

- A. **MATERIALS HANDLING AND SPILL PREVENTION AND RESPONSE PLAN:** Prior to construction commencing the Contractor shall submit a Spill Response Plan. Materials handling and Spill Response Plan shall be in accordance with subsection 208.06.
- B. **OTHER CDPS PERMITS:** List applicable CDPS permits associated with the permitted site and activities.
- C. **STOCKPILE MANAGEMENT:** Shall be done in accordance with subsections 107.25 and 208.07.

- D. **CONCRETE WASHOUT:** Concrete washout water or waste from field laboratories and paving equipment shall be contained in accordance with subsection 208.05.
- E. **SAW CUTTING:** shall be done in accordance with subsections 107.25, 208.04, 208.05
- F. **STREET SWEEPING:** Shall be done in accordance with subsection 208.04.

6. INSPECTIONS

- A. Water Quality Inspections shall be in accordance with subsection 208.03(c).
- B. Permanent Stabilization Inspections shall be in accordance with subsections 208.04(e)4 and 208.10.

7. CONTROL MEASURE MAINTENANCE

Maintenance shall be in accordance with subsection 208.04(f).

8. RECORD KEEPING

Records shall be kept in accordance with subsection 208.03(d).

9. INTERIM, PERMANENT STABILIZATION and LONG-TERM STORMWATER MANAGEMENT

The Contractor shall comply with all interim stabilization and permanent stabilization requirements in accordance with subsection 208.04(e).

A. SEEDING PLAN:

The following seed mix(es) and rates are for drill seeding method as shown on the Permanent Stabilization Site Maps shall be used:

| COMMON NAME | BOTANICAL NAME | LBS. PLS PER ACRE |
|--------------------|-------------------------------|-------------------|
| Blue grama | <i>Bouteloua gracilis</i> | 3.0 |
| Buffalograss | <i>Buchloe dactyloides</i> | 2.0 |
| Sideoats grama | <i>Bouteloua curtipendula</i> | 5.0 |
| Inland saltgrass | <i>Distichlis stricta</i> | 1.5 |
| Blanketflower | <i>Gallardia aristata</i> | 0.1 |
| Green needlegrass | <i>Nasella viridula</i> | 6.0 |
| Switchgrass | <i>Panicum virgatum</i> | 5.0 |
| Western wheatgrass | <i>Pascopyrum smithii</i> | 7.0 |
| Prairie coneflower | <i>Ratibida columnifera</i> | 0.2 |
| Blue flax | <i>Linum lewisii</i> | 0.1 |
| Showy goldeneye | <i>Viguiera multiflora</i> | 0.1 |
| Yarrow | <i>Achillea lanulosa</i> | 0.1 |
| Total | | 30.1 |

B. SEEDING APPLICATION METHOD:

The following seeding methods shall be used for all areas shown on the Permanent Stabilization Site Maps. Soil compaction shall be minimized for areas where permanent stabilization will be achieved through vegetative cover.

| Pay Item | Seeding Method (subsection 212.05) | Acre |
|-----------|------------------------------------|-------------|
| 212-00706 | Seeding (Native) Drill | 2.22 |
| | Total | 2.22 |

C. SOIL STABILIZATION METHODS:

Minimum soil stabilization methods (attached mulch) for all disturbances to receive seeding.

1. Apply a minimum of 2 tons/ac certified weed free hay or 2 1/2 tons/ac of certified weed free straw and mechanically crimp into the soil in combination with natural mulch tackifier in accordance with Section 213. Prior to winter shutdown or the summer seeding window closure: Uncompleted slopes shall be mulched with 2 tons of mulching (weed free) per acre, mechanically crimped into the topsoil in combination with an organic mulch tackifier in accordance with Sections 208 and 213.

D. SPECIAL REQUIREMENTS:

1. Soil amendments, seedbed preparation, and permanent stabilization mulching shall be accomplished within four working days of placing the topsoil on the de-compacted civil subgrades. If placed topsoil is not mulched with permanent stabilization mulch within four working days, the Contractor shall complete interim stabilization methods in accordance with subsection 208.04(e) at no additional cost to the Department.
2. Complete permanent stabilization mulching within 24 hours of hydraulic application of native seed.
3. The Contractor shall submit a proposed Permanent Stabilization Phasing Plan to the Engineer for approval showing how implementation of SWMP Permanent Stabilization Plans will minimize damage to seeded areas.

- E. **SOIL AMENDMENT REQUIREMENTS:** Minimum amendment material requirements for all disturbances to receive seeding.

