.
3. REQUIREMENTS FOR SUBBASE AND BASE MATERIAL TYPE ARE TO BE IN ACCORDANCE WITH LOCAL AUTHORITY HAVING LOCAL JURISDICTION IN PAVED AREAS.
4. REQUIREMENTS FOR GRAVEL, LOAM AND/OR SEED ARE TO BE IN ACCORDANCE WITH LOCAL AUTHORITY HAVING LOCAL JURISDICTION IN NON-PAVED AREAS.
5. 10 GAUGE TRACER WIRE AS MANUFACTURED BY BMS, DIVISION OF ALBESTAR CORP., AVON, MA OR EQUIVALENT.



INSERT "B"

TRENCH DETAIL

(A-02)
NOT TO SCALE
(MARCH 2008)

CONSTRUCTION DETAILS

AUTO BODY SHOP

MAP 128 LOTS 31, 32 & 84
MAP 132 LOTS 38 & 84
WEST GLENWOOD STREET
NASHUA, NEW HAMPSHIRE
HILLSBOROUGH COUNTY

OWNER/APPLICANT:
ROSCOMMON INVESTMENTS, LLC
147 DANIEL WEBSTER HIGHWAY
NASHUA, NH 03060
(603) 888-5050

KEACH-NORDSTROM ASSOCIATES, INC.
Civil Engineering Land Surveying Landscape Architecture
10 Commerce Park North, Suite 3B, Bedford, NH 03110 Phone (603) 627-2881

PAUL CHISHOLM No. 15078 STATE OF NEW HAMPSHIRE PROFESSIONAL ENGINEER LICENSED 9/4/2020

REVISIONS			
No.	DATE	DESCRIPTION	BY
1	7/29/20	AUTO STORAGE & MEZZANINE REVS	PCM
2	10/1/20	CITY ENGINEERING REVISIONS	PCM

DATE: JUNE 22, 2020 | SCALE: AS SHOWN
PROJECT NO: 17-1011-1 | SHEET 20 OF 22

TURF ESTABLISHMENT SCHEDULE

PURPOSE:
TO ESTABLISH AND MAINTAIN PERMANENT AND TEMPORARY TURF AREAS, RESTORE GROWTH TO EXISTING TURF AREAS DISTURBED DURING CONSTRUCTION AND CONTROL SOIL EROSION.

PREPARATION AND EXECUTION:
1. RAKE THE SUBGRADE OF ALL AREAS TO BE LOAMED AND SEEDED TO REMOVE RUBBISH, STICKS, ROOTS AND STONES LARGER THAN 1 INCH.
2. PLACE LOAM OVER AREAS TO BE SEEDED AND SPREAD.
3. FINE GRADE SUBGRADE AND SUPPLEMENT WITH SUITABLE LOAM WHERE NEEDED TO CREATE A UNIFORM SURFACE ACCORDING TO THE FINISH GRADES INDICATED; TOP AND BOTTOM OF SLOPES SHALL BE ROUNDED. NO LOAM SHALL BE SPREAD IF THE SUBGRADE IS EXCESSIVELY WET OR FROZEN.
4. APPLY LIME EVENLY OVER LOAM SURFACE AND THOROUGHLY INCORPORATE LIME INTO THE LOAM BY HEAVY RAKING TO AT LEAST ONE-HALF THE DEPTH OF THE LOAM.
5. APPLY NO PHOSPHATE, SLOW RELEASE FERTILIZER AND MIX WITH THE UPPER 2 INCHES OF LOAM.
6. DETERMINE APPROPRIATE MIXTURE FOR AREA TO BE SEEDED BASED ON EXAMINATION OF PROJECT PLANS. UNIFORMLY SPREAD THE SEED BY BROADCASTING OR HYDROSEEDING. TO BROADCASTING, LIGHTLY RAKE INTO THE PREPARED SURFACE AND ROLL. IF, HYDROSEEDING, USE 4 TIMES THE RECOMMENDED RATE OF INOCULANT. WATER SEED IS SPREAD, WATER THOROUGHLY WITH A FINE SPRAY.
7. SEEDING FOR PERMANENT COVER SHALL OCCUR BETWEEN SEPTEMBER 15 AND OCTOBER 15 AND BETWEEN APRIL 15 AND JUNE 15. SEEDING SHALL NOT BE DONE DURING WINDY WEATHER, WHEN THE GROUND IS FROZEN OR EXCESSIVELY WET OR OTHERWISE UNTILLABLE.
8. WITHIN 24 HOURS AFTER SEEDING OPERATION, UNIFORMLY MULCH THE AREA WITH STRAW. ANCHOR MULCH ON ALL SLOPES EXCEEDING 3 : 1 USING MULCH NETTING INSTALLED IN ACCORDANCE WITH THE MANUFACTURER.
9. PROTECT AND PREVENT AGAINST WASHOUTS, ANY WASHOUTS WHICH OCCUR SHALL BE PROMPTLY REGRADED AND RESEEDED.
10. WHEN IT IS IMPRACTICAL TO ESTABLISH PERMANENT GROWTH ON DISTURBED EARTH BY OCTOBER 15, A TEMPORARY SEED MIXTURE SHALL BE USED. WHEN TEMPORARY SEEDING CANNOT ESTABLISH VISIBLE GROWTH, THE DISTURBED AREA SHALL BE COVERED WITH SIX INCHES OF MULCH FOR THE WINTER.

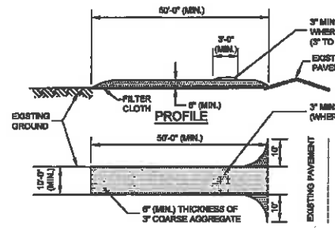
MAINTENANCE:
ALL SEEDED AREAS SHALL BE KEPT WATERED AND IN GOOD CONDITION. RESEED AS NECESSARY TO ESTABLISH HEALTHY UNIFORM GROWTH OVER THE ENTIRE SEEDED AREA. MAINTAIN SEEDED AREAS IN AN APPROVED CONDITION UNTIL FINAL ACCEPTANCE. MAINTENANCE SHALL INCLUDE REPAIRS FOR DAMAGE CAUSED BY EROSION.

APPLICATION RATES:
1. LOAM SHALL BE APPLIED AT A MINIMUM COMPACTED THICKNESS OF 4 INCHES.
2. LIME SHALL BE APPLIED AT A RATE OF 75 TO 100 POUNDS PER 1,000 S.F.
3. FERTILIZER SHALL BE APPLIED AT A RATE OF 30 POUNDS PER 1,000 S.F. IT IS RECOMMENDED THAT THE SOIL BE TESTED PRIOR TO APPLYING ANY FERTILIZERS TO DETERMINE WHAT LEVELS AND RATES ARE NECESSARY.
4. SEED MIXTURE FOR LAWN AREAS SHALL BE APPLIED AT A RATE OF AT LEAST 80 POUNDS PER ACRE OR 2 POUNDS PER 1,000 S.F.
5. TEMPORARY SEED MIXTURES SHALL BE APPLIED AT A RATE OF 2 POUNDS PER 1,000 S.F.
6. SEED MIXTURE FOR SLOPE AREAS SHALL BE APPLIED AT A RATE OF 80 POUNDS PER ACRE OR 2 POUNDS PER 1,000 S.F.
7. SEED MIXTURE FOR STORMWATER MANAGEMENT AREAS SHALL BE APPLIED AT A RATE OF 70 POUNDS PER ACRE OR 1.6 POUNDS PER 1,000 S.F.
8. MULCH SHALL BE APPLIED AT A RATE OF 90 POUNDS PER 1,000 S.F.

