

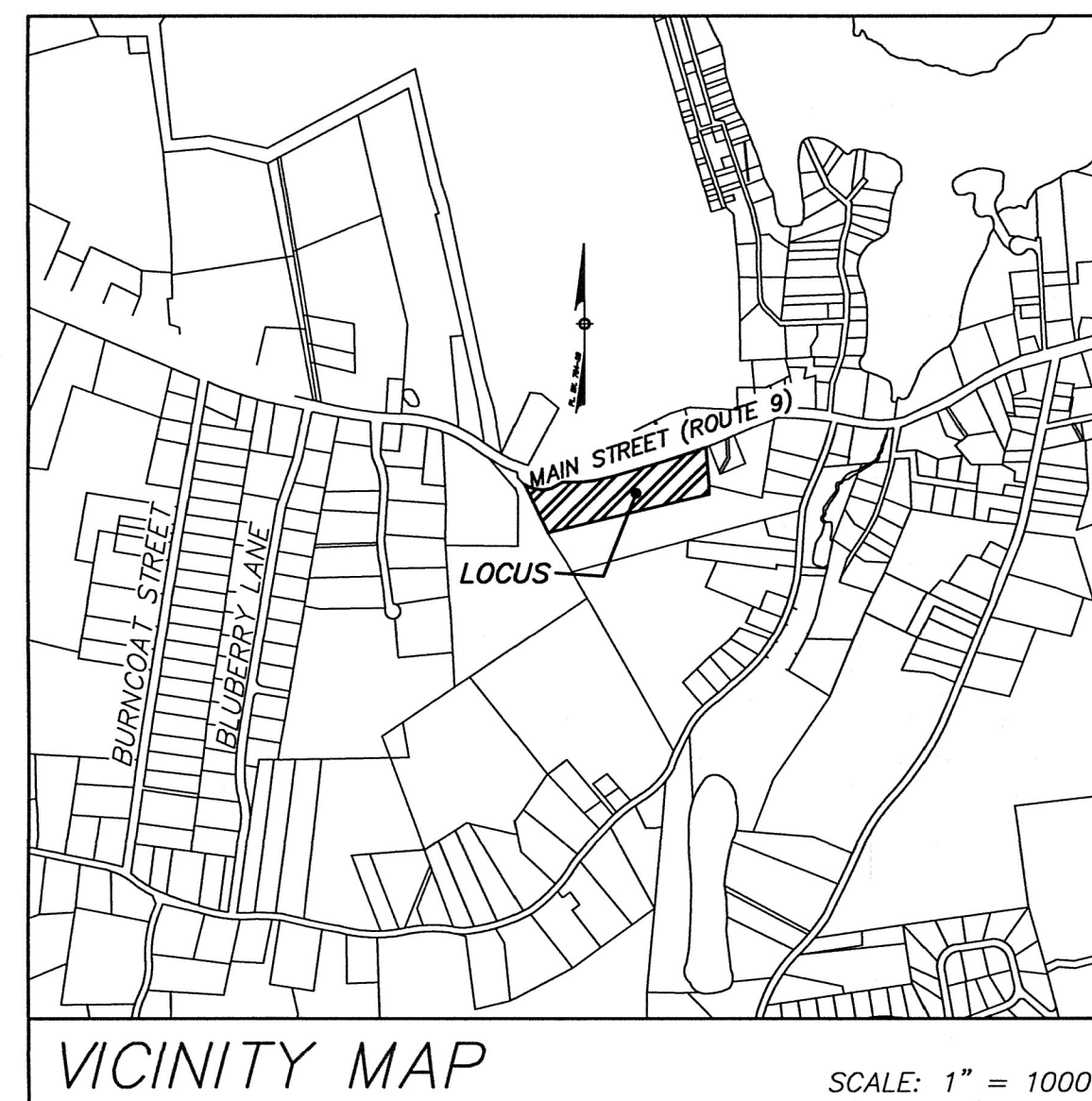
# **DEFINITIVE SUBDIVISION PLAN**

## **1355 MAIN STREET**

### **IN**

## **LEICESTER, MASSACHUSETTS**

## **NOVEMBER 30, 2022**



**APPLICANT:**

ZP BATTERY DEVCO, LLC  
BRENDON GOVE  
10 E. WORCESTER STREET, SUITE 3A  
WORCESTER, MASSACHUSETTS 01604

**OWNER:**

WR ENTERPRISES, LLC  
1323 MAIN STREET  
LEICESTER, MASSACHUSETTS 01420

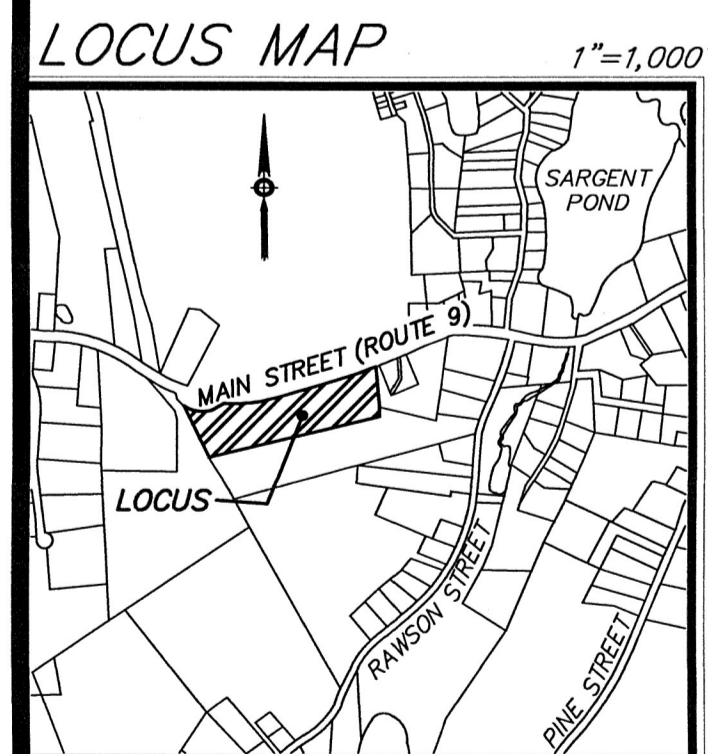
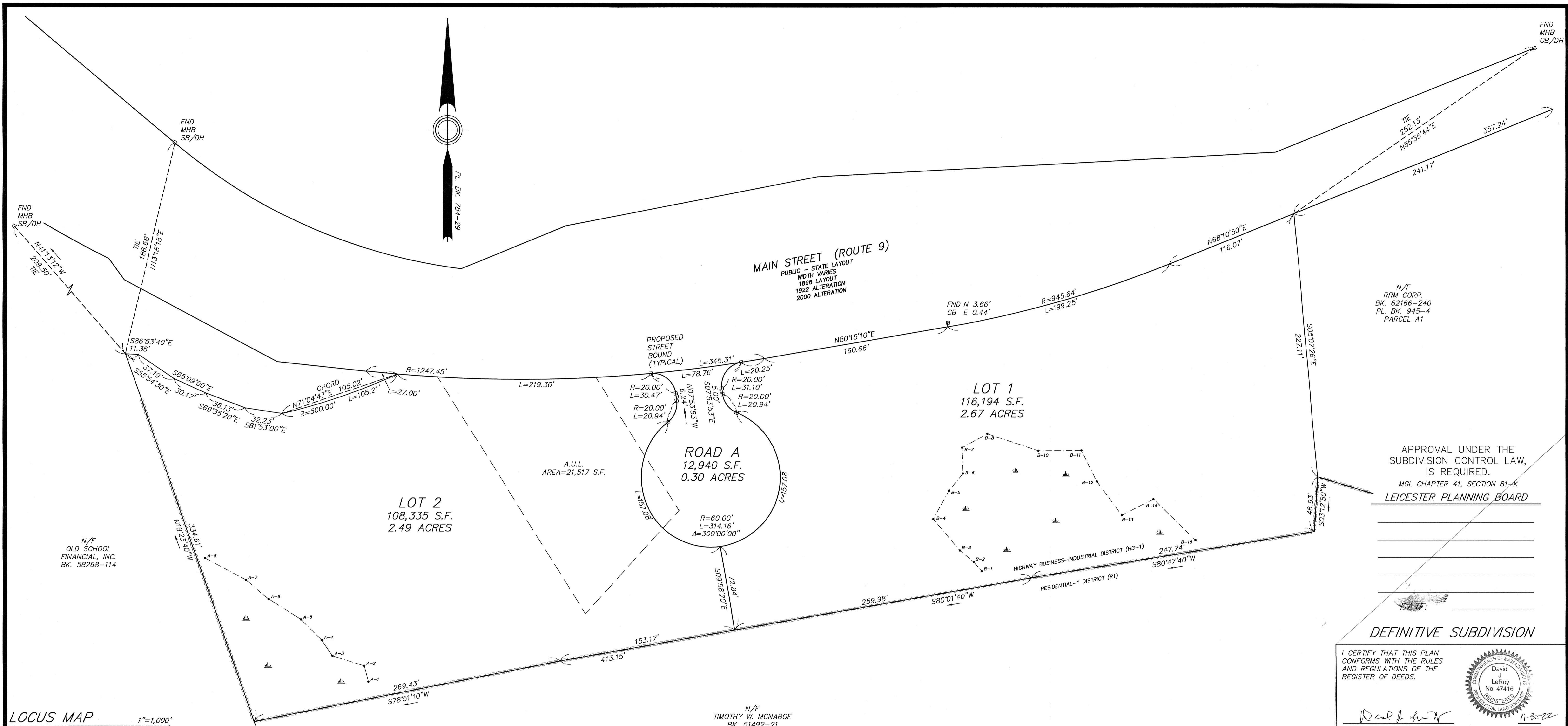
**CIVIL ENGINEER & LAND SURVEYOR:**

HANNIGAN ENGINEERING, INC.  
8 MONUMENT SQUARE  
LEOMINSTER, MASSACHUSETTS 01453  
TEL: (978) 534-1234

**PLAN INDEX**

SHEET 1	PLAN OF LAND
SHEET 2	EXISTING CONDITION PLAN
SHEET 3	DEFINITIVE SUBDIVISION PLAN
SHEET 4	ROADWAY PROFILE PLAN
SHEETS 5-6	CONSTRUCTION DETAILS

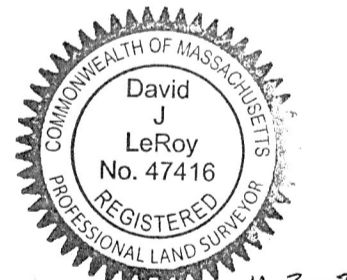
PERMITTING SET - NOT FOR CONSTRUCTION



APPROVAL UNDER THE  
SUBDIVISION CONTROL LAW,  
IS REQUIRED.  
MGL CHAPTER 41, SECTION 81-K  
**LEICESTER PLANNING BOARD**

**DEFINITIVE SUBDIVISION**

I CERTIFY THAT THIS PLAN  
CONFORMS WITH THE RULES  
AND REGULATIONS OF THE  
REGISTER OF DEEDS.