2.22 Total Acres of Seeding (Native) Drill With Topsoil Generated From

| Seeding (Native) Drill Pay Item | Pay Item | Description | Amount/Acre | Units | Total For This Method |
|---------------------------------|-----------|--------------------------------|-------------|--------|-----------------------|
| 212-00700 | 212-00700 | Organic Fertilizer | 300 | Pounds | 666 |
| 212-00701 | 212-00701 | Compost (Mechanically Applied) | 65 | CY | 145 |
| 212-00703 | 212-00703 | Humate | 200 | Pounds | 444 |

F. Permanent Stabilization Application Under Structures:

Under structures shade patterns should be considered and the use of Median Cover Material (Stone) or other stabilized options with an approved Project Special Provision should be used. See SWMP Site Map for locations.

G. RESEEDING OPERATIONS/CORRECTIVE STABILIZATION:

- Prior to stormwater construction work partial acceptance.
1. All seeded areas shall be reviewed by the SWMP Administrator for Construction and or Erosion Control Inspector for bare soils caused by surface or wind erosion. Bare areas caused by surface or gully erosion, blown away mulch, etc. shall be re-graded, seeded, and have the designated mulching applied as necessary, at no additional cost to the project.
2. The Contractor shall maintain seeding/mulch/tackifier/blanket/TRM, mow to control weeds or apply herbicide to control weeds in the seeded areas, at no additional cost to the project.

- H. **LOCATION AND DESCRIPTION OF PLANNED PERMANENT CONTROL MEASURES:** Is Permanent Water Quality Required. Yes ___ No ___ X ___.

10. PRIOR TO PROJECT FINAL ACCEPTANCE

- A. When directed by the Engineer, removal and disposal of temporary control measures shall be included in the cost of work.
- B. At the end of the project, all ditch checks shall consist of either temporary erosion logs (or equivalent) or permanent riprap.
- C. All storm drains shall be cleaned prior to the Final Acceptance of the project. If required, include work in 202-04002 Clean Culvert. ****Check with Region Water Quality staff to see if CLEAN CULVERT PSP is needed and what Pay Item to use.****
- D. Refer to subsection 208.10 for items to be completed prior to requesting partial acceptance of water quality work.

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11. NARRATIVES

Control Measure Matrixes During Construction:

- Control measure narratives have been included for the CDOT Standard Specifications and Standard Plan M-208 and M-216 along with any non-standard control measures approved during the design process. If a Non-Standard Control Measure not included in the SWMP is proposed and approved by the Engineer the SWMP Administrator for Construction shall do the following: Place an "X" in the column for non-standard and complete a Non-Standard Control Measure Specification and Narrative covering the what, when, where and why the control measure is being used shall be add to the SWMP. The appropriate "X" shall also be added to the implementation phase(s).
- The SWMP Administrator for Construction shall place an "X" in the column In Use On Site when the control measure has been installed.
- A "B" in the Initial Activities Column indicates that the control measure shall be installed **before** construction activity starts. Locations and quantities will be discussed during the Environmental Pre-Construction Conference with the Regional Water Pollution Control Manager.

STRUCTURAL Control Measures that may be potentially used on the project for erosion and sediment control; practices may include, but are not limited to the following:

| APPLICATION, CONTROL MEASURE | NARRATIVE | M-208 STANDARD or "X" for NON-STANDARD | IN USE ON SITE | CONTROL MEASURE IMPLEMENTATION PHASE | | |
|--|---|--|----------------|--------------------------------------|--------------------|-------------------------|
| | | | | INITIAL ACTIVITIES | INTERIM ACTIVITIES | PERMANENT STABILIZATION |
| Storm Drain Inlet Protection In Native Seed Areas (M-604 Standard Inlets Type C and D) | Erosion logs or aggregate bags placed around inlet grate to prevent sediment from entering inlet. Place prior to construction disturbances to protect existing inlets or immediately upon completion of new inlets. | M-208 | | B | X | |
| TYPE C, TYPE D AND TYPE 13 PROTECTION Erosion logs, aggregate bags, erosion bales | Placed around inlet grate or slope and ditch paving to prevent sediment from entering inlet. Place prior to the start of construction disturbances. | M-208 | | B | X | |
| TOE OF FILL PROTECTION Erosion logs, temporary berm, silt fence, topsoil windrow* | Place prior to slope/embankment work to capture sediment and protect and delineate undisturbed areas. *Can be used to stockpile topsoil for salvage. | M-208 | | X | X | |
| PERIMETER CONTROL Erosion logs, silt fence, temporary berm, topsoil windrow* | Placed prior to construction commencing to address potential run-on water from off site, and to divert around disturbed area. *Can be used to stockpile topsoil for salvage. | M-208 | | B | X | |
| SLOPE CONTROL Silt fence, erosion logs | Placed on the contour of a slope to contain and slow down construction runoff. Place prior to the start of construction disturbances. | M-208 | | X | X | |
| CONCRETE WASHOUT In-ground or fabricated | Construction control, used for waste management of concrete and concrete equipment cleaning. Place prior to the start of concrete activities. | M-208 | | X | X | |
| VEHICLE TRACKING PAD | Source control, placed to prevent tracking of sediment from disturbed area to offsite surface. Place prior to the start of construction disturbances. | M-208 | | B | X | |