MATERIALS:
1. LOAM USED FOR TOPSOIL SHALL BE FRIABLE, FERTILE, NATURAL FREE-DRAINING LOAM; FREE OF ROOTS, GRASS, STICKS, WEEDS, CLAY, SOD LUMPS, DEBRIS AND STONES LARGER THAN 1 INCH IN ANY DIMENSION. SOIL SHALL NOT BE EXCESSIVELY ACID OR ALKALINE AND CONTAIN NO TOXIC MATERIALS.
2. LIME SHALL BE GROUND LIMESTONE CONTAINING NO LESS THAN 95% CALCIUM AND MAGNESIUM CARBONATES.
3. FERTILIZER SHALL BE NO PHOSPHORUS, SLOW RELEASE.
4. SEED MIXTURE FOR LAWN AREAS SHALL BE 95% PURE LIVE SEED AND CONSIST OF THE FOLLOWING:
   - 25% CREEPING RED FESCUE
   - 25% KENTUCKY BLUEGRASS
   - 25% REDTOP
   - 25% MANHATTAN PERENNIAL RYEGRASS
5. TEMPORARY SEEDING MIXTURE SHALL BE AN APPROVED CONSERVATION MIX OR CONSIST OF THE FOLLOWING:
   - 15% BLACKWELL OR SHELTER SWITCHGRASS
   - 30% NIAGRA OR KAW BIG BLUESTEM
   - 30% CAMPER OR BLAZE LITTLESTEM
   - 15% NE-27 OR BLAZE SAND LOVEGRASS
   - 10% VIKING BIRDSFOOT TREFOIL

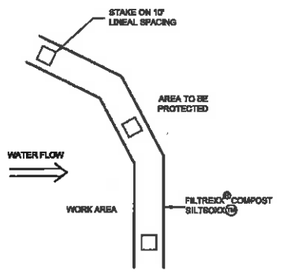
   INOCULUM SPECIFIC TO BIRDSFOOT TREFOIL MUST BE USED WITH THIS MIXTURE. IF SEEDING BY HAND, A STICKING AGENT SHALL BE USED. IF SEEDING WITH A HYDROSEEDER, USE FOUR TIMES THE RECOMMENDED AMOUNT OF INOCULUM.
6. SEED MIXTURE FOR SLOPE AREAS SHALL BE 95% PURE LIVE SEED AND SHALL CONSIST OF THE FOLLOWING:
   - 30% CREEPING RED FESCUE
   - 40% PERENNIAL RYE GRASS
   - 10% REDTOP
   - 15% BIRDSFOOT TREFOIL

   *IN ADDITION TO THE MIX SPECIFIED ABOVE, CROWN VETCH SHALL BE USED ON ALL SLOPES STEEPER THAN 3 : 1. CROWN VETCH SHALL BE APPLIED AT A RATE OF 10 POUNDS PER ACRE AND INOCULUM SPECIFIC TO CROWN VETCH MUST BE USED.
7. SEED MIXTURE FOR STORMWATER MANAGEMENT AREAS, INCLUDING DETENTION BASINS AND VEGETATED TREATMENT SWALES SHALL CONSIST OF THE FOLLOWING:
   - 25% CREEPING RED FESCUE
   - 15% SWITCH GRASS
   - 15% FOX SEDGE
   - 15% CREEPING BENTGRASS
   - 10% PLATPEA
   - 20% WILDFLOWER VARIETY
8. STRAW USED FOR MULCH SHALL CONSIST OF MOWED AND PROPERLY CURED GRASS OR LEGUME MOWINGS, FREE FROM WEEDS, TWIGS, DEBRIS OR OTHER DELETERIOUS MATERIAL AND ROT OR MOLD.
9. NATIVE PLANTINGS SHOULD BE USED FOR ALL NEW GREENSCAPES.
10. ALL WILDFLOWER SEEDING MIXES SHOULD BE FREE OF INVASIVE SPECIES.

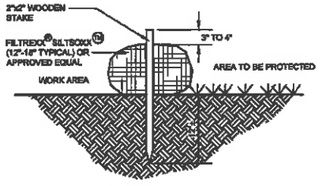


PLAN VIEW

STABILIZED CONSTRUCTION EXIT DETAIL
NOT TO SCALE



PLAN VIEW



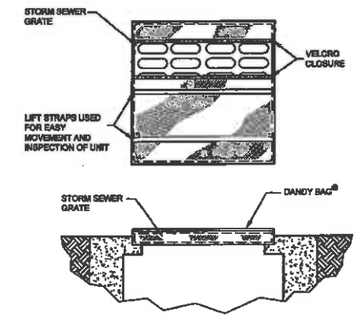
SECTION VIEW

NOTES:
1. ALL MATERIAL TO MEET FILTREXX® SPECIFICATIONS.
2. SILTSOXX™ COMPOST/SOIL/ROCK/SEED FILL TO MEET APPLICATION REQUIREMENTS.
3. SILTSOXX™ DEPICTED IS FOR MINIMUM SLOPES. GREAT SLOPES MAY REQUIRE LARGER SOCKS PER THE ENGINEER.
4. COMPOST MATERIAL TO BE DISPERSED ON SITE, AS DETERMINED BY ENGINEER.

FILTREXX® SILTSOXX™ DETAIL
NOT TO SCALE
(AUGUST 2011)

MAINTENANCE:
1. MUD AND SOIL PARTICLES WILL EVENTUALLY CLOG THE VOIDS IN THE CRUSHED STONE AND THE EFFECTIVENESS OF THE CRUSHED STONE PAD WILL NOT BE SATISFACTORY. WHEN THIS OCCURS, THE PAD SHOULD BE TOPDRESSED WITH NEW CRUSHED STONE OR COMPLETE REPLACEMENT OF THE PAD MAY BE NECESSARY WHEN THE PAD BECOMES COMPLETELY CLOGGED.
2. IF WASHING FACILITIES ARE USED, THE SEDIMENT TRAPS SHOULD BE CLEANED OUT AS OFTEN AS NECESSARY TO ASSURE THAT ADEQUATE TRAPPING EFFICIENCY AND STORAGE VOLUME IS AVAILABLE. VEGETATIVE FILTER STRIPS SHOULD BE MAINTAINED TO INSURE A VIGOROUS STAND OF VEGETATION AT ALL TIMES.