*David J. LeRoy*  
DAVID J. LEROY, PLS #47416

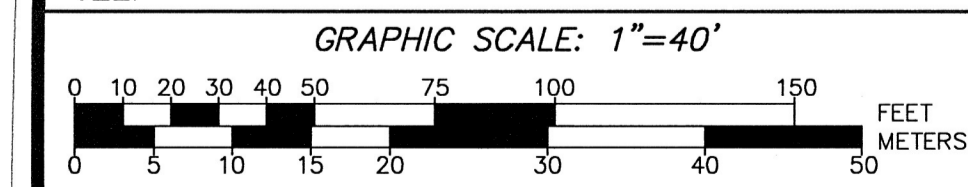
11-30-22  
DATE

**HANNIGAN  
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CIVIL ENGINEERS & LAND SURVEYORS

8 MONUMENT SQUARE (978) 534-1234 (T)  
LEOMINSTER, MASSACHUSETTS 01453 (978) 534-6060 (F)  
WWW.HANNIGANENGINEERING.COM

**PLAN OF LAND  
IN  
LEICESTER, MASSACHUSETTS**

PREPARED FOR:  
ZP BATTERY DEVCO, LLC  
BRENDAN GOVE  
10 E WORCESTER STREET SUITE 3A  
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CALC: DJL	DRWN: DJL	SCALE: 1"=40'
CHKD: CMA	APPD: DJL	DATE: NOV 30, 2022
SRV: JEF	FB: 71-22	JOB NO: 3010
TAB: DEFINITIVE	SHEET 1 OF 6	PLAN NO: C-17-38

**ZONING INFORMATION**

ZONING DISTRICT: HIGHWAY BUSINESS-INDUSTRIAL 1 (HB-1)  
DIMENSIONAL REQUIREMENTS:

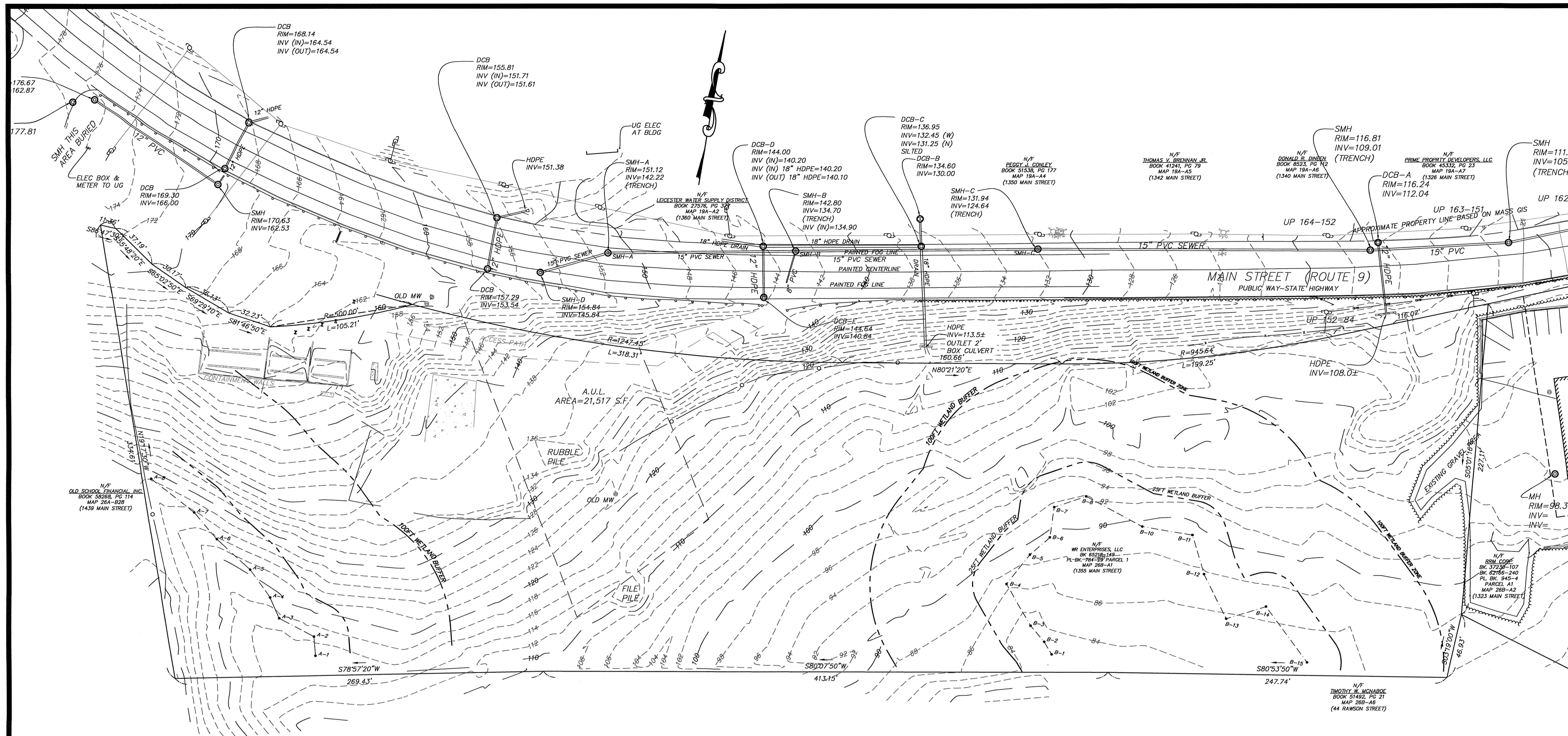
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MINIMUM FRONTAGE:	200'
MAXIMUM HEIGHT:	55'
MINIMUM SETBACKS:	
FRONT YARD:	50'
SIDE YARD:	50'
REAR YARD:	50'

**RECORD OWNER**

WR ENTERPRISES, LLC  
BK. 65218-149  
PL. BK. 784-29  
ASSESSOR'S MAP 26B PARCEL A-1  
1323 MAIN STREET  
LEICESTER, MA 01524

CLERK OF THE TOWN OF LEICESTER  
RECEIVED AND RECORDED APPROVAL FROM THE PLANNING BOARD  
OF THIS PLAN ON \_\_\_\_\_ AND NO APPEAL WAS TAKEN  
FOR TWENTY (20) DAYS THEREAFTER.

THE WETLANDS SHOWN HEREON WERE DELINEATED BY CARON ENVIRONMENTAL CONSULTING ON MARCH 26, 2021.



**PROJECT INFORMATION**

<b>LAND INFORMATION</b>	
MAP PARCEL:	269/A1
DEED BOOK-PAGE:	65218/149
EXISTING FRONTAGE:	794.29'
EXISTING AREA:	5.44 ACRES
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**DEFINITIVE PLAN**

NO.	DATE	REVISIONS	BY

David J. LeRoy  
 No. 47416  
 REGISTERED  
 PROFESSIONAL LAND SURVEYOR

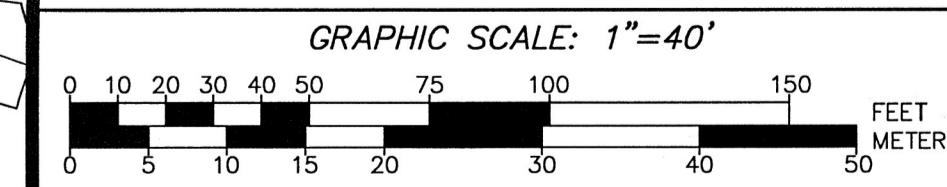
*David J. LeRoy 11-30-22*

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 LEOMINSTER, MASSACHUSETTS 01453 (978) 534-6060 (F)  
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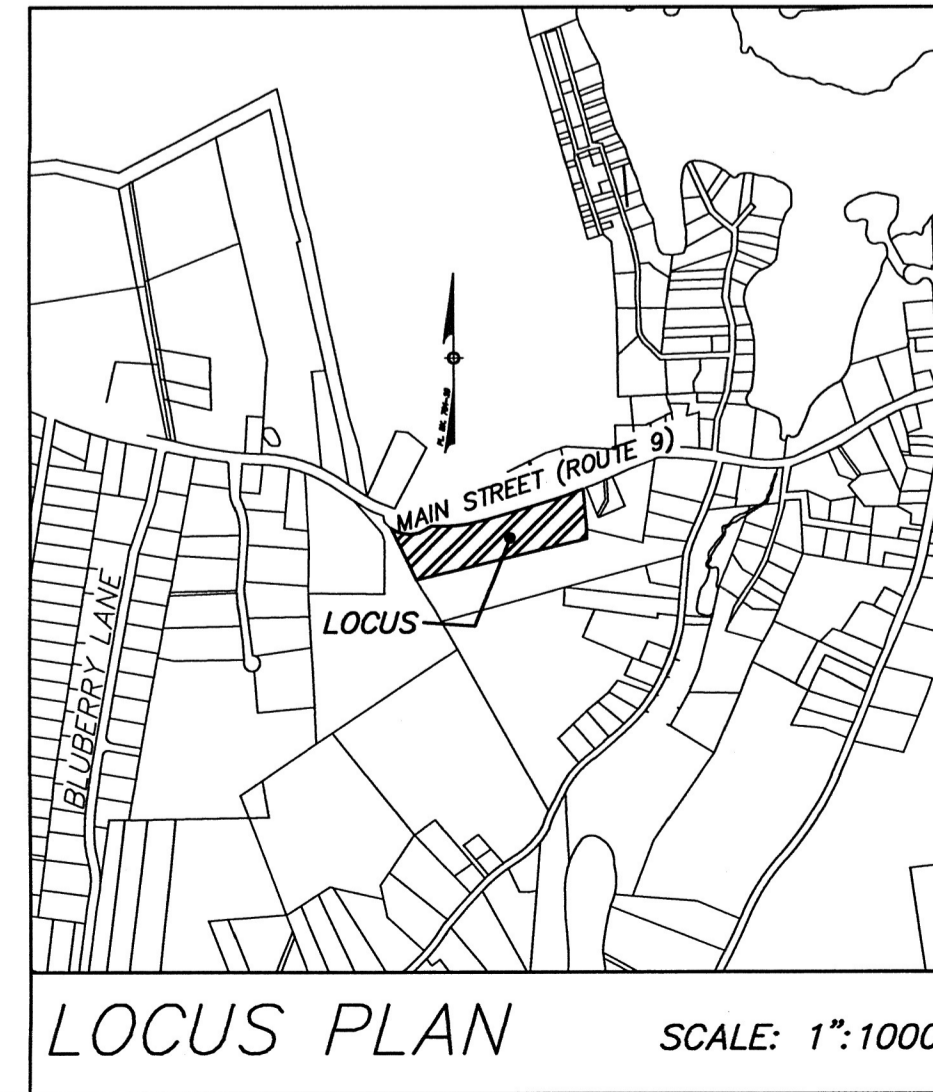
**EXISTING CONDITIONS PLAN**  
 IN  
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PREPARED FOR:  
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 BRENDAN GOVE  
 10 E WORCESTER STREET SUITE 3A  
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TAB:	(2) EXCON	SHEET:	2 OF 6	PLAN NO:	C-17-38

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 1323 MAIN STREET  
 LEICESTER, MASSACHUSETTS 01524



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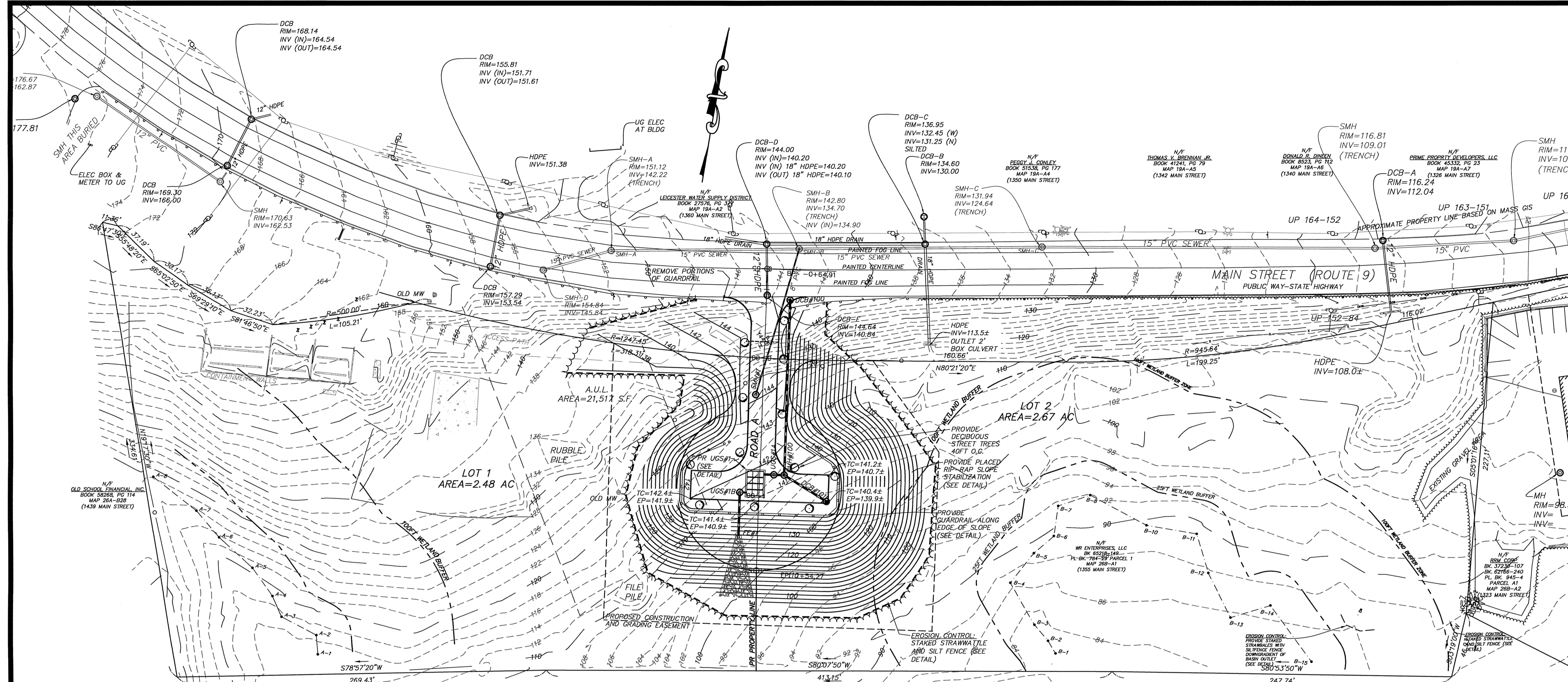
**LAND INFORMATION**