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| | | | Sheet Subset: SWMP | 24364 |
| | | | Sheet Subset: SWMP | 67 |
| 22/08/2024 AutoCAD PDF (General Documentation).pc3 DEA-STD-STB.stb | | | Sheet Subset: SWMP | 4 of 32 |

NON-STRUCTURAL Control Measures that may be potentially used on the project for erosion and sediment control; practices may include, but are not limited to: Erosion control devices are used to limit the amount of soil loss on site. Sediment control devices are designed to capture sediment on the project site. Construction controls are control measures related to construction access and staging. Control Measure locations are indicated on the SWMP Site Map.

* **Use of vegetative buffer strip requirements.** The CDPHE Water Quality Control Division Technical Memorandum dated August 27, 2015 clarifies the requirements for utilization of existing vegetation as a buffer type of sediment control measure, while maintaining compliance with the CDPS permit for Stormwater Discharges Associated with Construction Activity – CDPS Permit No. COR4000000. In general, the division does not recommend that vegetated buffers be implemented as a sediment removal control measure for runoff from disturbed areas at construction sites, unless implemented as a "finishing" component of a treatment train comprised of additional, adequate up-gradient Control Measures. The entire memorandum can be found at: <https://www.colorado.gov/pacific/sites/default/files/Vegetative%20Buffer%20Memo.pdf>

| APPLICATION, CONTROL MEASURE | NARRATIVE | M-STANDARD or "For NON-STANDARD | IN USE ON SITE | CONTROL MEASURE IMPLEMENTATION PHASE | | |
|--|---|---------------------------------|----------------|--------------------------------------|--------------------|-------------------------|
| | | | | INITIAL ACTIVITY | INTERIM ACTIVITIES | PERMANENT STABILIZATION |
| TOPSOIL MANAGEMENT STOCKPILE/SALVAGE Stockpile | Prior to any site disturbance work commencing, existing topsoil shall be scraped to a depth six inches or as specified, and placed in stockpiles or windrows. Upon completion of final grading, topsoil shall be evenly distributed over embankment to a depth of six inches or as specified. | M-208 | | X | X | X |
| SURFACE ROUGHENING / GRADING TECHNIQUES | Temporary stabilization of disturbance and to minimize wind and erosion. | | | X | | |
| Straw or Hay MULCH/MULCH TACKIFIER | Interim or Permanent Stabilization placed as a surface cover for erosion control and or seeding establishment. To be installed as Interim Stabilization as a surface cover when work is temporarily halted and as approved by the Engineer | | | | | X |
| SEEDING PERMANENT (NATIVE PERENNIAL) | Permanent Stabilization of disturbance and to reduce runoff and control erosion on disturbed areas. | | | | | X |
| Sweeping | Source control, used to remove sediment tracked onto paved surfaces and to prevent sediment from entering drainage system. Sweep daily and at the end of the construction shift as needed. Kick brooms shall not be permitted. | | | | X | X |

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| File Name: LITN0001_EN_BID-1-SWMP_Plans_Template.dwg | Comments | No Revisions: | MINERAL MOBILITY IMPROVEMENTS – NARRATIVE | C M810-019 |
| Horiz. Scale: 1"=40' | Date: | Revised: | Designer: NXGE | Structure Numbers |
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12. TABULATION OF STORMWATER QUANTITIES

A. Control Measure sediment removal and disposal shall be paid for as: 208 Removal and Disposal of Sediment (Equipment) and 208 Removal and Disposal of Sediment (Labor). All other control measure maintenance shall be included in the cost of the control measure.