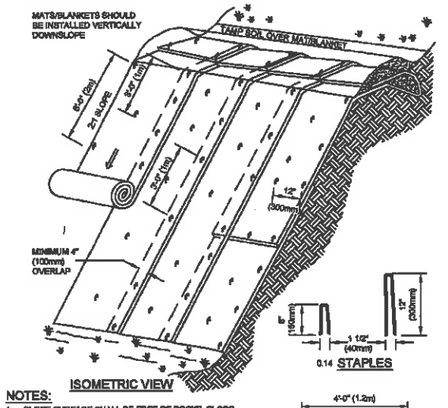
CONSTRUCTION SPECIFICATIONS:
1. STONE FOR A STABILIZED CONSTRUCTION EXIT SHALL BE 1 TO 2 INCH STONE, RECLAIMED STONE OR RECYCLED CONCRETE EQUIVALENT.
2. THE LENGTH OF THE STABILIZED EXIT SHALL NOT BE LESS THAN 50 FEET, EXCEPT FOR A SINGLE RESIDENTIAL LOT WHERE A 30 FOOT MINIMUM LENGTH WOULD APPLY.
3. THE THICKNESS OF THE STONE FOR THE STABILIZED EXIT SHALL NOT BE LESS THAN 6 INCHES.
4. THE WIDTH OF THE EXIT SHALL NOT BE LESS THAN THE FULL WIDTH OF THE AREA WHERE INGRESS OR EGRESS OCCURS OR 10 FEET, WHICHEVER IS GREATER.
5. GEOTEXTILE FILTER CLOTH SHALL BE PLACED OVER THE ENTIRE AREA PRIOR TO PLACING THE STONE. FILTER CLOTH IS NOT REQUIRED FOR A SINGLE FAMILY RESIDENCE LOT.
6. ALL SURFACE WATER THAT IS FLOWING TO OR DIVERTED TOWARD THE CONSTRUCTION EXIT SHALL BE PIPED BENEATH THE EXIT. IF PIPING IS IMPRACTICAL, A BERM WITH 5:1 SLOPES THAT CAN BE CROSSED BY VEHICLES MAY BE SUBSTITUTED FOR THE PIPE.
7. THE EXIT SHALL BE MAINTAINED IN A CONDITION THAT WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC RIGHTS-OF-WAY. THIS MAY REQUIRE PERIODIC TOPDRESSING WITH ADDITIONAL STONE AS CONDITIONS DEMAND AND REPAIR AND/OR CLEANOUT OF ANY MEASURES USED TO TRAP SEDIMENT. ALL SEDIMENT SPILLED, WASHED OR TRACKED ONTO PUBLIC RIGHT-OF-WAY MUST BE REMOVED PROMPTLY.
8. WHEELS SHALL BE CLEANED TO REMOVE MUD PRIOR TO ENTRANCE ONTO PUBLIC RIGHTS-OF-WAY. WHEN WASHING IS REQUIRED, IT SHALL BE DONE ON AN AREA STABILIZED WITH STONE WHICH DRAINS INTO AN APPROVED SEDIMENT TRAPPING DEVICE.



HI-FLOW DANDY BAG® (SAFETY ORANGE)

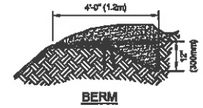
MECHANICAL PROPERTIES	TEST METHOD	UNITS	MARV
GRAB TENSILE STRENGTH	ASTM D 4632	kN (lbs)	1.82 (365) x 0.89 (200)
GRAB TENSILE ELONGATION	ASTM D 4632	%	24 x 19
PUNCTURE STRENGTH	ASTM D 4833	kN (lbs)	0.49 (90)
MULLEN BURST STRENGTH	ASTM D 3786	kPa (psi)	3067 (450)
TRAPEZOID TEAR STRENGTH	ASTM D 4533	kN (lbs)	0.51 (115) x 0.33 (75)
UV RESISTANCE	ASTM D 4355	%	90
APPARENT OPENING SIZE	ASTM D 4751	Mm (US Std Sieve)	0.425 (40)
FLOW RATE	ASTM D 4491	l/min/m² (gal/min/ft²)	6907 (148)
PERMITTIVITY	ASTM D 4491	Sec⁻¹	2.1

DANDY BAG®
NOT TO SCALE
(APRIL 2016)



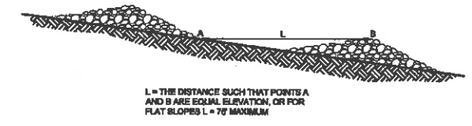
ISOMETRIC VIEW

NOTES:
1. SLOPE SURFACE SHALL BE FREE OF ROCKS, CLODS, STICKS AND GRASS. MATS/ BLANKETS SHALL HAVE GOOD SOIL CONTACT.
2. APPLY PERMANENT SEEDING BEFORE PLACING BLANKETS.
3. LAY BLANKETS LOOSELY AND STAKE OR STAPLE TO MAINTAIN DIRECT CONTACT WITH THE SOIL. DO NOT STRETCH.
4. EROSION BLANKETS TO BE A BCN150 OR AN APPROVED ALTERNATIVE WHICH MUST CONSIST OF ALL NATURAL FIBERS.



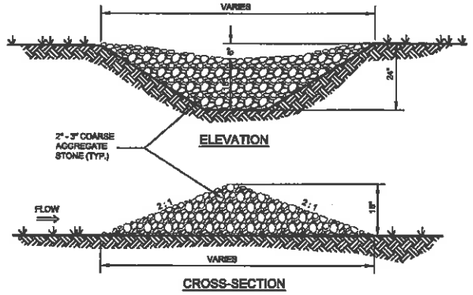
BERM

EROSION CONTROL BLANKETS - SLOPE INSTALLATION
NOT TO SCALE
(AUGUST 2011)



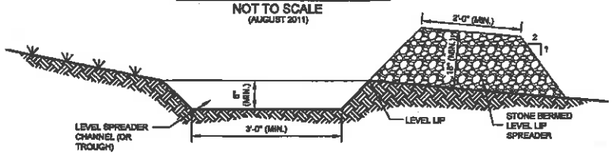
L = THE DISTANCE SUCH THAT POINTS A AND B ARE EQUAL ELEVATION, OR FOR FLAT SLOPES L = 70' MAXIMUM

STONE CHECK DAM SPACING DETAIL
NOT TO SCALE
(MARCH 2008)



CROSS-SECTION

STONE CHECK DAM DETAIL
NOT TO SCALE
(MARCH 2008)



NOTES:
1. CONSTRUCT THE LEVEL SPREADER LIP ON A ZERO PERCENT GRADE TO INSURE UNIFORM SPREADING OF RUN-OFF.
2. LEVEL SPREADER SHALL BE CONSTRUCTED ON UNDISTURBED SOIL AND NOT ON FILL.
3. THE FLOW FROM THE LEVEL SPREADER SHALL OUTLET INTO STABILIZED AREAS. WATER SHOULD NOT RECONCENTRATE IMMEDIATELY BELOW THE SPREADER.
4. PERIODIC INSPECTION AND REQUIRED MAINTENANCE SHALL BE PERFORMED.