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 DEED BOOK-PAGE: 65218/149  
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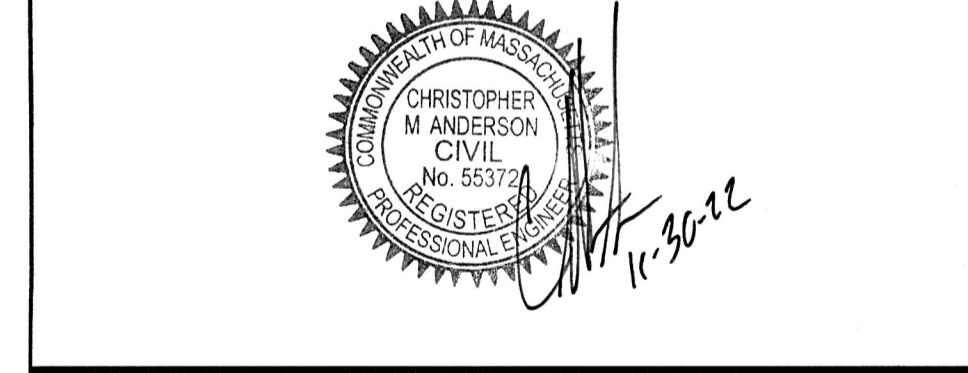
ZONING DISTRICT: HIGHWAY BUSINESS-INDUSTRIAL 1 (HB-1)  
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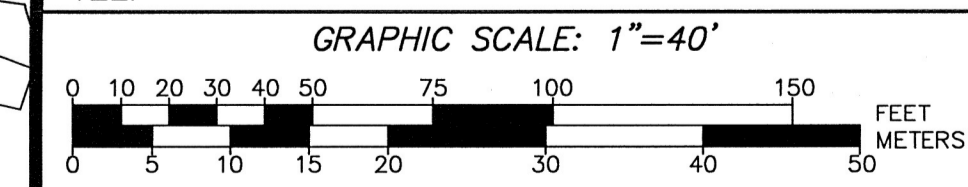


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**DEFINITIVE SUBDIVISION PLAN**  
 IN  
**LEICESTER, MASSACHUSETTS**

PREPARED FOR:  
 ZP BATTERY DEVCO, LLC  
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 TEL:



CALC: CMA	DRWN: CMA	SCALE: 1"=40'
CHKD: WDH	APPD: WDH	DATE: NOV 30, 2022
SRV: JEF	FB: 71-22	JOB NO: 3010
TAB: (3) SDP	SHEET 3 OF 6	PLAN NO: C-17-38

**SCHEDULE OF DRAINAGE STRUCTURES & ELEVATIONS**

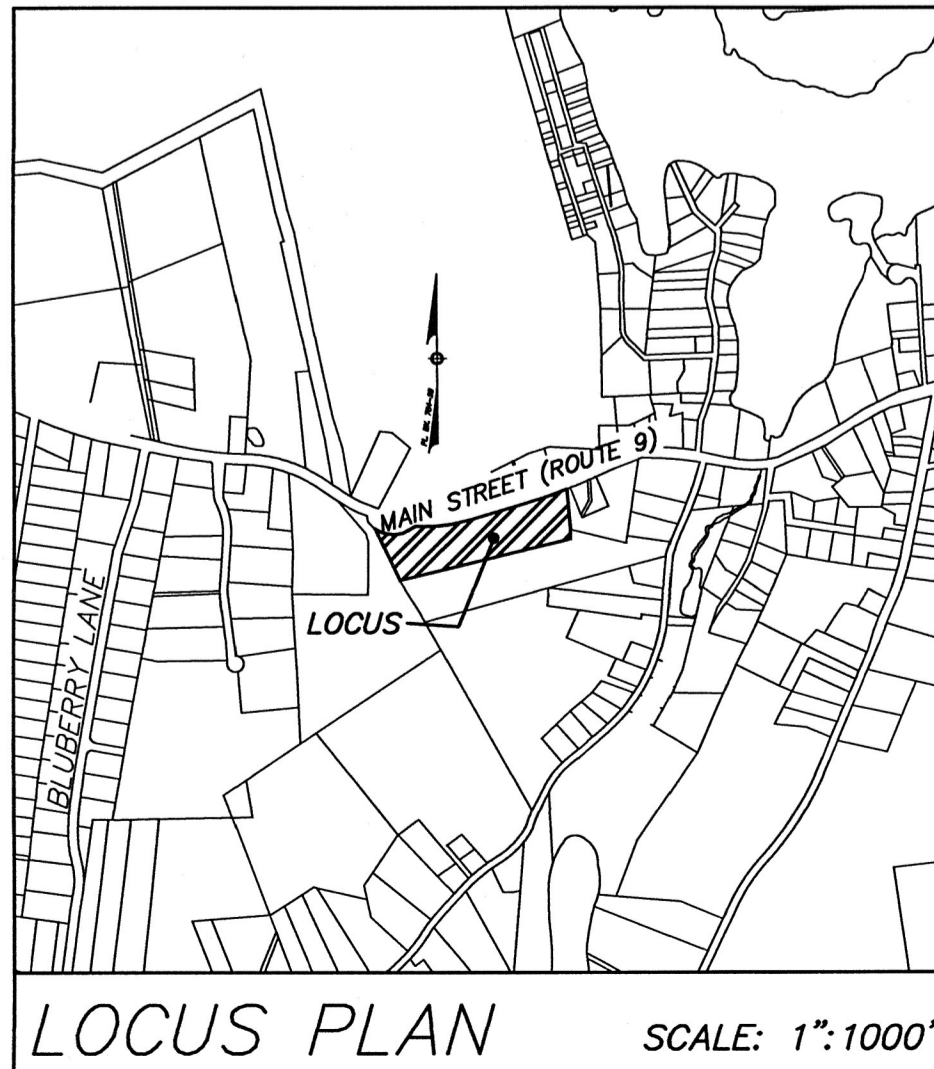
FROM	PIPE	TO
DCB#100 RIM=143.5± INV=140.5± SUMP=136.5±	12" HDPE L=127 FT S=0.035 F/F	DMH#100 WQU RIM=141.4± INV=136.0±(DCB#100) INV=136.0±(DMH#101) INV=135.75±(OUT) HYDROWORKS HG4
DCB#101 RIM=139.9± INV=136.4± SUMP=132.4±	12" HDPE L=36 FT S=0.011 F/F	DMH#100 WQU RIM=141.4± INV=136.0±(DCB#100) INV=136.0±(DMH#101) INV=135.75±(OUT) HYDROWORKS HG4
DMH#100 WQU RIM=141.4± INV=136.0±(DCB#100) INV=136.0±(DMH#101) INV=135.75±(OUT) HYDROWORKS HG4	12" HDPE L=8 FT S=0.033 F/F	UGS#1A RIM=141.6± INV=135.5±(DMH#100) SUMP=131.4±
UGS#1B RIM=141.3± INV=135.0±(6" ORIFICE) INV=131.5±(SUBDRAIN) INV=131.4± (OUT)	12" HDPE L=31 FT S=0.045 F/F	FE#1 INV=130.0±

**SCHEDULE OF SEWER STRUCTURES & ELEVATIONS**

FROM	PIPE	TO
SMH#1 RIM=144.1± INV=137.1±	8" SDR35 PVC L=111 FT S=0.020 F/F	SMH-B RIM=142.80 INV=134.70 (TRENCH) INV (N)=134.90

NOTE: CONTRACTOR SHALL DETERMINE FIELD LOCATION AND ELEVATION OF EXISTING 8" SEWER STUB PRIOR TO CONSTRUCTION.

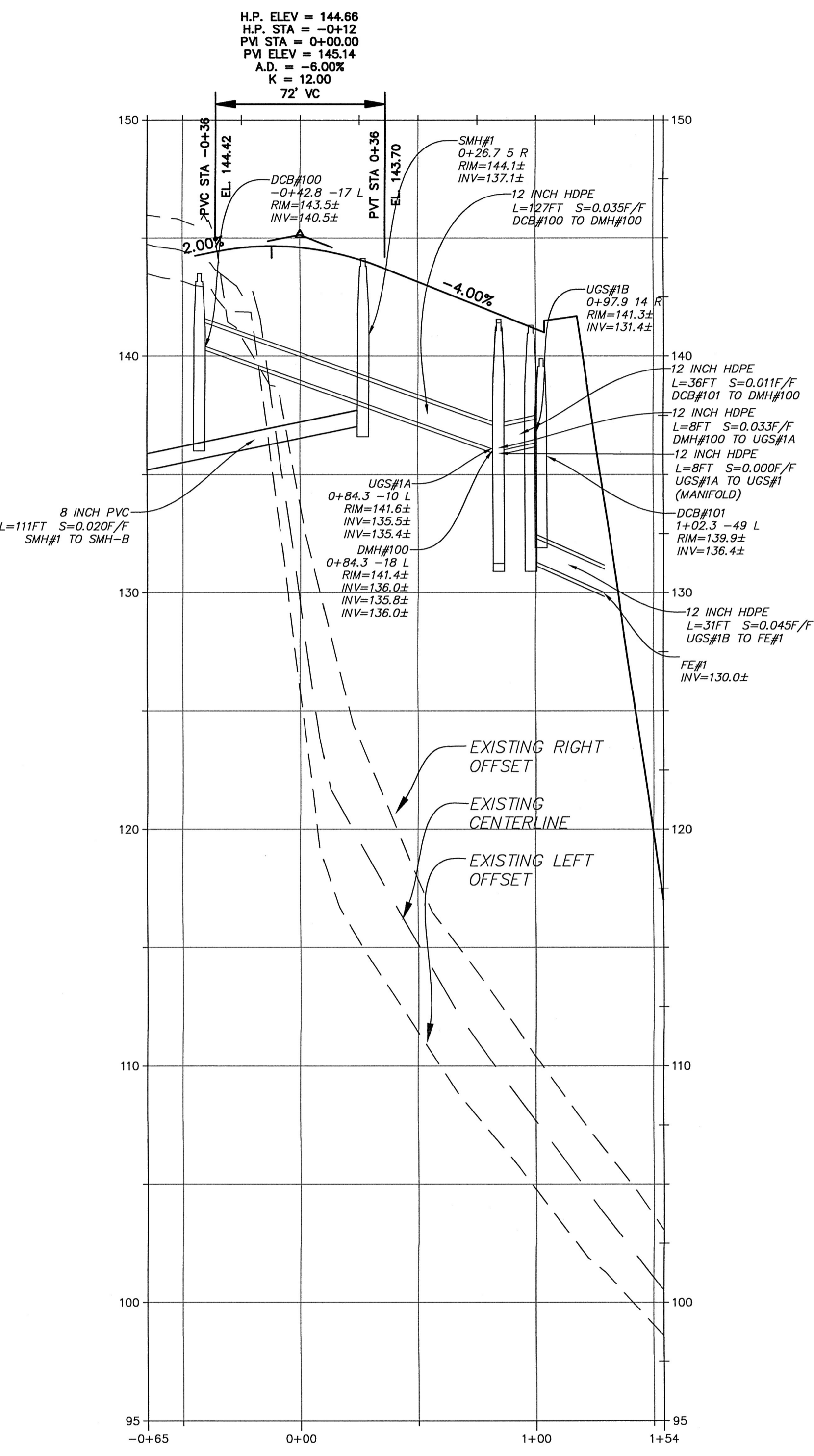
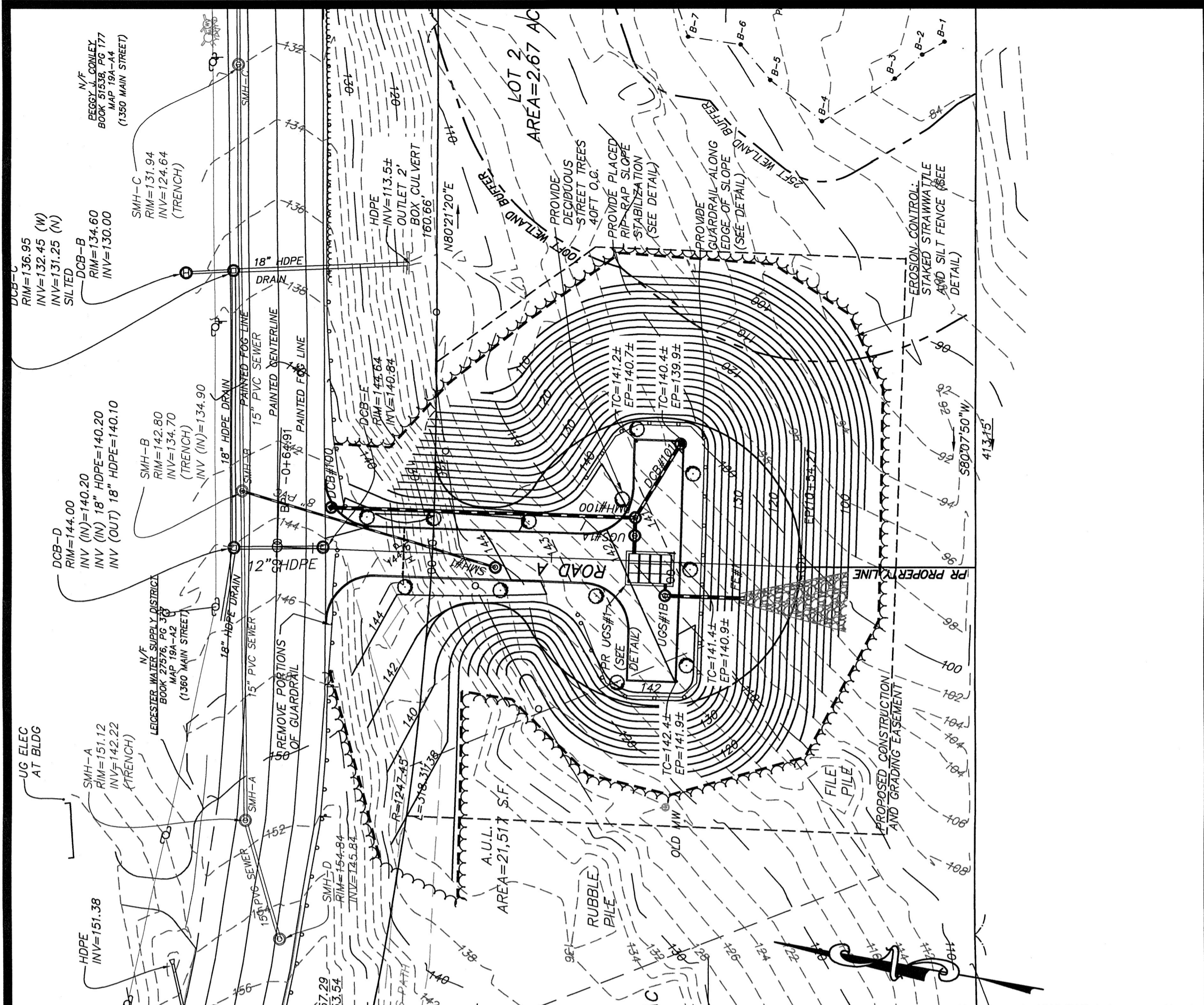
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  - PRE-CONSTRUCTION CONFERENCE SHALL BE HELD PRIOR TO THE COMMENCEMENT OF CONSTRUCTION.
  - ALL UTILITIES ARE TO BE INSTALLED BY A LICENSED UTILITY CONTRACTOR LICENSED BY THE TOWN OF LEICESTER.