| PSP Spec. | Pay Item | Description | Pay Unit | Initial Const. | Interim Const. | Permanent Stabilization | *Total Quantity |
|-----------|-----------|--|----------|----------------|----------------|-------------------------|-----------------|
| | 207-00700 | Topsoil (Onsite) | CY | | | 1193 | 1193 |
| | 208-00002 | Erosion Log Type 1 (12 inch) | LF | 5,620 | 2,810 | | 8,430 |
| | 208-00035 | Aggregate Bag | LF | 112 | | | 112 |
| | 208-00045 | Concrete Washout Structure | Each | 1 | | | 1 |
| | 208-00052 | Storm Drain Inlet Protection (Type II) | LF | 48 | | | 48 |
| | 208-00070 | Vehicle Tracking Pad | Each | 1 | | | 1 |
| | 208-00071 | **Maintenance Aggregate (Vehicle Tracking Pad) | CY | | 12 | | 12 |
| | 208-00103 | Removal and Disposal of Sediment (Labor) | Hour | | 60 | | 60 |
| | 208-00105 | Removal and Disposal of Sediment (Equipment) | Hour | | 60 | | 60 |
| | 208-00106 | Sweeping (Sediment Removal) | Hour | | 40 | | 40 |
| | 208-00107 | Removal of Trash | Hour | | 100 | | 100 |
| | 208-00207 | Erosion Control Management (ECM) | Day | | 20 | | 20 |
| | 212-00700 | Organic Fertilizer | Pounds | | | 666 | 666 |
| | 212-00701 | Compost (Mechanically Applied)- | CY | | | 145 | 145 |
| | 212-00703 | Humate | Pounds | | | 444 | 444 |
| | 212-00706 | Seeding (Native) Drill | Acre | | | 2.22 | 2.22 |
| | 213-00002 | Mulching (Weed Free Hay) | Acre | | | 2.22 | 2.22 |
| | 213-00061 | Mulch Tackifier | LB | | | 444 | 444 |
| | 607-11525 | Fence (Plastic) | LF | 295 | 295 | | 590 |

*It is anticipated that additional control measures and control measure quantities not shown on the SWMP Site Maps shall be required on the project for unforeseen conditions and replacement of items that are beyond their useful service life, see subsections 208.03 and 208.04. **Quantities for all control measures shown above are estimated and have been increased for unforeseen conditions and normal control measure life expectancy.**

Quantities shall be adjusted according to the conditions encountered in the field as directed and approved by the Engineer. Payment shall be for the actual work completed and material used.

**Pay Item 208-00071 is included for anticipated maintenance of vehicle tracking pads based on the service life of the control measure in the field. The use of the material shall be directed and approved by the Engineer.

*** F/A refers to CDOT's Force Account Pay Items.

13. BIOLOGICAL IMPACTS and DEWATERING

A. ENVIRONMENTAL IMPACTS:

1. Wetland Impacts: NO
2. Stream Impacts: NO
3. Threatened and Endangered Species: No species are anticipated to be impacted by the project.

B. DEWATERING:

(Not covered under the CDPHE guidance document Low Risk Discharge Guidance Discharges of

Uncontaminated Groundwater to Land):

<https://www.colorado.gov/pacific/sites/default/files/WQ%20LOW%20RISK%20GW.pdf>

1. Dewatering: Refer to other environmental permits in accordance with subsection 107.02 and the permits contained in Tab 16 of the SWMP.

2. If groundwater does not meet water quality standards for receiving water a separate CDPS Dewatering Permit shall be obtained by the Contractor from CDPHE in accordance with subsections 107.02 and 107.25.