MAINTENANCE REQUIREMENTS:
1. INSPECT AT LEAST ONCE ANNUALLY FOR ACCUMULATION OF SEDIMENT AND DEBRIS AND FOR SIGNS OF EROSION WITHIN APPROACH CHANNEL, SPREADER CHANNEL OR DOWN-SLOPE OF THE SPREADER.
2. REMOVE DEBRIS WHENEVER OBSERVED DURING INSPECTION.
3. REMOVE SEDIMENT WHEN ACCUMULATION EXCEEDS 25% OF SPREADER CHANNEL DEPTH.
4. MOW AS REQUIRED BY LANDSCAPE DESIGN. AT A MINIMUM, MOW ANNUALLY TO CONTROL WOODY VEGETATION WITHIN THE SPREADER.
5. SNOW SHOULD NOT BE STORED WITHIN OR DOWN-SLOPE OF THE LEVEL SPREADER OR ITS APPROACH CHANNEL.
6. REPAIR ANY EROSION AND RE-GRADE OR REPLACE STONE BERM MATERIAL, AS WARRANTED BY INSPECTION.
7. RECONSTRUCT THE SPREADER IF DOWN-SLOPE CHANNELIZATION INDICATES THAT THE SPREADER IS NOT LEVEL OR THAT DISCHARGE HAS BECOME CONCENTRATED, AND CORRECTIONS CANNOT BE MADE THROUGH MINOR RE-GRADING.

GRADATION OF STONE FOR LEVEL SPREADER BERM

SIEVE DESIGNATION	PERCENT BY WEIGHT PASSING SQUARE MESH SIEVES
12 INCH	100%
6 INCH	84 - 100%
3 INCH	58 - 83%
1 INCH	42 - 58%
NO. 4	8 - 12%

STONED BERMED LEVEL LIP SPREADER DETAIL
NOT TO SCALE
(APRIL 2010)

CONSTRUCTION SEQUENCE
1. THE CONTRACTOR WILL ENSURE THAT NO MORE THAN 5 ACRES IS DISTURBED AT ANY ONE TIME.
2. FIRST CUT AND CLEAR TREES AND BRUSH ONLY WITHIN DESIGNATED LIMITS OF CLEARING AS NECESSARY TO FACILITATE PROPOSED CONSTRUCTION. ALL TREES, BRANCHES AND OTHER VEGETATIVE MATERIALS SHALL BE PROPERLY DISPOSED OF OFF SITE BY THE CONTRACTOR. THIS PROJECT IS MANAGED TO MEET THE REQUIREMENTS AND INTENT OF RSA 430:53 AND AGR 3800 RELATIVE TO INVASIVE SPECIES.
3. PRIOR TO COMMENCEMENT OF ANY EARTHMOVING OPERATIONS, ALL APPLICABLE TEMPORARY EROSION CONTROL MEASURES, INCLUDING SPECIFIED PERIMETER SILTATION FENCING AND STABILIZED CONSTRUCTION EXIT SHALL BE IN PLACE AS SHOWN ON THE PROJECT PLANS.
4. COMPLETE GRUBBING OPERATIONS. ALL STUMPS AND SIMILAR ORGANIC DEBRIS SHALL BE PROPERLY DISPOSED OF BY THE CONTRACTOR. NATIVE ORGANIC SOIL MATERIALS SUITABLE FOR USE AS TOPSOIL SHALL BE STOCKPILED WITHIN AREAS OUT OF THE WAY OF OTHER CONSTRUCTIONS ACTIVITIES AND DRAINAGE FLOW. STOCKPILES SHALL BE TEMPORARILY SEEDED WITH WINTER RYE AND BE SURROUNDED WITH STRAW BALES AND/OR FABRIC SILTATION FENCE IN ORDER TO PREVENT LOSS DUE TO EROSION.
5. BEGIN EARTHMOVING OPERATIONS, COMMENCING WITH WORK NEEDED TO BALANCE SITE AND FACILITATE BUILDING FOUNDATION AND RETAINING WALL CONSTRUCTION. PERMANENT DOWNSLOPE WORK SHALL BE PROTECTED FROM UPGRADIENT STORMWATER FLOW BY THE CONSTRUCTION OF TEMPORARY EARTHEN DIKES OR EXCAVATED SWALES.
6. ONCE BUILDING FOUNDATION WORK IS UNDERWAY, CONTINUE EARTHMOVING OPERATIONS UNTIL DESIGN SUBGRADE IS ACHIEVED.
7. DETENTION BASINS/SWALES SHALL BE INSTALLED BEFORE ROUGH GRADING THE SITE.
8. DITCHES/SWALES/BASINS SHALL BE STABILIZED PRIOR TO DIRECTING RUNOFF TO THEM.
9. TEMPORARY WATER DIVERSION (SWALES, BASINS, ETC.) MUST BE USED AS NECESSARY UNTIL SOILS ARE STABILIZED.
10. INSTALL DRAINAGE SWALE SYSTEMS AND OTHER UTILITIES WORKING FROM LOW TO HIGH. INCOMPLETE WORK SHALL BE PROTECTED FROM SILTATION BY THE USE OF SILTATION BARRIERS AROUND SWALES UNTIL THE SITE HAS BECOME FULLY STABILIZED.
11. DEEPLY TILL THE BASE OF THE INFILTRATION BASIN TO RESTORE INFILTRATION RATES FOLLOWED BY A PASS WITH A LEVELING DRAG. STORMWATER FLOWS ARE NOT TO BE DIRECTED TO THE INFILTRATION AREA UNTIL CONTRIBUTING AREAS HAVE BEEN FULLY STABILIZED.
12. PLACE GRAVEL AND CRUSHED GRAVEL OVER PROPOSED DRIVEWAY, WALKS AND PARKING AREAS AND COMPACT IN SPECIFIED LIFT THICKNESS.
13. COMPLETE EXCAVATION/STABILIZATION GRADING ACTIVITIES. WHEN COMPLETE, IMMEDIATELY BEGIN TOPSOILING PROPOSED TURF AREAS USING STOCKPILED LOAM SUPPLEMENTED WITH BORROW LOAM, IF NECESSARY, TO LEAVE A THICKNESS OF 4 INCHES OF FRIABLE LOAM.
14. FINE GRADE ALL FUTURE TURF AREAS AND HYDROSEED WITH THE SPECIFIED SEED MIXTURE IMMEDIATELY AFTER FINE GRADING IS COMPLETED. ALL AREAS SHALL BE STABILIZED WITHIN 72 HOURS OF ACHIEVING FINISH GRADE.
15. INSTALL THE BINDER COURSE OF PAVEMENT OVER ALL DESIGNATED AREAS.
16. CONTINUE TO MONITOR AND RESTIFY MINOR SITE AND SLOPE EROSION UNTIL ENTIRE SITE APPEARS TO BE COMPLETELY STABILIZED AND VEGETATED WITH A HEALTHY STAND OF TURF OR GROUND COVER. MAINTAIN SPECIFIED SILTATION/EROSION CONTROL MEASURES THROUGH ONE WINTER.
17. INSTALL THE SPECIFIED WEARING COURSE OF PAVEMENT OVER THE BINDER COURSE.
18. COMPLETE INSTALLATION OF LANDSCAPING, SIGNAGE AND OTHER SITE AMENITIES.