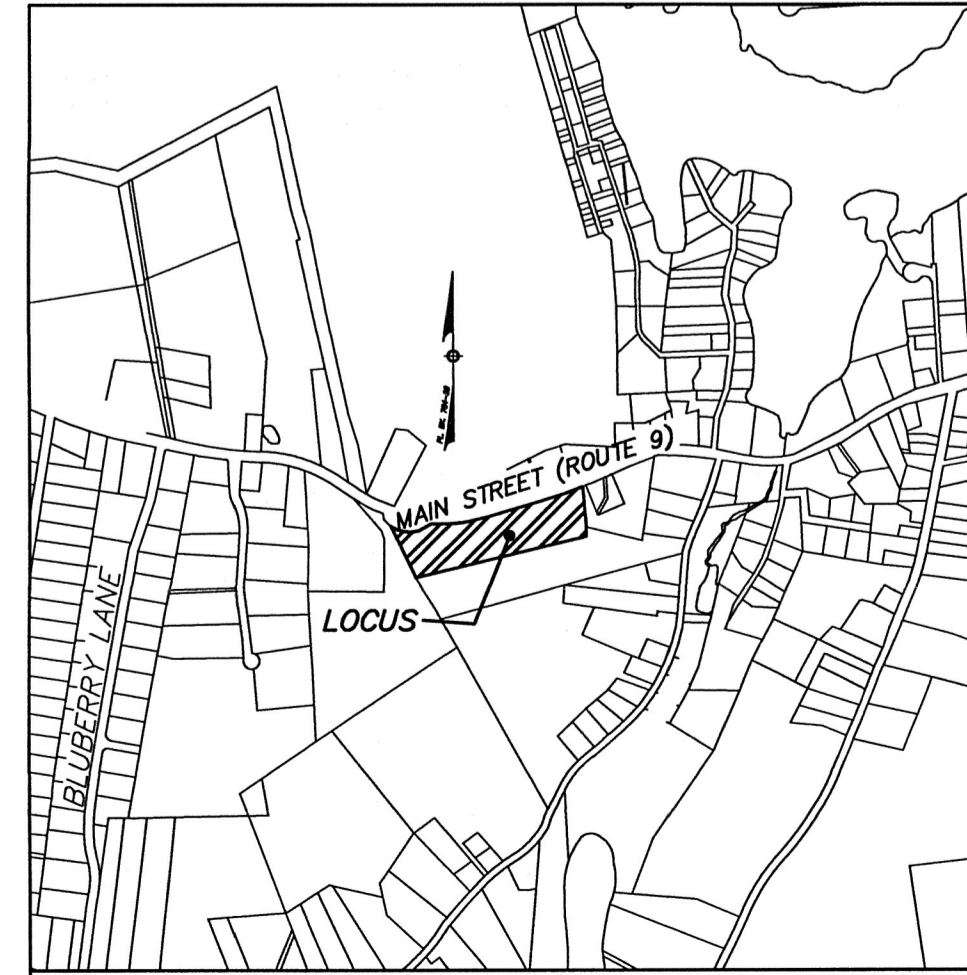


**ROADWAY PROFILE**  
HORIZONTAL SCALE: 1"=40'  
VERTICAL SCALE: 1"=4'

144.74	144.46	144.80	143.14	141.14	141.05
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**APPLICANT:**  
ZP BATTERY DEVCO, LLC  
BRENDON GOVE  
10 E. WORCESTER STREET, SUIT 3A  
WORCESTER, MASSACHUSETTS 01604

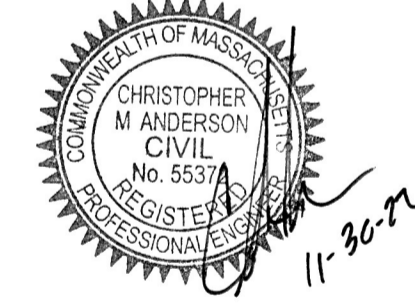
**OWNER:**  
WR ENTERPRISES, LLC  
1323 MAIN STREET  
LEICESTER, MASSACHUSETTS 01524



**LOCUS PLAN** SCALE: 1"=1000'

**DEFINITIVE PLAN**

NO.	DATE	REVISIONS	BY

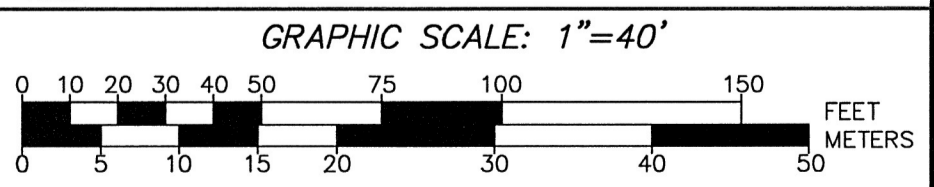


**HANNIGAN ENGINEERING, INC.**  
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LEOMINSTER, MASSACHUSETTS 01453 (978) 534-6060 (F)  
WWW.HANNIGANENGINEERING.COM

**ROADWAY PROFILE**  
IN  
LEICESTER, MASSACHUSETTS

PREPARED FOR:  
ZP BATTERY DEVCO, LLC  
BRENDAN GOVE  
10 E. WORCESTER STREET SUITE 3A  
WORCESTER, MASSACHUSETTS 01604  
TEL:



CALC: CMA	DRWN: CMA	SCALE: 1"=40'
CHKD: WDH	APPD: WDH	DATE: NOV 30, 2022
SRV: JEF	FB: 71-22	JOB NO: 3010
TAB: (4) PROF	SHEET 4 OF 6	PLAN NO: C-17-38

**EROSION & SEDIMENTATION CONTROL PLAN**

**GENERAL:**  
 1. THE PURPOSE OF THIS PLAN IS TO PRESENT A PREVENTIVE METHOD OF CONSTRUCTION TO MINIMIZE THE IMPACT OF THE CONSTRUCTION ACTIVITIES UPON WETLAND AND OTHER SENSITIVE AREAS. THE DATA CONTAINED ON THIS PLAN IS INTENDED TO SUPPLEMENT THE DEVELOPER OR CONTRACTOR'S OPERATIVE AND PERMITTING APPLICATIONS. LOGICAL DECISIONS REQUIRED BY A VARIETY OF FIELD CONDITIONS INCLUDING WEATHER AND THE TYPE OF EQUIPMENT AVAILABLE TO THE CONTRACTOR.

2. THE CONTRACTOR IS TO BE AWARE OF THE REQUIREMENTS AND OBLIGATIONS TO CHAPTER 40B OF THE MASSACHUSETTS GENERAL LAWS, OTHERWISE KNOWN AS THE WETLANDS PROTECTION ACT, AND ITS ASSOCIATED REGULATIONS (310 CMR 10.00). CERTAIN PERMITS IN THE FORM OF AN ORDER OF CONDITIONS, OR OTHER FORMAT, MAY BE REQUIRED FOR THE CONSTRUCTION AS DEPICTED ON THIS PLAN. THESE PERMITS SHALL BE REVIEWED AND ADHERED TO BY THE CONTRACTOR THROUGHOUT THE CONSTRUCTION PROCESS. THE CONTRACTOR SHALL ALSO MAINTAIN COPIES OF ALL PERMITS ON SITE AT ALL TIMES.

3. IF CHANGES IN THE PROJECT ARE REQUIRED DUE TO FIELD CONDITIONS THE DEVELOPER/CONTRACTOR SHALL PROMPTLY NOTIFY THE ENGINEER FOR REVIEW OF THESE CONDITIONS. UPON REVIEW, AND PRIOR TO THE IMPLEMENTATION OF ANY CHANGE, THE CONTRACTOR AND THE ENGINEER SHALL MEET WITH THE APPROPRIATE LOCAL AND/OR STATE OFFICIAL, OR ITS AGENT, TO DETERMINE IF THE CHANGE REQUIRES MODIFICATION TO EXISTING APPROVED PERMITS.

4. ALTERATION AND/OR DESTRUCTION OF WETLAND AREAS WITHOUT PRIOR CONSENT OF THE CONSERVATION COMMISSION IS PROHIBITED. SILTATION PLUMES, ILGIT DISCHARGES, OR INADVERTENT ALTERATION SHALL BE CONSIDERED AS ACTIVITIES NOT PERMITTED BY THE ORDER AND SHALL BE REPORTED TO THE CONSERVATION COMMISSION ALONG WITH THE PROPOSED MITIGATIVE MEASURES.

5. PRIOR TO THE COMMENCEMENT OF CONSTRUCTION, THE EROSION AND SEDIMENT CONTROL BARRIER SHALL BE INSTALLED AS SHOWN ON THE PLANS. THE CONTRACTOR SHALL MAINTAIN THE EROSION CONTROL BARRIER UNTIL ALL WORK IS COMPLETE, AND ALL AREAS HAVE BEEN STABILIZED. THE REMOVAL OF SEDIMENT CONTROL DEVICES SHALL BE ONLY UPON THE APPROVAL OF THE CONSERVATION COMMISSION.

6. EROSION AND SEDIMENTATION CONTROL DEVICES, SUCH AS CHECK DAMS, SEDIMENT BASINS, ETC. ARE TO BE INSTALLED AS SHOWN ON THE SITE DEVELOPMENT PLANS WITH ASSOCIATED DETAILS, AS APPROPRIATE.

7. CONSTRUCTION OPERATIONS SHALL NOT CAUSE NOTICEABLE SEDIMENTATION PLUMES TO OCCUR ON OR SURROUNDING THE PROJECT. SHOULD SEDIMENT EXTEND BEYOND THE EROSION CONTROL BARRIERS, THE CONTRACTOR SHALL STOP WORK AND INSTALL ADDITIONAL MITIGATIVE MEASURES TO PREVENT FURTHER SEDIMENTATION.

8. NO MATERIAL SUBJECT TO EROSION SHALL BE STOCKPILED OVERNIGHT WITHIN 100 FEET OF ANY WETLAND AREAS WITHOUT PROPER EROSION AND SEDIMENTATION DEVICES IN PLACE.

9. EQUIPMENT SHALL NOT BE PARKED WITHIN WETLAND OR BUFFER AREAS EXCEPT DURING ACTUAL OPERATIONS REQUIRING SAID EQUIPMENT.

10. ACCUMULATED SEDIMENT ALONG EROSION CONTROL BARRIERS SHALL BE PERIODICALLY REMOVED AND DISPOSED OF BY THE CONTRACTOR AS REQUIRED BY THE CONSERVATION COMMISSION OR AS DIRECTED BY THE ENGINEER.