14. NOTES

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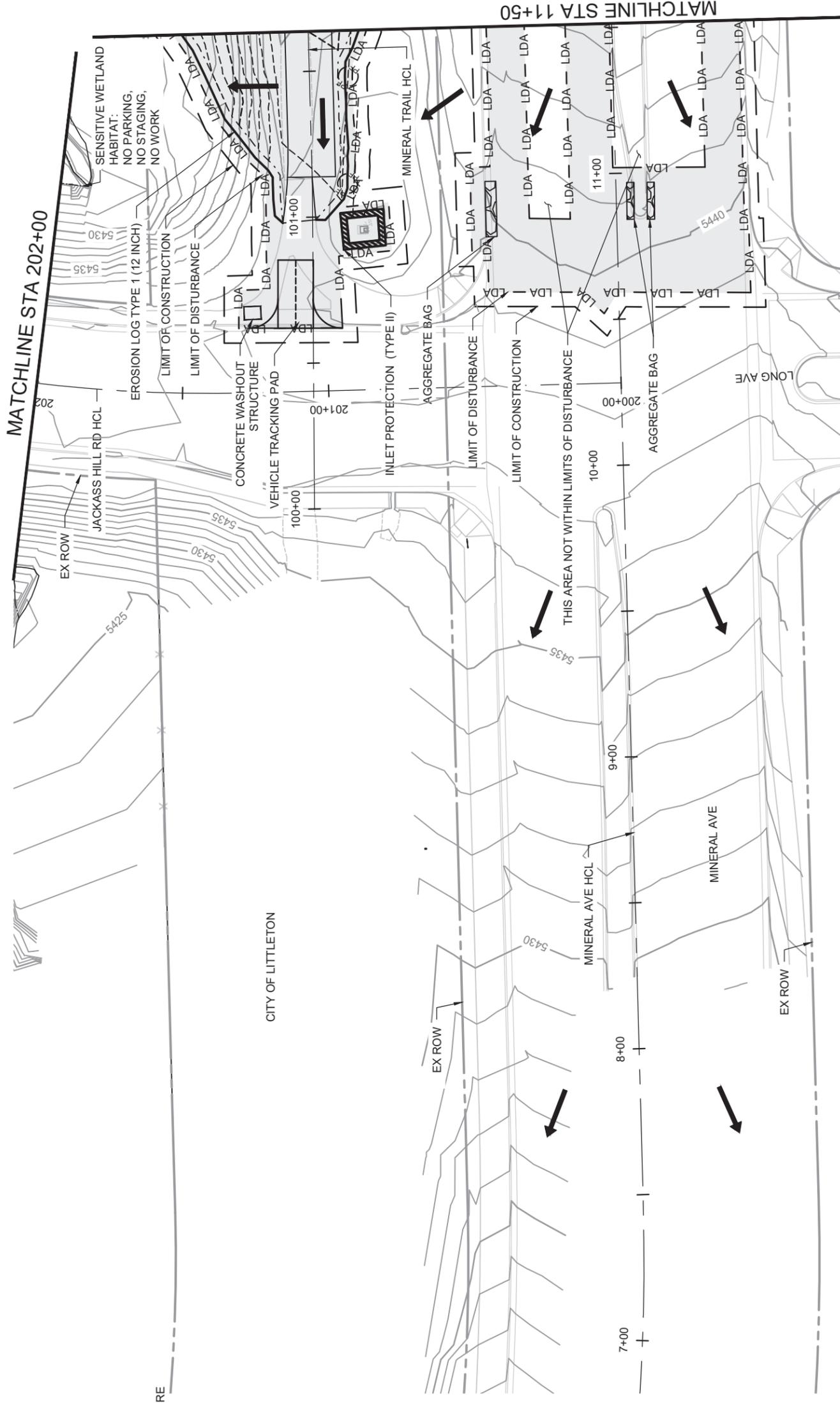
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LEGEND:

- LIMITS OF CONSTRUCTION
- LDA - LIMITS OF DISTURBANCE
- - - - - TOP OF CUT
- - - - - TOE OF FILL
- ===== EXISTING 1' CONTOUR
- ===== EXISTING 5' CONTOUR
- - - - - PROPOSED 1' CONTOUR
- - - - - PROPOSED 5' CONTOUR
-  EROSION LOG TYPE 1 (12 INCH)
-  INLET PROTECTION (TYPE II)
-  AGGREGATE BAG
-  FLOW ARROW
-  CONCRETE WASHOUT STRUCTURE
-  VEHICLE TRACKING PAD
- PF - FENCE (PLASTIC)

NOTES:

1. ONCE DISTURBANCE OF EXISTING VEGETATION STARTS, THE SWMP ADMINISTRATOR FOR CONSTRUCTION SHALL OUTLINE THE CONSTRUCTION AREA WITH THE AREA OF DISTURBANCE LINE.
2. ALL CONTROL MEASURES USED SHALL BE SHOWN AS INITIAL AND INTERIM CONTROLS.
3. CONTROL MEASURES ARE NOT DRAWN TO SCALE AND LOCATIONS ARE APPROXIMATE.
4. EROSION LOGS SHALL BE FLARED UPGRADIENT.
5. GIS DATA FROM ARAPAHOE COUNTY'S GIS SITE WAS USED TO DETERMINE THE DIRECTION OF FLOW IN AREAS WHERE CONTOURS ARE NOT SHOWN.