CERTIFICATE OF OCCUPANCY PHASING PLAN AGREEMENT:
1. THE FOLLOWING SITE IMPROVEMENTS ARE REQUIRED FOR INDIVIDUAL CERTIFICATES OF OCCUPANCY AS CONSTRUCTION PROGRESSES:
   - A. ROAD BASE COAT;
   - B. STOP SIGNS AND TEMPORARY STRIPING OF STOP BAR;
   - C. GRADING AND DRAINAGE;
   - D. LOAM AND SEED THAT SUPPORTS THE SUBJECT UNIT OF THE CERTIFICATE OF OCCUPANCY;
   - E. TEMPORARY STRIPING OF VISITOR PARKING; AND
   - F. UTILITIES.

EROSION CONTROL NOTES
1. EXPOSED EARTHWORK SHALL BE CONFINED TO AS LIMITED AN AREA AS IS PRACTICAL AT ANY GIVEN TIME THROUGHOUT THE CONSTRUCTION SEQUENCE. AT NO TIME SHALL MORE THAN FIVE (5) ACRES OF SITE AREA BE IN AN UNSTABLE CONDITION UNLESS AN ENVIRONMENTAL MONITOR IS EMPLOYED THROUGH THE DURATION OF CONSTRUCTION. NO GIVEN AREA OF THE SITE SHALL BE LEFT IN AN UNSTABILIZED CONDITION FOR A PERIOD OF FORTY-FIVE (45) CALENDAR DAYS.
2. TEMPORARY EROSION CONTROL MEASURES SHALL BE INSTALLED IN STRICT ACCORDANCE WITH PROJECT PLANS. IN ADDITION, SIMILAR MEASURES SHALL BE INSTALLED WHERE AND WHEN THE FIELD CONDITION, OR FIELD OPERATION OF THE INDIVIDUAL SITE CONTRACTOR, MAY WARRANT. ALL TEMPORARY EROSION CONTROL MEASURES USED SHALL BE INSPECTED WEEKLY AND WITHIN 24 HOURS AFTER 0.25" OF RAINFALL OR MORE. THEY SHALL BE CLEANED AND MAINTAINED AND OTHERWISE KEPT IN AN EFFECTIVE OPERATING MANNER THROUGHOUT THE CONSTRUCTION PERIOD.
3. ALL DISTURBED AREAS DESIGNATED TO BE TURF, SHALL RECEIVE A MINIMUM APPLICATION OF 4 INCHES OF LOAM (COMPACTED THICKNESS), PRIOR TO FINAL SEEDING AND MULCHING.
4. EROSION CONTROL AND STABILIZATION SHALL BE IN ACCORDANCE WITH HILLSBOROUGH COUNTY CONSERVATION DISTRICT-VEGETATIVE STANDARD AND SPECIFICATIONS FOR SEEDING GRASSES AND LEGUMES FOR LONG-TERM COVER ON EXCAVATED AREAS.
5. ALL SWALES AND DITCHLINES SHALL BE PERIODICALLY CLEANED OF DEPOSITED SEDIMENT SO AS TO MAINTAIN AN EFFECTIVE GRADE AND CROSS SECTION. ALL SWALES AND DITCHLINES SHALL BE FULLY STABILIZED PRIOR TO HAVING STORMWATER DIRECTED TOWARDS THEM.
6. IN THE EVENT THAT, DURING CONSTRUCTION OF ANY PORTION OF THIS PROJECT, A WINTER SHUTDOWN IS NECESSARY, THE CONTRACTOR SHALL STABILIZE ALL INCOMPLETE WORK AND PROVIDE FOR SUITABLE METHODS OF DIVERTING RUNOFF IN ORDER TO ELIMINATE SHEET FLOW ACROSS FROZEN SURFACES.
7. AN AREA SHALL BE CONSIDERED STABLE IF ONE OF THE FOLLOWING HAS OCCURRED:
   - A. BASE COURSE GRAVELS ARE INSTALLED IN AREAS TO BE PAVED;
   - B. A MINIMUM OF 85% VEGETATED GROWTH HAS BEEN ESTABLISHED;
   - C. A MINIMUM OF 3" OF NON-EROSIVE MATERIAL SUCH AS STONE OR RIP RAP HAS BEEN INSTALLED; OR
   - D. EROSION CONTROL BLANKETS HAVE BEEN PROPERLY INSTALLED.
8. DUST SHALL BE CONTROLLED BY THE USE OF WATER AS NECESSARY THROUGHOUT THE CONSTRUCTION PERIOD, IN ACCORDANCE WITH ENV-A 1000.
9. IN NO WAY ARE THOSE TEMPORARY EROSION CONTROL MEASURES INDICATED ON THESE PLANS TO BE CONSIDERED ALL INCLUSIVE. THE CONTRACTOR SHALL USE JUDGEMENT IN INSTALLING SUPPLEMENTARY EROSION CONTROL MEASURES WHERE AND WHEN SPECIFIC SITE CONDITIONS AND/OR CONSTRUCTION METHODOLOGIES MAY WARRANT.
10. THE TOWN RESERVES THE RIGHT TO REQUIRE ADDITIONAL EROSION CONTROL MEASURES DURING CONSTRUCTION.
11. AREAS HAVING FINISH GRADE SLOPES OF 3 : 1 OR STEEPER, SHALL BE STABILIZED WITH JUTE MATTING WHEN AND IF FIELD CONDITIONS WARRANT, OR IF SO ORDERED. JUTE MATTING INSTALLED TO CONFORM WITH THE RECOMMENDED BEST MANAGEMENT PRACTICE OUTLINED IN VOLUME 3 OF THE NEW HAMPSHIRE STORMWATER MANUAL "EROSION AND SEDIMENT CONTROLS DURING CONSTRUCTION."
12. DETENTION BASINS/SWALES SHALL BE INSTALLED BEFORE ROUGH GRADING THE SITE.
13. DITCHES/SWALES/BASINS SHALL BE STABILIZED PRIOR TO DIRECTING RUNOFF TO THEM.
14. TEMPORARY WATER DIVERSION (SWALES, BASINS, ETC.) MUST BE USED AS NECESSARY UNTIL SOILS ARE STABILIZED.
15. ALL ROADWAYS AND PARKING AREAS SHALL BE STABILIZED WITHIN 72 HOURS OF ACHIEVING FINISHED GRADE.
16. ALL CUT AND FILL SLOPES SHALL BE STABILIZED WITHIN 72 HOURS OF ACHIEVING FINISHED GRADE.