**EROSION CONTROL METHODS:**

1. IT IS OF GREAT IMPORTANCE THAT CONCENTRATION OF RUNOFF BE AVOIDED IN ORDER TO PREVENT THE TRANSPORT OF SEDIMENT.

2. THE PRIMARY EROSION CONTROL METHOD TO BE UTILIZED IS TO LIMIT THE AREA OF DISTURBANCE DURING CONSTRUCTION ACTIVITIES. THIS IS ACCOMPLISHED BY PROMPT STABILIZATION OF DISTURBED AREAS UPON COMPLETION OF SEQUENCES OF CONSTRUCTION.

3. EROSION AND SEDIMENT CONTROL DEVICES SUCH AS HAY BALES, SILT FENCES, DIVERSION BERMS, ETC. SHALL BE UTILIZED FOR THE PROTECTION OF THE AREAS BEYOND THE LIMIT OF CONSTRUCTION.

**DEMARICATION OF SENSITIVE AREAS:**

1. IT IS RECOMMEND THAT BARRIERS BE PLACED ON THE SITE TO CONTROL THE LIMITS OF THE DISTURBANCE. AS AN EXAMPLE, HAY BALE BARRIERS PROVIDE SUCH DEMARICATION AND OTHER METHODS SUCH AS LOG BARRIERS, ROPE WITH FLAGGING, ETC. MAY BE UTILIZED.

2. CARE SHOULD BE TAKEN IN THE OPERATION OF EQUIPMENT, SUCH THAT ONLY THE MINIMUM AREA NEEDED TO BE ALTERED IS DISTURBED.

3. ACCESS TO THE SITE SHALL BE MADE IN THE AREA OF A PERMANENT DRIVEWAY OR ROADWAY UNLESS DOING SO WOULD RESULT IN A TRAFFIC HAZARD.

4. AN AREA OF CRUSHED STONE SHALL BE PLACED AT THE DRIVEWAY ENTRANCE TO INSURE THAT MUD IS NOT TRACKED ONTO THE EXISTING ROAD (SEE CONSTRUCTION ENTRANCE DETAIL). IF MUD IS INADVERTENTLY TRACKED ONTO THE ROAD, IT SHOULD BE PROMPTLY REMOVED.

5. LABORERS VEHICLES SHALL BE PARKED IN A DESIGNATED AREA AS TO MINIMIZE DISTURBED SURFACES AND TO INSURE THAT RUTS ARE NOT CREATED AND WHICH COULD CARRY WATER TO A WETLAND OR OTHER SENSITIVE AREA.

6. SUITABLE MEASURES SHALL BE TAKEN TO INSURE THAT LARGE DELIVERY TRUCKS SERVICING THE SITE DO NOT DAMAGE TO AREAS OF EXISTING VEGETATION OR CAUSE DISTURBANCE TO STABILIZED AREAS.

**ORDERLY CONSTRUCTION PROCEDURES:**

1. THE CONTRACTOR SHALL PERFORM SITE CONSTRUCTION IN A MANNER WHICH WILL INSURE THE STABILIZATION OF AREAS IN PROXIMITY OF OR TRIBUTARY TO WETLAND AREAS AS SOON AS POSSIBLE.

2. EROSION CONTROL DEVICES SUCH AS HAY BALE BARRIERS, SILT FENCES AND MULCH SHALL BE BROUGHT TO THE SITE AND STOCKPILED PRIOR TO INITIATING CONSTRUCTION.

3. THE CONTRACTOR SHALL PROVIDE AREAS FOR THE TEMPORARY STORAGE OF CONSTRUCTION DEBRIS. CONSTRUCTION DEBRIS SHALL NOT BE ALLOWED TO ACCUMULATE FOR AN EXTENDED PERIOD OF TIME.

**CLEARING:**

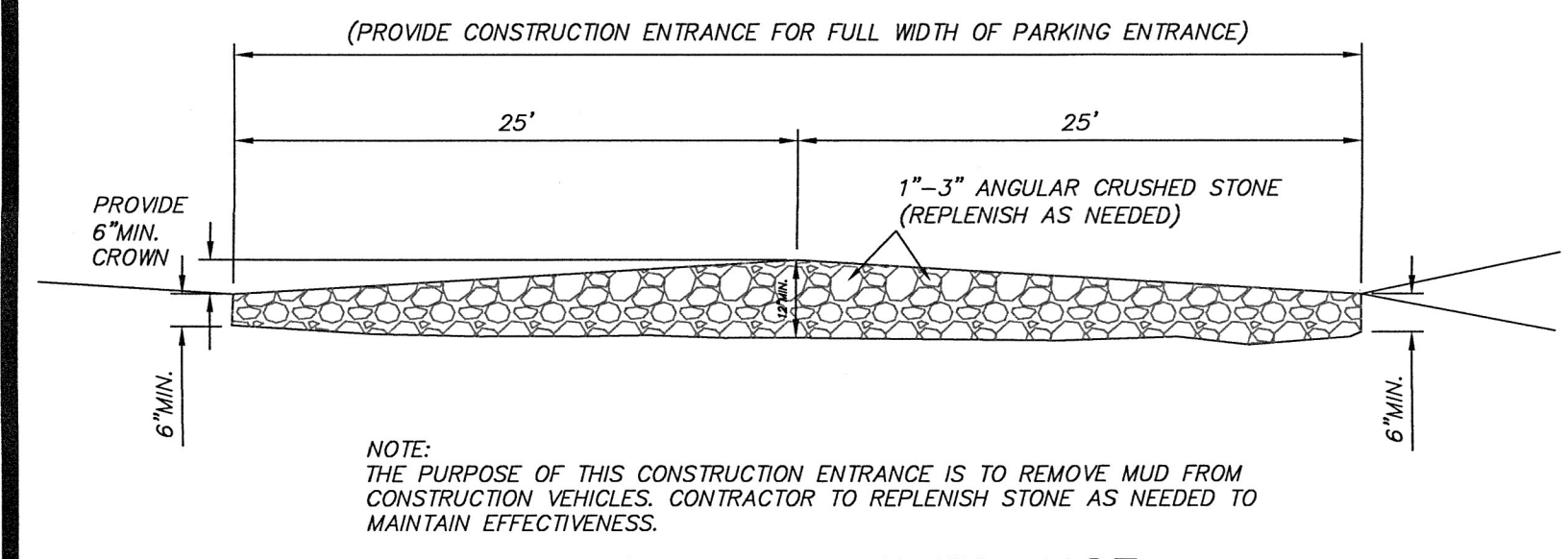
1. LAND CLEARING SHALL BE PERFORMED IN PHASES CONSISTENT WITH ACTUAL CONSTRUCTION REQUIREMENTS. FINAL LAND CLEARING SHALL BE LIMITED TO RETURN TO GRADE SLOPES.

2. TREES SHALL BE CUT FOR ENTIRE SITE LEAVING HUMPS IN PLACE TO MAINTAIN SOIL STABILIZATION.

3. STUMPS SHALL BE PULLED AND STOCKPILED FOR GRINDING.

4. BRUSH AND BRANCHES SHOULD BE CHIPPED AND UTILIZED FOR WOOD MULCH IF PRACTICAL.

5. VEHICLES UTILIZED IN THE CLEARING OPERATION SHOULD NOT TRAVERSE WETLANDS OR FLOWING BROOKS OR STREAMS WITHOUT PRIOR APPROVAL FROM THE LOCAL CONSERVATION COMMISSION OR AGENT.



**ROUGH GRADING:**

1. THE ROUGH GRADING OF THE SITE SHALL FOLLOW THE FILL AND EXCAVATION SEQUENCES AS DESCRIBED ON THE CONSTRUCTION PHASING PLANS. SLOPES SHALL BE MAINTAINED AWAY FROM WETLANDS AND SENSITIVE AREAS AS MUCH AS IS PRACTICAL.

2. DURING THIS PROCESS THE EROSION POTENTIAL IS HIGH. SUFFICIENT EROSION CONTROL BARRIERS SHOULD BE KEPT IN PROXIMITY TO THE WORK AREA TO ALLOW QUICK ACTION SHOULD EROSION BECOME AN ISSUE AND TO INSURE THAT NO SEDIMENT REACHES WETLANDS OR OTHER SENSITIVE AREAS.

3. IN AREAS OF CUT AND/OR FILL WHERE SLOPES COULD DIVERT WATER TOWARD WETLAND AREAS, DIVERSION TRENCHES AND/OR SWALES SHOULD BE CONSIDERED AND IMPLEMENTED TO DIVERT WATER AWAY FROM THESE AREAS.

4. STEEP SIDE SLOPES IN EXCAVATION OR FILL SHOULD BE AVOIDED.

5. DISTURBED AREAS SHALL BE STABILIZED BY LOAMING AND SEEDING OR RIPRAPPED IMMEDIATELY AFTER THE FINISH GRADE HAS BEEN MET. IF FINAL GRADING DOES NOT OCCUR DURING THE GROWING SEASON, THESE AREAS SHALL BE MULCHED WITH HAY WITH A TACKIFIER, IF NECESSARY SLOPED AREAS MAY REQUIRE ADDITIONAL CONTROLS SUCH AS EROSION CONTROL SOCKS OR HAYBALES.

6. A GROUND COVER SUFFICIENT TO RETAIN SOILS IN A STABILIZED CONDITION MUST BE PROVIDED WITHIN 14 WORKING DAYS, SEASON PERMITTING, ON ANY PORTION OF THE TRACT UPON WHICH FURTHER ACTIVE CONSTRUCTION IS NOT BEING UNDERTAKEN.

**DRAINAGE:**

1. IF DRAINAGE PIPES OR SWALES ARE TO BE INSTALLED, THEY SHALL BE CONSTRUCTED FROM DOWNSTREAM UP AND CONSTRUCTION SHALL INCLUDE THE PLACEMENT OF OUTFALL RIPRAP AND OTHER MITIGATIVE MEASURES SHOWN ON THE PLAN.

2. PRIOR TO THE COMMENCEMENT OF CONSTRUCTION, HAY BALES OR OTHER SUITABLE METHODS TO ENTRAP SEDIMENT SHALL BE PLACED DOWNSTREAM.

3. THE TOE OF EMBANKMENTS SHALL BE STABILIZED IMMEDIATELY, MULCHED AND TACKED DOWN BY SUITABLE MEANS.

**GRUBBING AND STRIPPING:**

1. TOP SOIL SHALL BE RETAINED AND STOCKPILED FOR LANDSCAPING PURPOSES.

2. GRUBBING AND STRIPPING OF SLOPES LEADING TO WETLAND AREAS SHOULD NOT BE UNDERTAKEN DURING PERIODS OF INTENSE RAINFALL.

3. TOP SOIL STOCKPILE LOCATIONS ARE DEPICTED ON THE SITE DEVELOPMENT PLAN, THE EROSION CONTROL PLAN, AND/OR THE CONSTRUCTION PHASING PLAN AND SHALL BE ADHERED TO.

4. WHEN WORKING IN THE VICINITY OF WETLANDS, TOP SOIL SATURATED WITH WATER SHALL BE REMOVED, AND CONTAINED PRIOR TO BEING USED.

5. AREAS LEADING TO WETLANDS SHALL HAVE HAY BALE BARRIERS INSTALLED ACROSS THEM IN AREAS POINTING DOWN THE HILL AT INTERVALS SUFFICIENT TO MITIGATE RUNOFF CARRYING SEDIMENT.

6. DURING PERIODS OF INTENSE RAINFALL, OR IF THE PROJECT IS TO BE LEFT FOR A PERIOD OF TIME, CONSIDERATION SHOULD BE GIVEN TO SUPPLEMENT HAY BALE BARRIERS WITH EITHER CRUSHED STONE OR ARMORED BARRIERS. CONSIDERATION MAY ALSO BE GIVEN TO DIVERTING RUNOFF INTO TEMPORARY SEDIMENTATION CONTROL AREAS.

7. WHENEVER PRACTICAL, NATURAL VEGETATION SHALL BE RETAINED, PROTECTED AND SUPPLEMENTED.

8. DURING PERIODS OF INTENSE RAINFALL, OR IF THE PROJECT IS TO BE LEFT FOR A PERIOD OF TIME, CONSIDERATION SHOULD BE GIVEN TO SUPPLEMENT HAY BALE BARRIERS WITH EITHER CRUSHED STONE OR ARMORED BARRIERS. CONSIDERATION MAY ALSO BE GIVEN TO DIVERTING RUNOFF INTO TEMPORARY SEDIMENTATION CONTROL AREAS.