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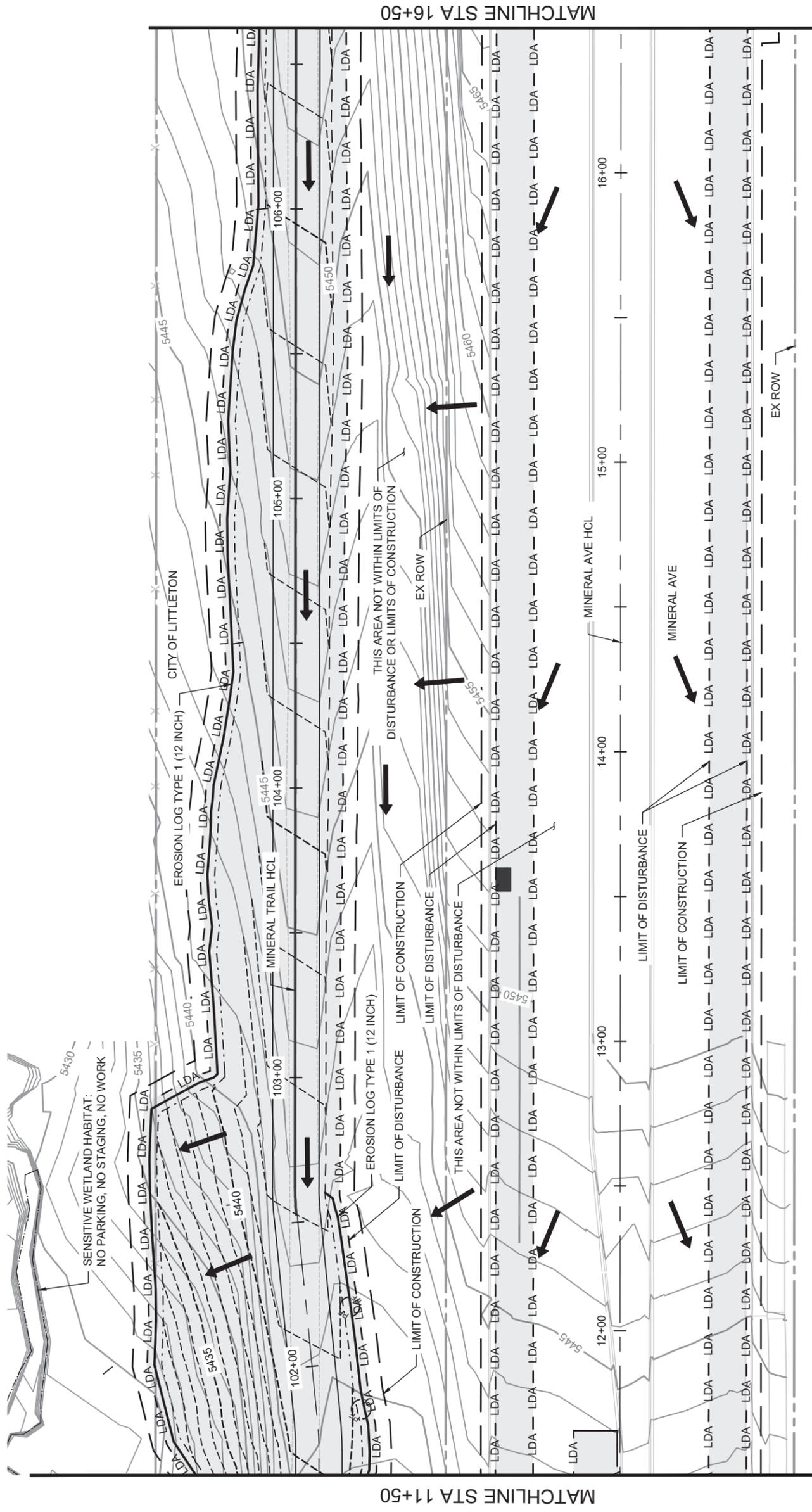
Sheet Sheets: 7 of 32

Project No./Code

C M810-019

24364

Sheet 70



LEGEND:
 - - - - - LIMITS OF CONSTRUCTION
 - - - - - LIMITS OF DISTURBANCE
 - - - - - TOP OF CUT
 - - - - - TOE OF FILL
 - - - - - EXISTING 1' CONTOUR
 - - - - - EXISTING 5' CONTOUR