WINTER CONSTRUCTION NOTES:
1. ALL PROPOSED POST-DEVELOPMENT VEGETATED AREAS WHICH DO NOT EXHIBIT A MINIMUM OF 85% VEGETATIVE GROWTH BY OCTOBER 15TH, OR WHICH ARE DISTURBED AFTER OCTOBER 15TH, SHALL BE STABILIZED BY SEEDING AND INSTALLING EROSION CONTROL BLANKETS ON SLOPES GREATER THAN 4:1, AND SEEDING AND PLACING 3 TO 4 TONS OF MULCH PER ACRE, SECURED WITH ANCHORED NETTING, ELSEWHERE. THE PLACEMENT OF EROSION CONTROL BLANKETS OR MULCH AND NETTING SHALL NOT OCCUR OVER ACCUMULATED SNOW OR ON FROZEN GROUND AND SHALL BE COMPLETED IN ADVANCE OF THAW OR SPRING MELT EVENTS.
2. ALL DITCHES OR SWALES WHICH DO NOT EXHIBIT A MINIMUM OF 85% VEGETATIVE GROWTH BY OCTOBER 15TH, OR WHICH ARE DISTURBED AFTER OCTOBER 15TH, SHALL BE STABILIZED WITH STONE OR EROSION CONTROL BLANKETS APPROPRIATE FOR THE DESIGN FLOW CONDITIONS.
3. AFTER OCTOBER 15TH, INCOMPLETE ROAD OR PARKING SURFACES SHALL BE PROTECTED WITH A MINIMUM OF 3 INCHES OF CRUSHED GRAVEL PER NHDOT ITEM 304.3 OR, IF CONSTRUCTION IS TO CONTINUE THROUGH THE WINTER SEASON, BE CLEARED OF ANY ACCUMULATED SNOW AFTER EACH STORM EVENT.
4. AN AREA SHALL BE CONSIDERED STABLE IF ONE OF THE FOLLOWING HAS OCCURRED:
   - A. BASE COURSE GRAVELS ARE INSTALLED IN AREAS TO BE PAVED;
   - B. A MINIMUM OF 85% VEGETATED GROWTH HAS BEEN ESTABLISHED;
   - C. A MINIMUM OF 3" OF NON-EROSIVE MATERIAL SUCH AS STONE OR RIP RAP HAS BEEN INSTALLED; OR
   - D. EROSION CONTROL BLANKETS HAVE BEEN PROPERLY INSTALLED.

CONSTRUCTION DETAILS
AUTO BODY SHOP
MAP 128 LOTS 31, 32 & 84
MAP 132 LOTS 38 & 84
WEST GLENWOOD STREET
NASHUA, NEW HAMPSHIRE
HILLSBOROUGH COUNTY

OWNER/APPLICANT:
ROSCOMMON INVESTMENTS, LLC
147 DANIEL WEBSTER HIGHWAY
NASHUA, NH 03060
(603) 888-5050

KEACH-NORDSTROM ASSOCIATES, INC.
Civil Engineering Land Surveying Landscape Architecture
10 Commerce Park North, Suite 3B, Bedford, NH 03110 Phone (603) 627-2881

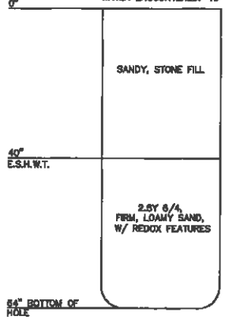
PAUL CHISHOLM No. 19078 — STATE OF NEW HAMPSHIRE — PROFESSIONAL ENGINEER — LICENSED — 10/1/20

REVISIONS

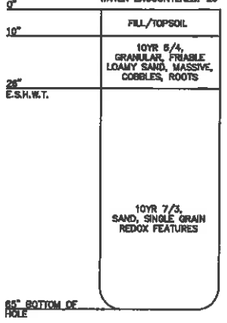
No.	DATE	DESCRIPTION	BY
1	7/29/20	AUTO STORAGE & MEZZANINE REVS	PCM
2	10/1/20	CITY ENGINEERING REVISIONS	PCM

DATE: JUNE 22, 2020 | SCALE: AS SHOWN
PROJECT NO: 17-1011-1 | SHEET 21 OF 22

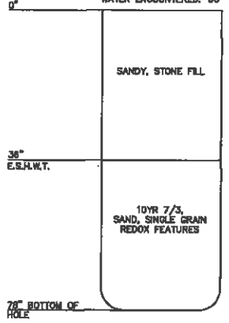
TP #1
LOGGED BY GPC
PERC TEST @ 20"
DATE: 4-22-2020
PERC RATE: 5 MIN./INCH
IMPERVIOUS LAYER: NONE
WATER ENCOUNTERED: 40"



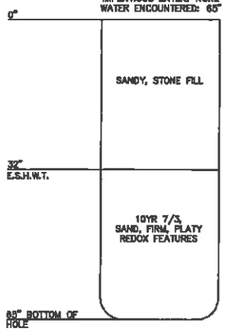
TP #2
LOGGED BY GPC
PERC TEST @ 20"
DATE: 4-22-2020
PERC RATE: 5 MIN./INCH
IMPERVIOUS LAYER: NONE
WATER ENCOUNTERED: 28"



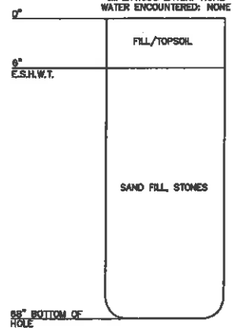
TP #3
LOGGED BY GPC
PERC TEST @ 20"
DATE: 4-22-2020
PERC RATE: 5 MIN./INCH
IMPERVIOUS LAYER: NONE
WATER ENCOUNTERED: 60"



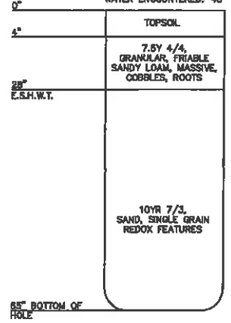
TP #4
LOGGED BY GPC
PERC TEST @ 20"
DATE: 4-22-2020
PERC RATE: 5 MIN./INCH
IMPERVIOUS LAYER: NONE
WATER ENCOUNTERED: 65"



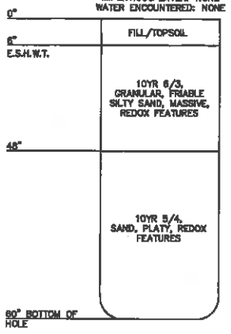
TP #5
LOGGED BY GPC
PERC TEST @ 20"
DATE: 4-22-2020
PERC RATE: 5 MIN./INCH
IMPERVIOUS LAYER: NONE
WATER ENCOUNTERED: NONE



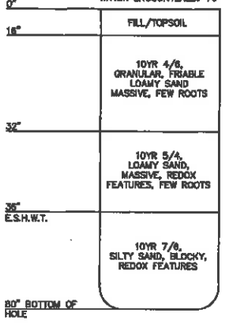
TP #6
LOGGED BY GPC
PERC TEST @ 20"
DATE: 4-22-2020
PERC RATE: 5 MIN./INCH
IMPERVIOUS LAYER: NONE
WATER ENCOUNTERED: 48"



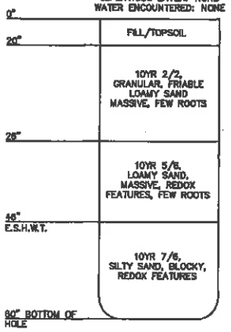
TP #7
LOGGED BY GPC
PERC TEST @ 20"
DATE: 6-15-2020
PERC RATE: 8 MIN./INCH
IMPERVIOUS LAYER: NONE
WATER ENCOUNTERED: NONE



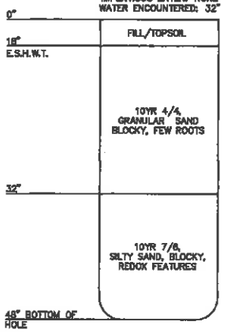
TP #8
LOGGED BY GPC
PERC TEST @ 20"
DATE: 6-15-2020
PERC RATE: 8 MIN./INCH
IMPERVIOUS LAYER: NONE
WATER ENCOUNTERED: 76"