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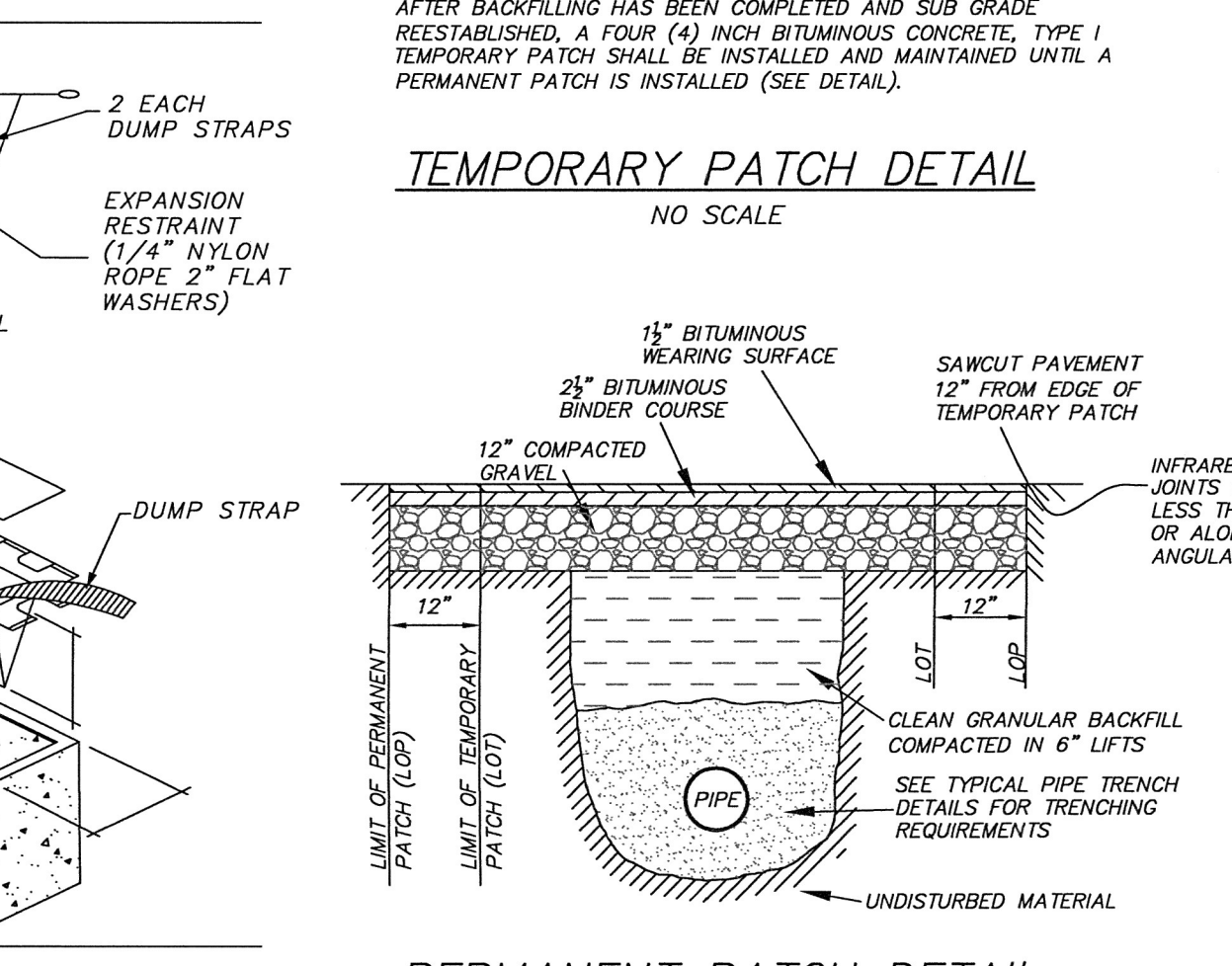
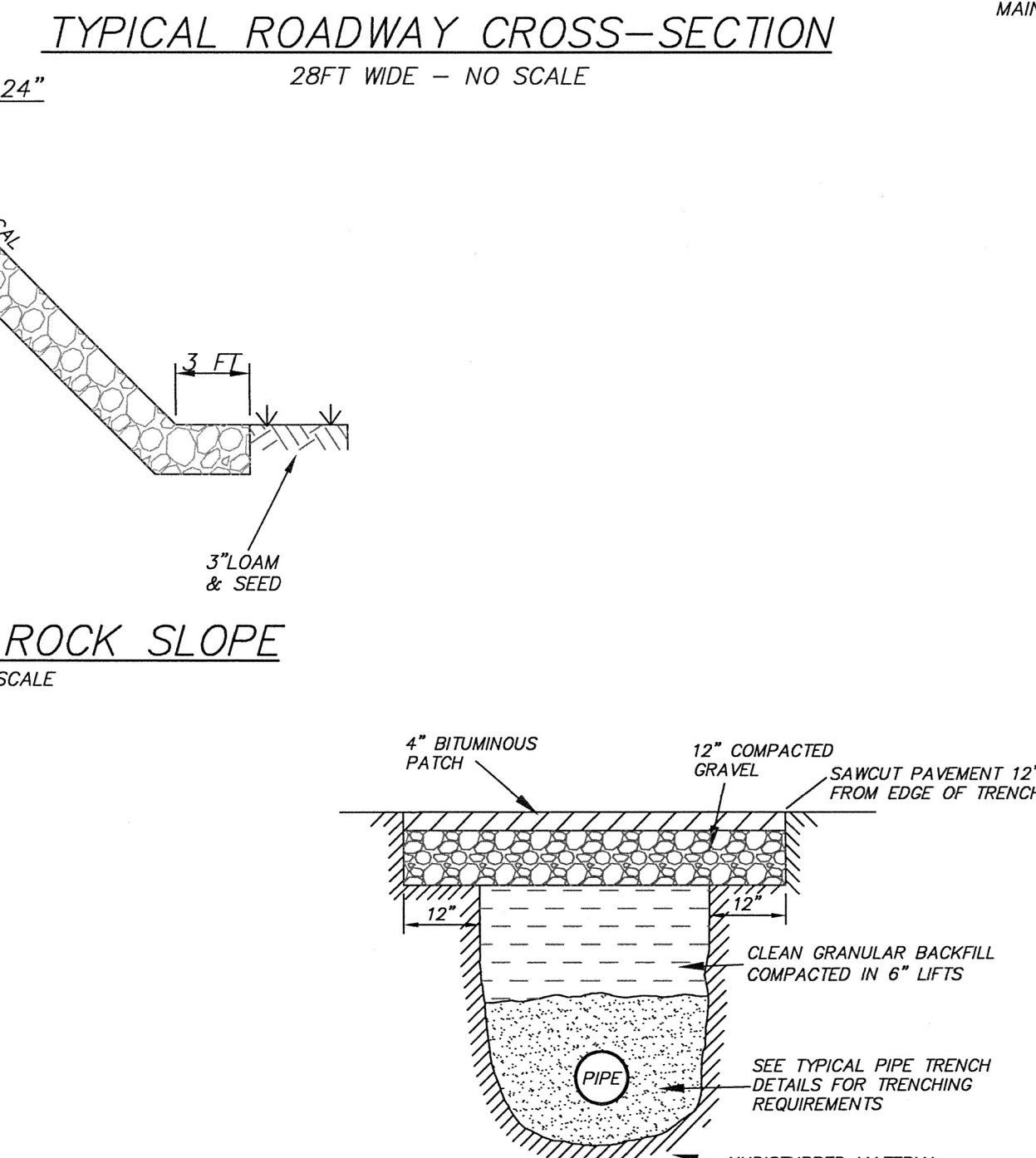
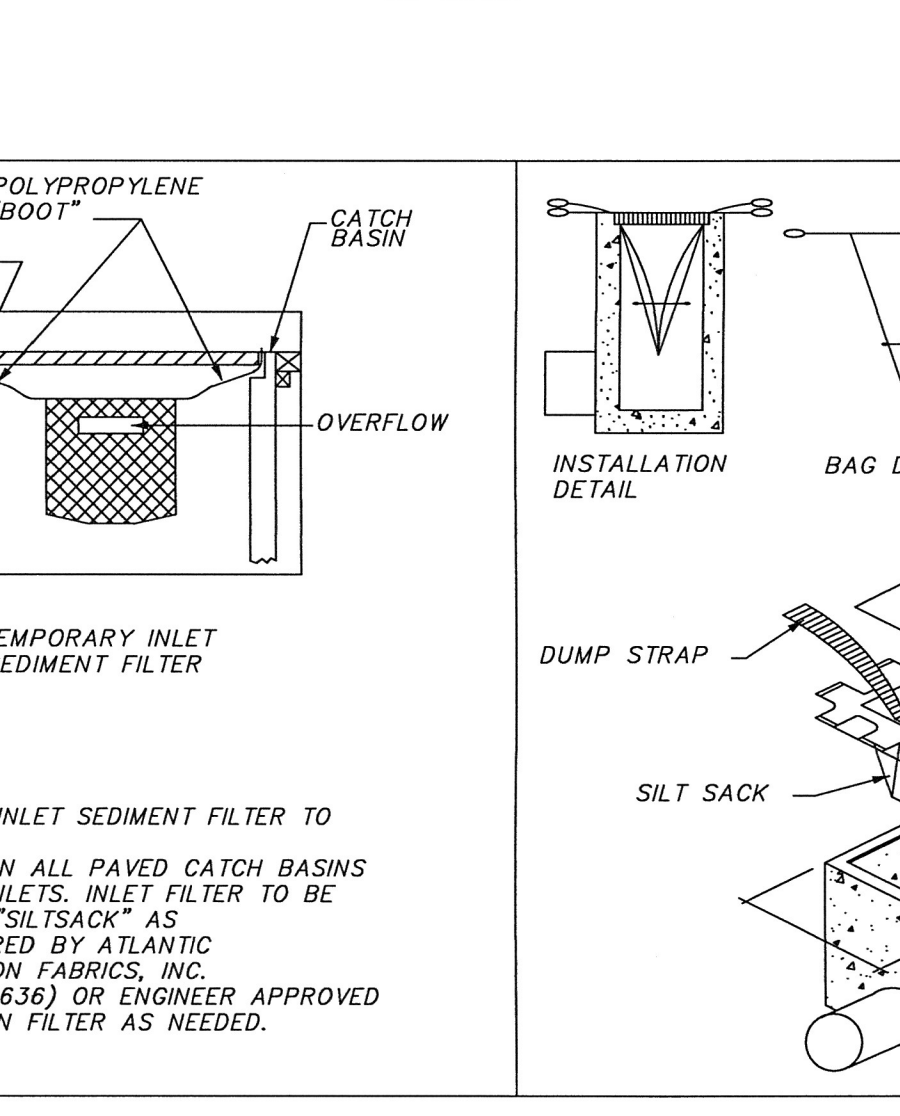
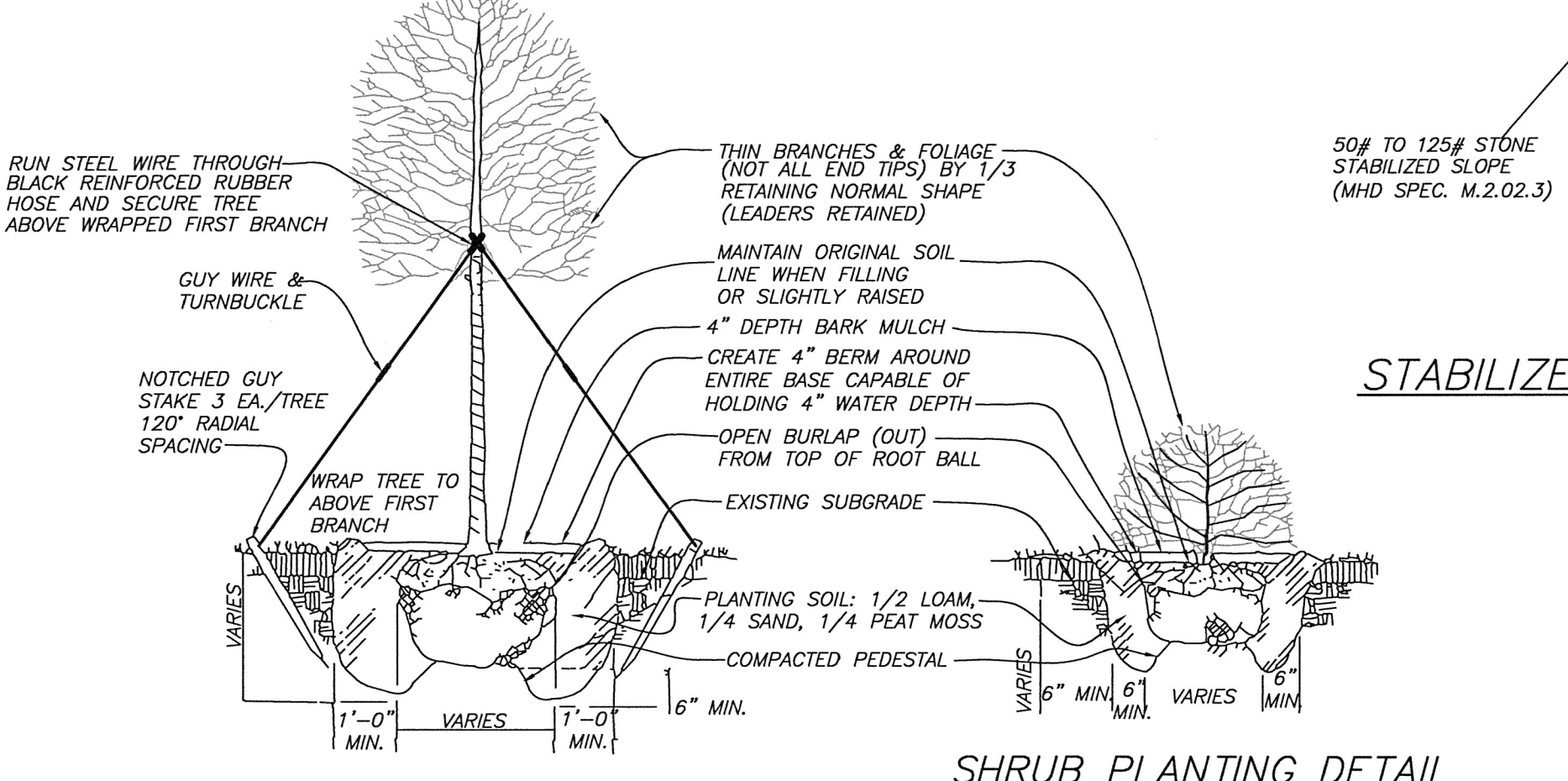
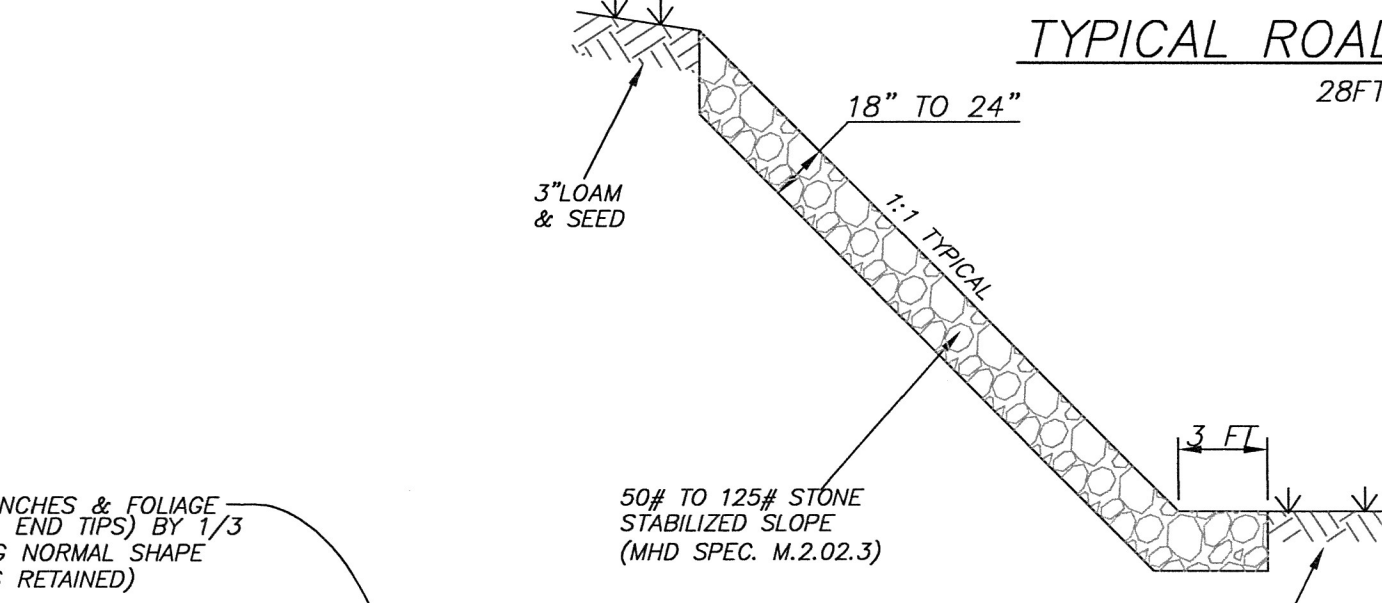
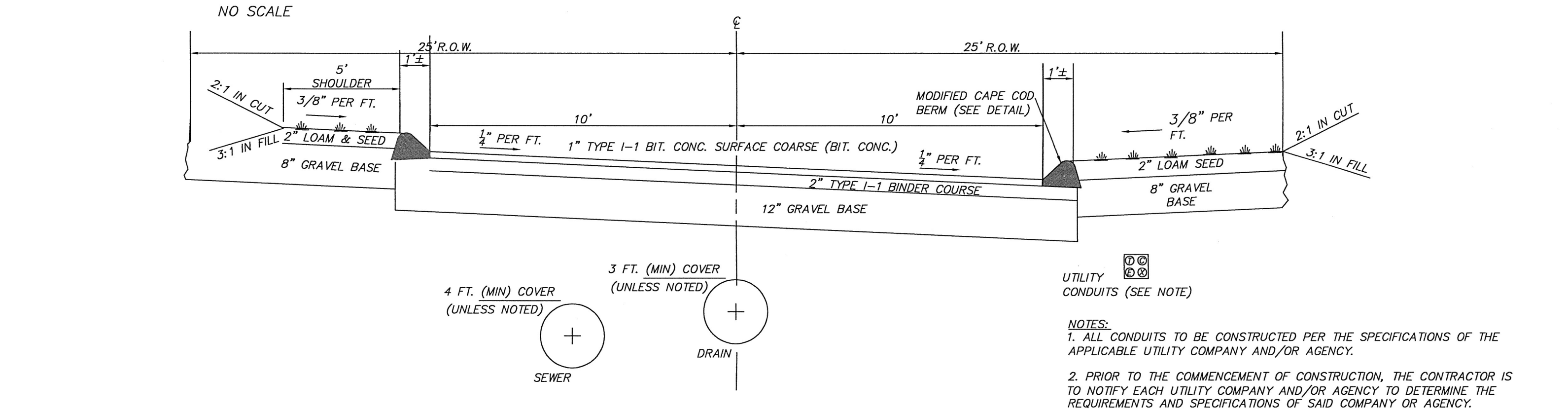
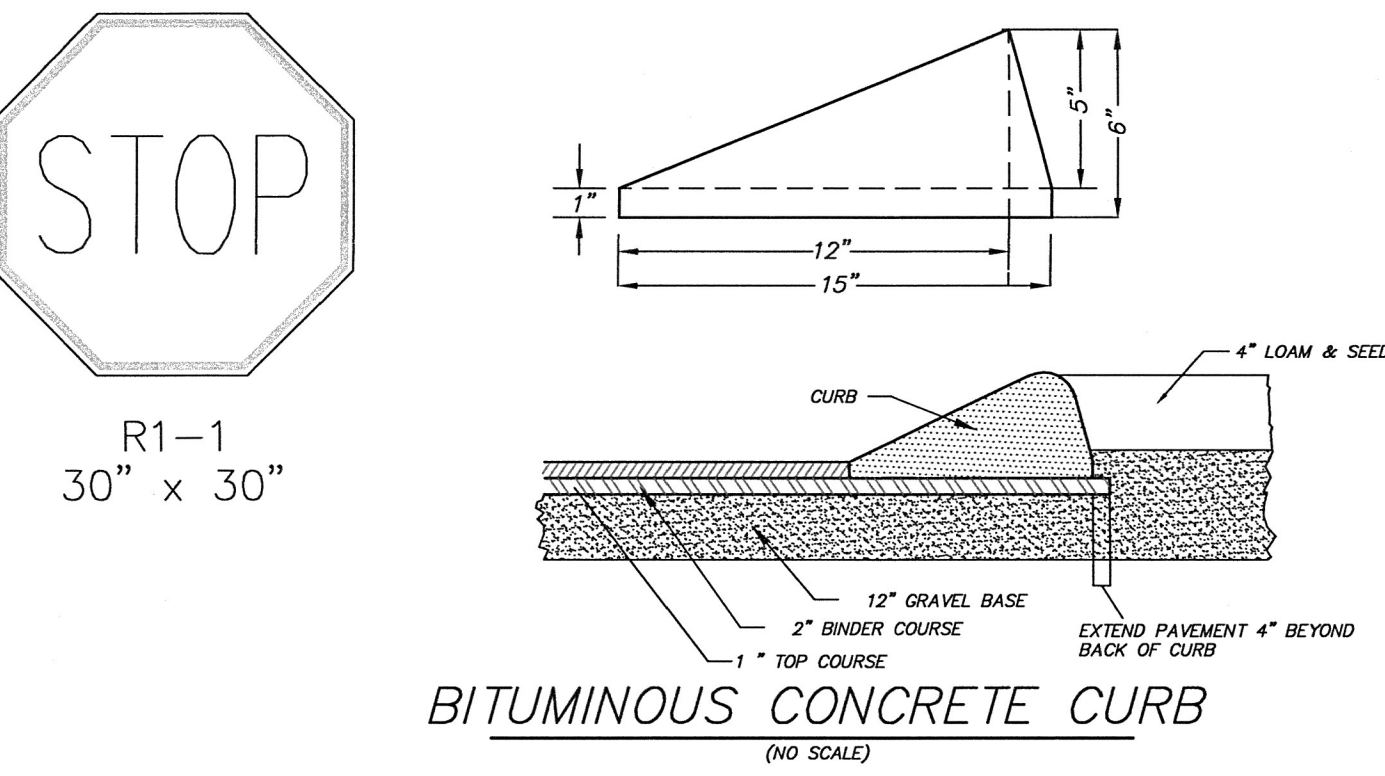
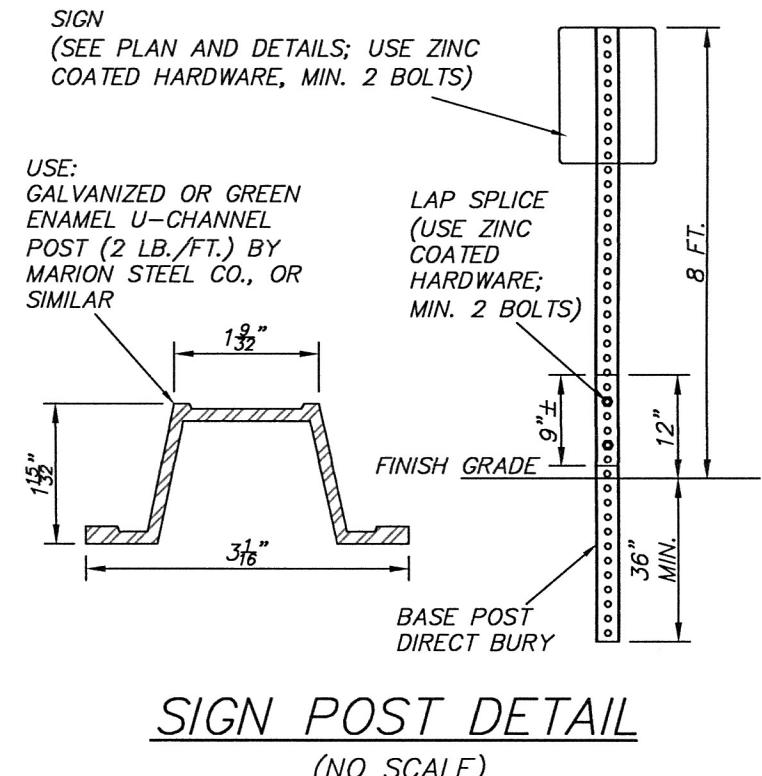
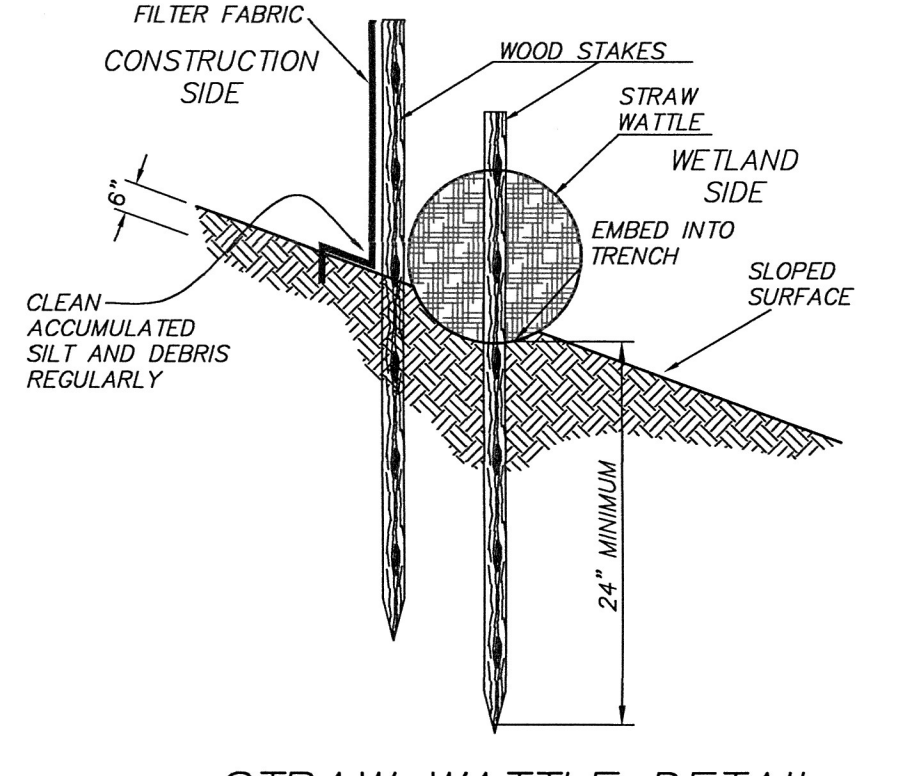
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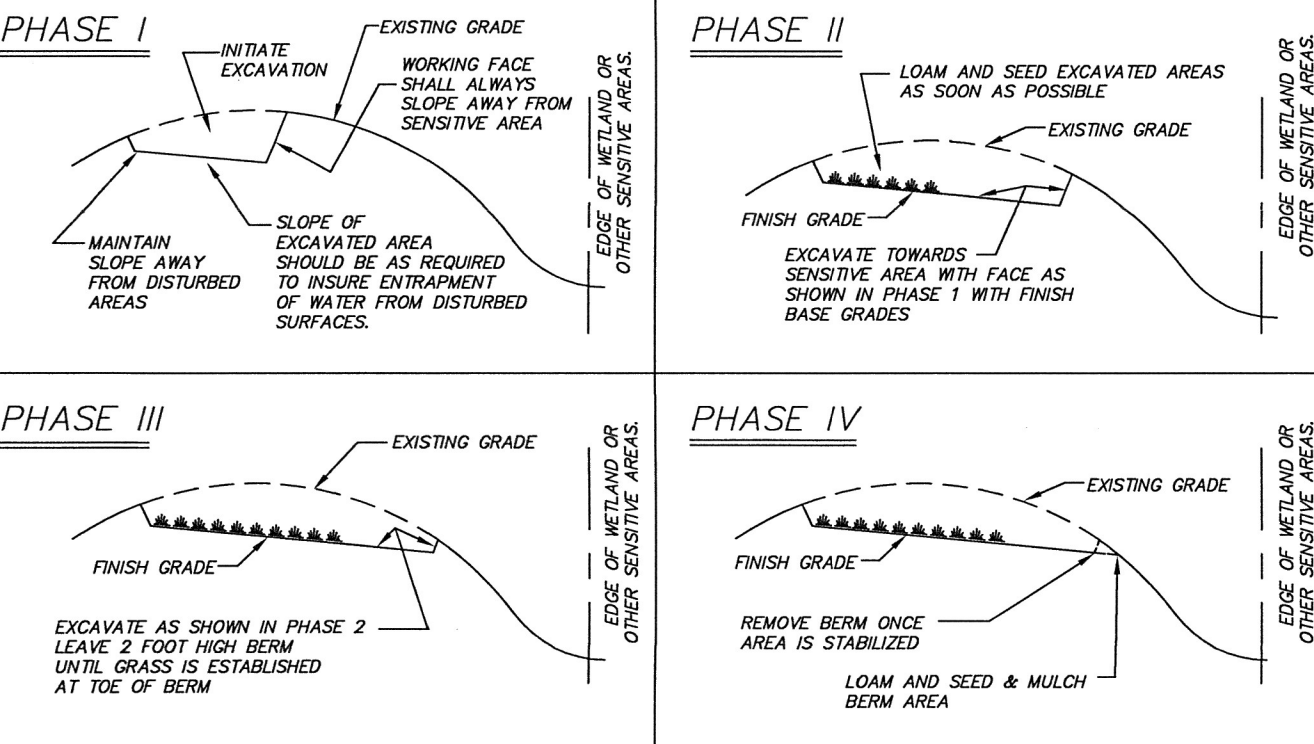
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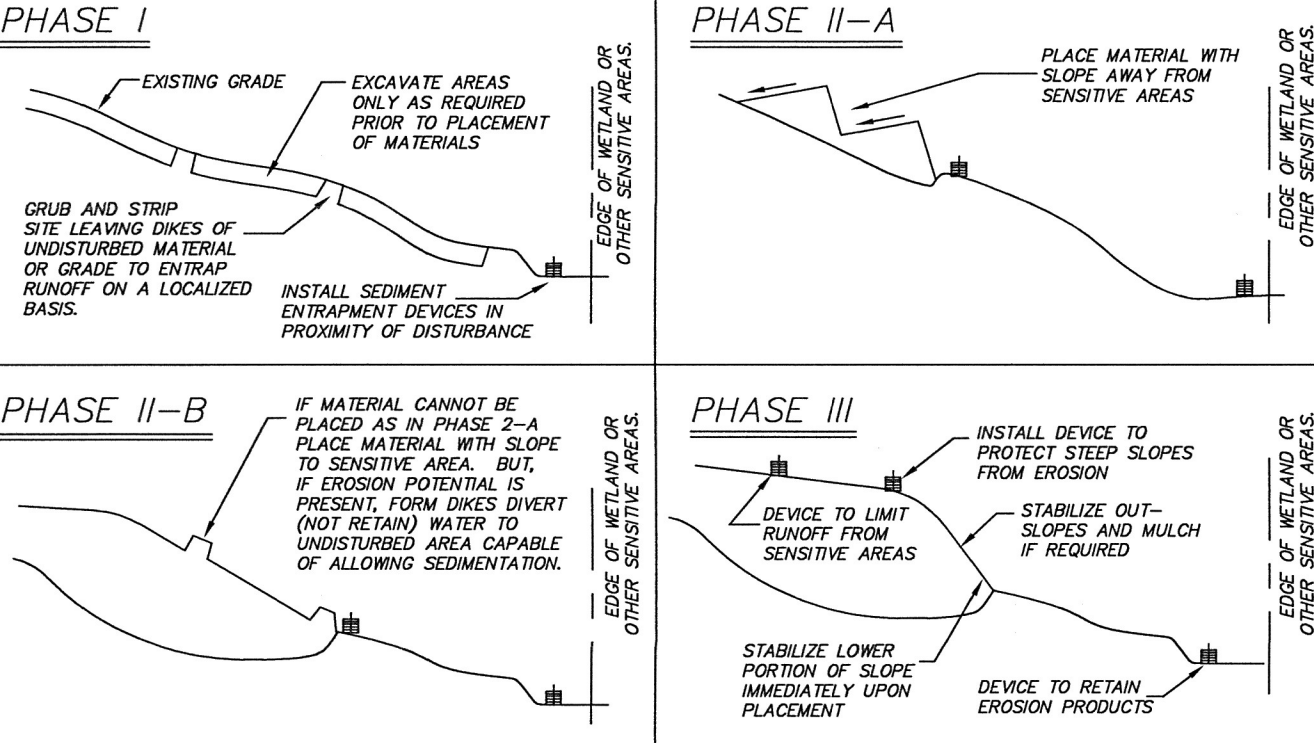
**TRENCH PATCHING NOTES:**