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LEGEND:
 - - - - - PROPOSED 1' CONTOUR
 - - - - - PROPOSED 5' CONTOUR
 - - - - - EROSION LOG TYPE 1 (12 INCH)
 - - - - - INLET PROTECTION (TYPE II)
 - - - - - AGGREGATE BAG
 - - - - - FLOW ARROW
 [Symbol] CONCRETE WASHOUT STRUCTURE
 [Symbol] VEHICLE TRACKING PAD
 - PF - FENCE (PLASTIC)

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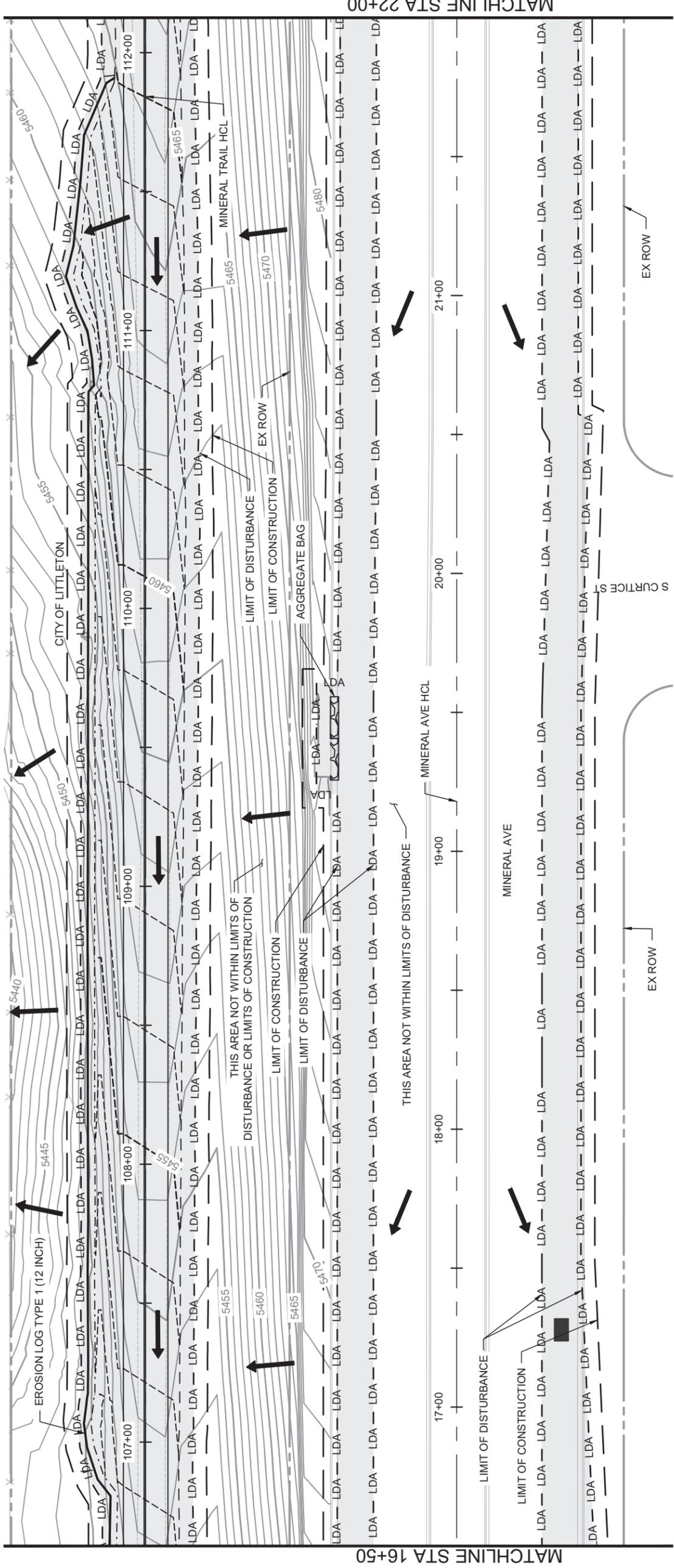
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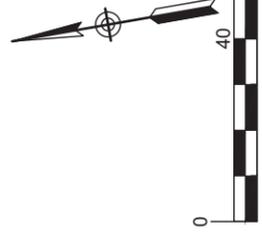
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 Designer: NXGE
 Detailer: CLLE
 Sheet Subset: SWMP
 Structure Numbers: N/A
 Subset Sheets: 8 of 32