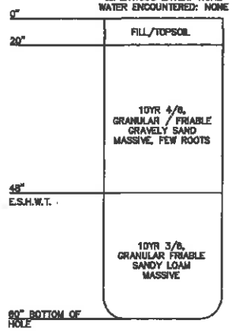
TP #9
LOGGED BY GPC
PERC TEST @ 20"
DATE: 6-15-2020
PERC RATE: 8 MIN./INCH
IMPERVIOUS LAYER: NONE
WATER ENCOUNTERED: NONE



TP #10
LOGGED BY GPC
PERC TEST @ 20"
DATE: 6-15-2020
PERC RATE: 8 MIN./INCH
IMPERVIOUS LAYER: NONE
WATER ENCOUNTERED: 32"



TP #11
LOGGED BY GPC
PERC TEST @ 20"
DATE: 6-15-2020
PERC RATE: 8 MIN./INCH
IMPERVIOUS LAYER: NONE
WATER ENCOUNTERED: NONE



TEST PITS
AUTO BODY SHOP
MAP 128 LOTS 31, 32 & 84
MAP 132 LOTS 38 & 84
WEST GLENWOOD STREET
NASHUA, NEW HAMPSHIRE
HILLSBOROUGH COUNTY

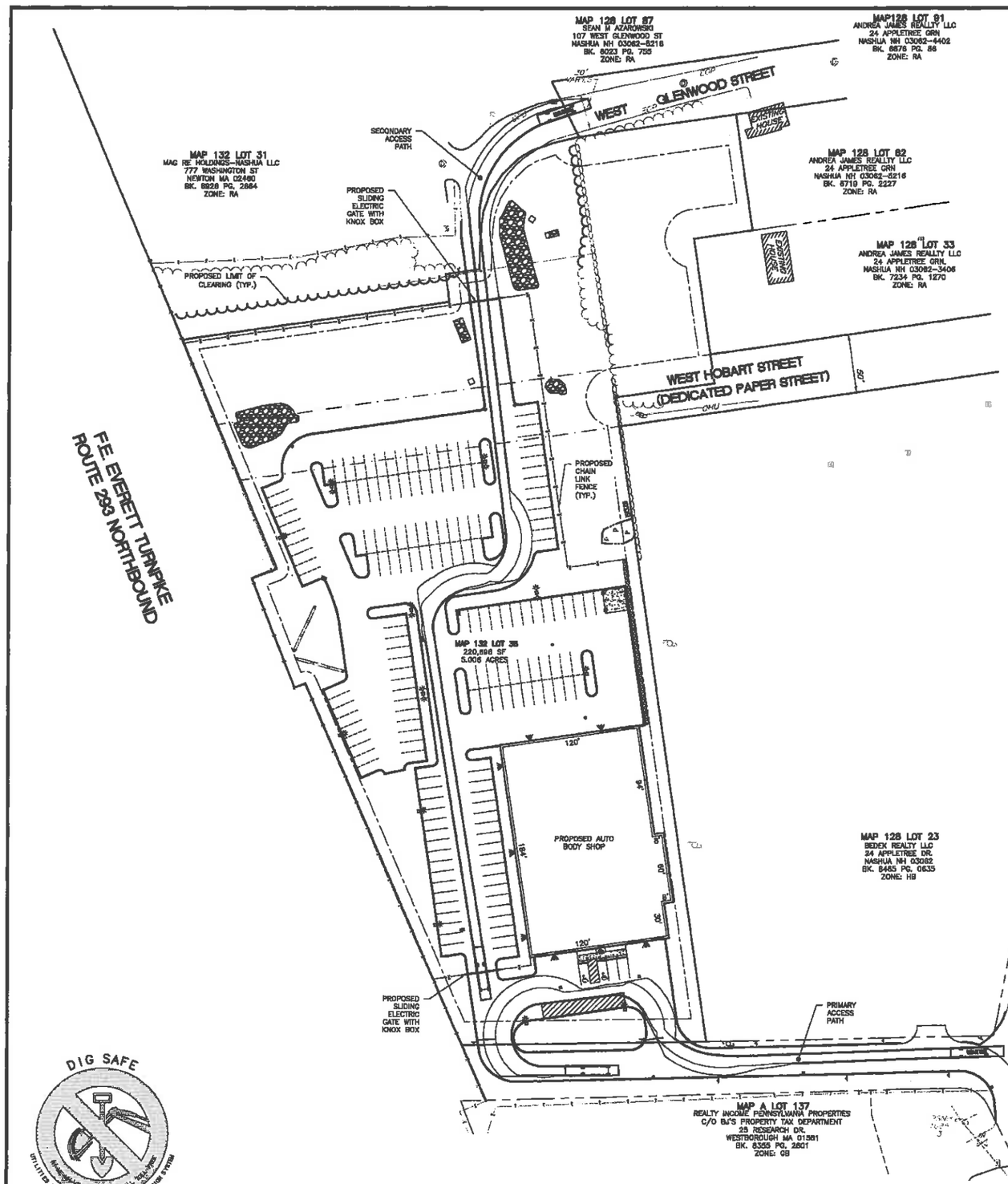
OWNER/APPLICANT:
ROSCOMMON INVESTMENTS, LLC
147 DANIEL WEBSTER HIGHWAY
NASHUA, NH 03060
(603) 888-5050

KNA KEACH-NORDSTROM ASSOCIATES, INC.
Civil Engineering Land Surveying Landscape Architecture
10 Commerce Park North, Suite 3B, Bedford, NH 03110 Phone (603) 627-2881

STATE OF NEW HAMPSHIRE
PAUL CHISHOLM
No. 15076
LICENSED PROFESSIONAL ENGINEER
10/1/20

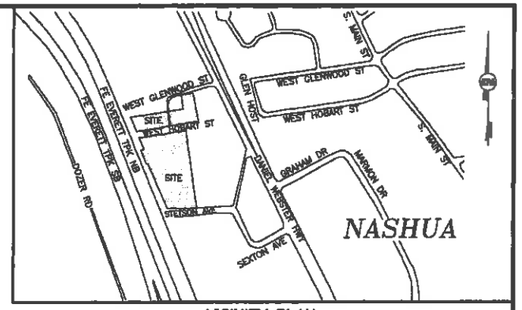
REVISIONS			
No.	DATE	DESCRIPTION	BY
1	7/28/20	AUTO STORAGE & MEZZANINE REVS	PCM
2	10/1/20	CITY ENGINEERING REVISIONS	PCM