- UPON COMPLETION OF THE TRENCH/UTILITY INSTALLATION WORK, AND ONLY AFTER REQUIRED BACKFILLING AND COMPACTION HAS BEEN ACHIEVED, SHALL ROAD PATCHING OPERATIONS BEGIN. IN NO EVENT SHALL OPENINGS BE ALLOWED TO BE LEFT UN-PATCHED FOR MORE THAN FORTY-EIGHT (48) HOURS WITHOUT WRITTEN APPROVAL OF THE DEPARTMENT OF PUBLIC WORKS (DPW).
- ALL ROAD PATCHES SHALL BE PLACED PERPENDICULAR OR PARALLEL TO TRAFFIC FLOW. ANGULAR PATCHES ACROSS THE ROADWAY SHALL NOT BE PERMITTED WITHOUT DPW APPROVAL. ALL TRENCHES SHALL BE SAW-CUT TO PROVIDE A VERTICAL JOINT FOR PATCHING.
- HOT PATCH SHALL BE USED AT ALL TIMES EXCEPT WHEN SEASONAL CONDITIONS WARRANT THE USE OF A TEMPORARY COLD PATCH.
- IF A TEMPORARY PATCH IS USED, THE DPW SHALL BE NOTIFIED AS TO WHEN A PERMANENT PATCH IS TO BE PLACED. THE CONTRACTOR IS RESPONSIBLE UNTIL THE PERMANENT PATCH IS IN PLACE.
- TEMPORARY PATCHES SHALL BE MAINTAINED BY THE CONTRACTOR THROUGH ONE WINTER-SPRING SEASON. PERMANENT PATCH WILL BE REQUIRED ON ALL TRENCHES AND SHALL BE WARRANTED FOR A PERIOD OF ONE YEAR.
- PERMANENT PATCHES IN A HEAVILY TRAVELED AREA, AS DETERMINED BY THE DPW, SHALL BE REINFORCED WITH A CONCRETE SLAB NO LESS THAN FIVE (5) INCHES THICK. CONSTRUCTION SHALL COMPLY WITH SECTION 430 OF THE COMMONWEALTH OF MASSACHUSETTS DEPARTMENT OF PUBLIC WORKS STANDARD SPECIFICATIONS FOR HIGHWAYS AND BRIDGES.
- TEMPORARY AND PERMANENT PATCHES SHALL BE NO LESS THAN FOUR (4) INCHES THICK OR THE THICKNESS OF THE EXISTING PAVEMENT, WHICHEVER IS GREATER.
- TEMPORARY AND PERMANENT PATCHES SHALL BE ROLLED AND COMPACTED TO MATCH THE EXISTING SURFACE IN A GOOD WORKMANLIKE MANNER AND ALL ABUTTING SURFACES SEALED.
- PERMANENT PATCHES WILL BE MAINTAINED BY THE CONTRACTOR FOR A PERIOD OF NINETY (90) DAYS AT WHICH TIME THE PATCH WILL BE FINALIZED BY THE INFRARED METHOD OF PATCHING. NO INFRARED PATCHING WILL BE REQUIRED ON ANY PAVEMENT THAT IS FIVE (5) YEARS OLD OR GREATER.
- ALL MATERIALS AND CONSTRUCTION METHODS MUST MEET THE COMMONWEALTH OF MASSACHUSETTS DEPARTMENT OF PUBLIC WORKS STANDARD SPECIFICATIONS FOR HIGHWAYS AND BRIDGES.
- THE REPAINTING OF TRAFFIC LINES SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR. THE TOWN SHALL BE NOTIFIED PRIOR TO THE PAINTING OF ANY NEW TRAFFIC MARKINGS.
- THE CONTRACTOR SHOULD EXERCISE EXTREME CARE TO PREVENT THE DAMAGE TO MAJOR ROOT SYSTEMS OF TREES.
- WHERE MANHOLES ARE TO BE PLACED IN THE HARDENED SURFACE, ALL MANHOLE COVERS SHALL BE SET IN CONCRETE COLLARS TO WITHIN FOUR (4) INCHES OF THE EXISTING SURFACE. A PATCH OF CLASS I BITUMINOUS CONCRETE TYPE I SHALL BE PLACED OVER THE CONCRETE COLLAR TO A LEVEL WITH THE PAVEMENT GRADE WHEN SATURATEDLY COMPACTED.
- WITH THE EXCEPTION OF EMERGENCY WORK, NO EXCAVATION SHALL BE PERMITTED FROM DECEMBER 1 TO APRIL 1. WORK WITHIN THIS PERIOD MAY BE ALLOWED AT THE DISCRETION OF THE TOWN.

**EXCAVATION SEQUENCE NO SCALE**

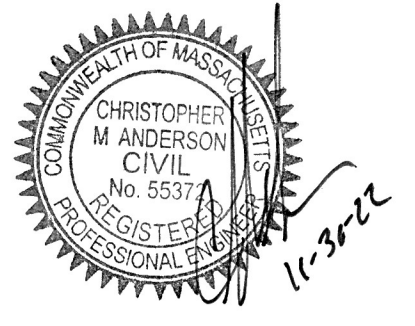


**FILL SEQUENCE NO SCALE**



**DEFINITIVE PLAN**

NO.	DATE	REVISIONS	BY



**HANNIGAN ENGINEERING, INC.**  
 CIVIL ENGINEERS & LAND SURVEYORS

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 LEOMINSTER, MASSACHUSETTS 01453 (978) 534-6060 (F)  
 WWW.HANNIGANENGINEERING.COM

**CONSTRUCTION DETAILS IN LEICESTER, MASSACHUSETTS**

PREPARED FOR:  
 ZP BATTERY DEVCO, LLC  
 BRENDAN GOVE  
 10 E WORCESTER STREET SUITE 3A  
 WORCESTER, MASSACHUSETTS 01604  
 TEL:

CALC: CMA	DRWN: CMA	SCALE: NA
CHKD: WDH	APPD: WDH	DATE: NOV 30, 2022
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TAB: (5-6)DET	SHEET 5 OF 6	PLAN NO: C-17-38