DATE: JUNE 22, 2020 | SCALE: AS SHOWN
PROJECT NO: 17-1011-1 | SHEET 22 OF 22



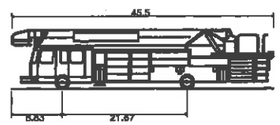
LEGEND

- SB-F STONE BOUND FOUND
- IPIN-F IRON PIN FOUND
- IPP-F IRON PIPE FOUND
- UTILITY POLE
- SIGN
- LIGHT
- GAS VALVE
- WATER VALVE
- HYDRANT
- WATER SHUT OFF
- SEWER MANHOLE
- DRAINAGE MANHOLE
- CATCH BASIN
- FLARED END SECTION
- WELL
- ABUTTER LINE
- PROPERTY LINE
- WETLAND
- CHAIN LINK FENCE
- OVERHEAD UTILITIES
- GAS LINE
- WATER LINE
- SEWER LINE
- DRAINAGE LINE
- TREELINE
- STONE WALL
- EDGE OF PAVEMENT
- VERTICAL GRANITE CURB
- STONE WALL
- BUILDING SETBACK
- EASEMENT
- ZONE LINE
- PROPOSED UTILITY POLE
- PROPOSED SIGN
- PROPOSED BUILDING MOUNTED LIGHT
- PROPOSED PARKING LOT LIGHT
- PROPOSED BACK TO BACK PARKING LOT LIGHT
- PROPOSED GAS VALVE
- PROPOSED WATER VALVE
- PROPOSED SEWER MANHOLE
- PROPOSED DRAINAGE MANHOLE
- PROPOSED CATCH BASIN
- PROPOSED OUTLET STRUCTURE
- PROPOSED BITUMINOUS CURB
- PROPOSED EDGE OF PAVEMENT
- SNOW STORAGE
- PROPOSED TREELINE
- PROPOSED STORMWATER SYSTEM
- PROPOSED MODULAR BLOCK WALL
- PROPOSED STOCKADE FENCE



VICINITY PLAN
SCALE: 1" = 500' +/-

NOTES:
1. THE PURPOSE OF THIS PLAN IS TO SHOW THE PATH OF A TYPICAL NASHUA FIRE ENGINE TRAVERSING THE SITE.



NASHUA FIRE ENGINE	
Overall Length	45.500ft
Overall Width	8.670ft
Overall Body Height	10.227ft
Min Body Ground Clearance	0.657ft
Track Width	6.830ft
Lock-to-lock time	6.00s
Max Wheel Angle	45.00°

GRAPHIC SCALE
50 0 25 50 100 200
(IN FEET)
1 inch = 50 ft.

FIRE TRUCK OVERLAY PLAN
AUTO BODY SHOP
MAP 128 LOTS 31, 32 & 84
MAP 132 LOTS 38 & 84
WEST GLENWOOD STREET
NASHUA, NEW HAMPSHIRE
HILLSBOROUGH COUNTY

OWNER/APPLICANT:
ROSCOMMON INVESTMENTS, LLC
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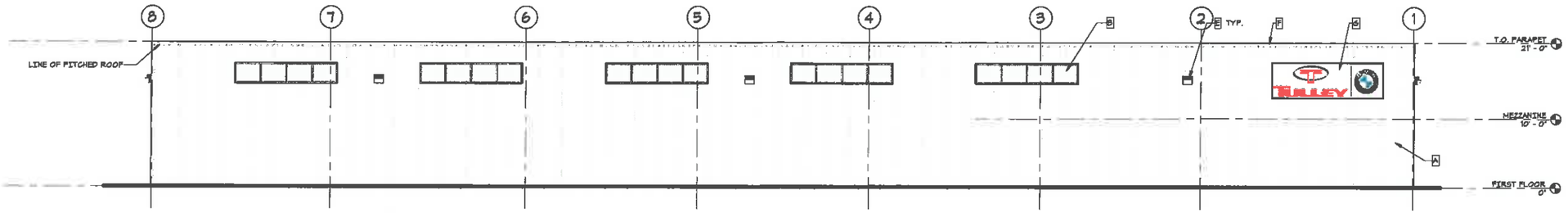
Civil Engineering Land Surveying Landscape Architecture
10 Commerce Park North, Suite 3B, Bedford, NH 03110 Phone (603) 627-2881

REVISIONS			
No.	DATE	DESCRIPTION	BY
1	9/30/20	UPDATED LAYOUT	PCM

DATE: JULY 7, 2020 SCALE: 1"=50'
PROJECT NO: 17-1011-1 SHEET 1 OF 1

DIG SAFE
811
UTILITIES UNDERGROUND PLANT DAMAGE PREVENTION SYSTEM



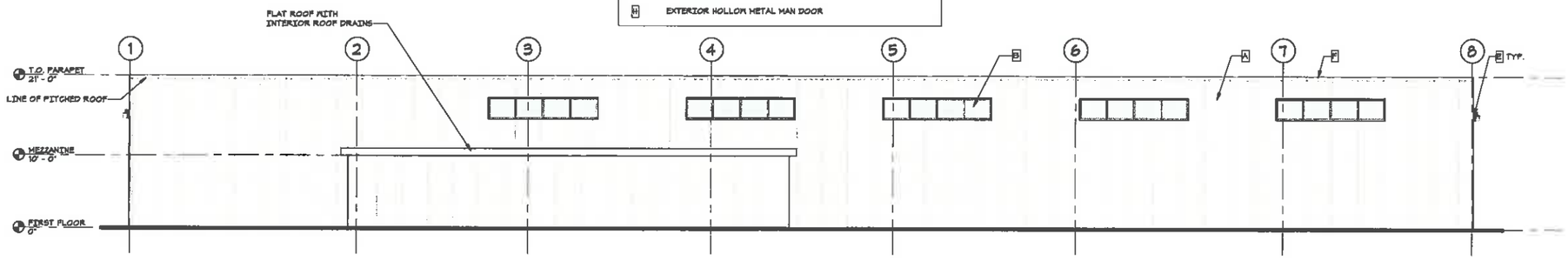
WEST ELEVATION
1/8" = 1'-0"

SOUTH ELEVATION
1/8" = 1'-0"

NORTH ELEVATION
1/8" = 1'-0"

MATERIAL LEGEND

A	3" INSULATED METAL PANEL, 42" WIDE, BY METL SPAN (OR APPROVED EQUAL) COLOR TO MATCH RAL 9010 (WHITE)
B	FIXED ALUM & GLASS STOREFRONT WINDOWS W/ INSULATED GLAZING AND THERMALLY BROKEN FRAMES (CLEAR ANODIZED)
C	FULL LITE OVERHEAD DOORS
D	EXTERIOR ALUM. & GLASS DOOR
E	EXTERIOR WALL PACKING LIGHTING (SEE CIVIL)
F	PRE-FINISHED ALUM. ROOF EDGE - COLOR TBD
G	EXTERIOR SIGNAGE, PROVIDE BLOCKING & ELECTRICAL FEED AS REQUIRED
H	EXTERIOR HOLLOW METAL MAN DOOR



EAST ELEVATION
1/8" = 1'-0"

EXTERIOR ELEVATIONS

0 2' 4' 8'

TULLEY BODY SHOP

WEST GLENWOOD STREET
NASHUA, NH, 03060
4/29/20

ARCHITECTURE
LAND PLANNING
INTERIOR DESIGN
3D VISUALIZATION

BRUCE ROSCATESE HAMILTON ARCHITECTS

833 TURNPIKE ROAD P.O. BOX 104
NEW IPSWICH NEW HAMPSHIRE 03071