Project No./Code
 C M810-019
 24364
 Sheet 71

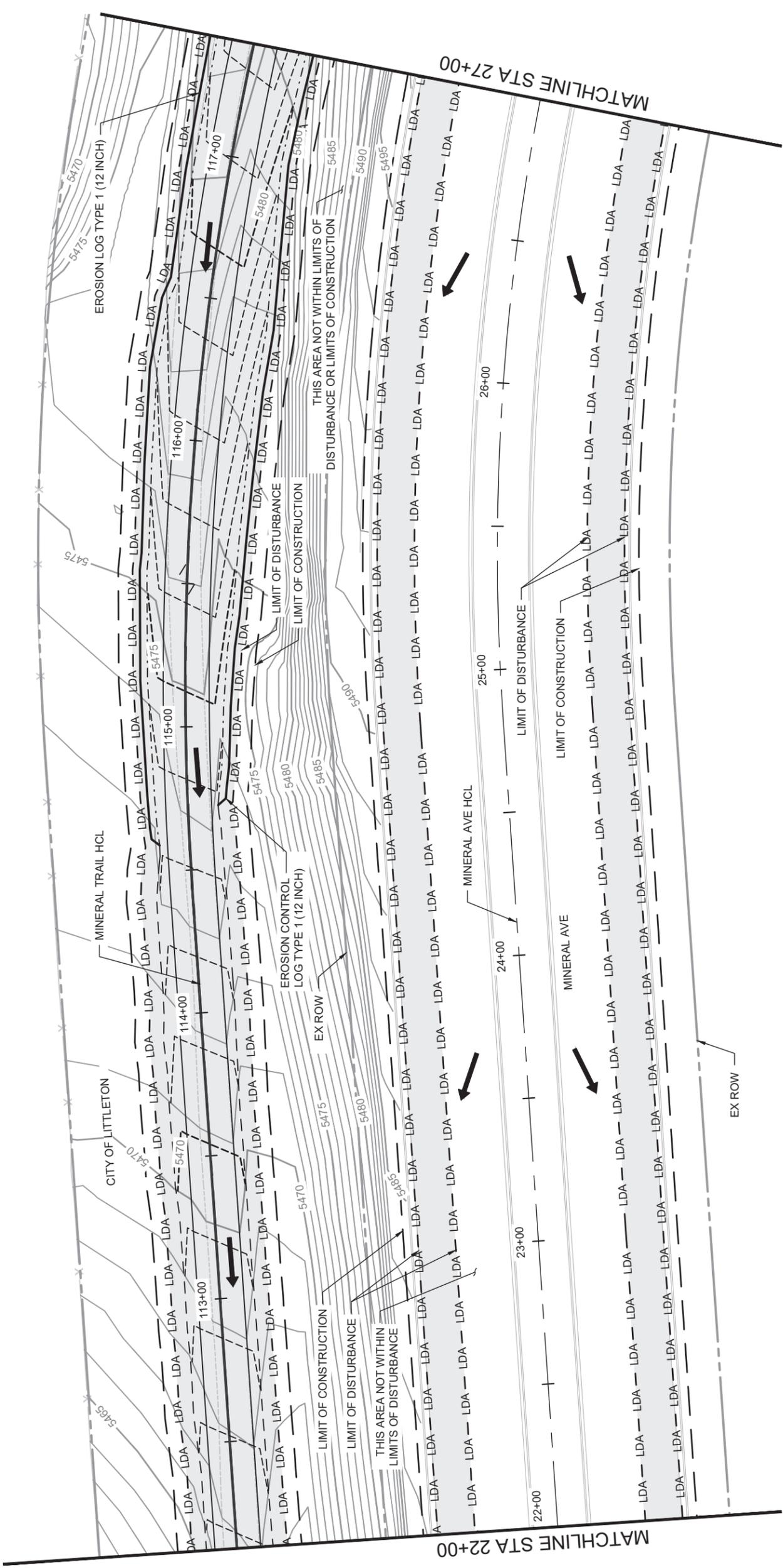


- LEGEND:**
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 - - - - - LIMITS OF DISTURBANCE
 - - - - - TOP OF CUT
 - - - - - TOE OF FILL
 - EXISTING 1' CONTOUR
 - EXISTING 5' CONTOUR
 - PROPOSED 1' CONTOUR
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 - ▣ EROSION LOG TYPE 1 (12 INCH)
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 - ▣ VEHICLE TRACKING PAD
 - PF --- FENCE (PLASTIC)
 - ➔ FLOW ARROW

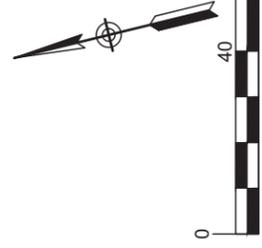
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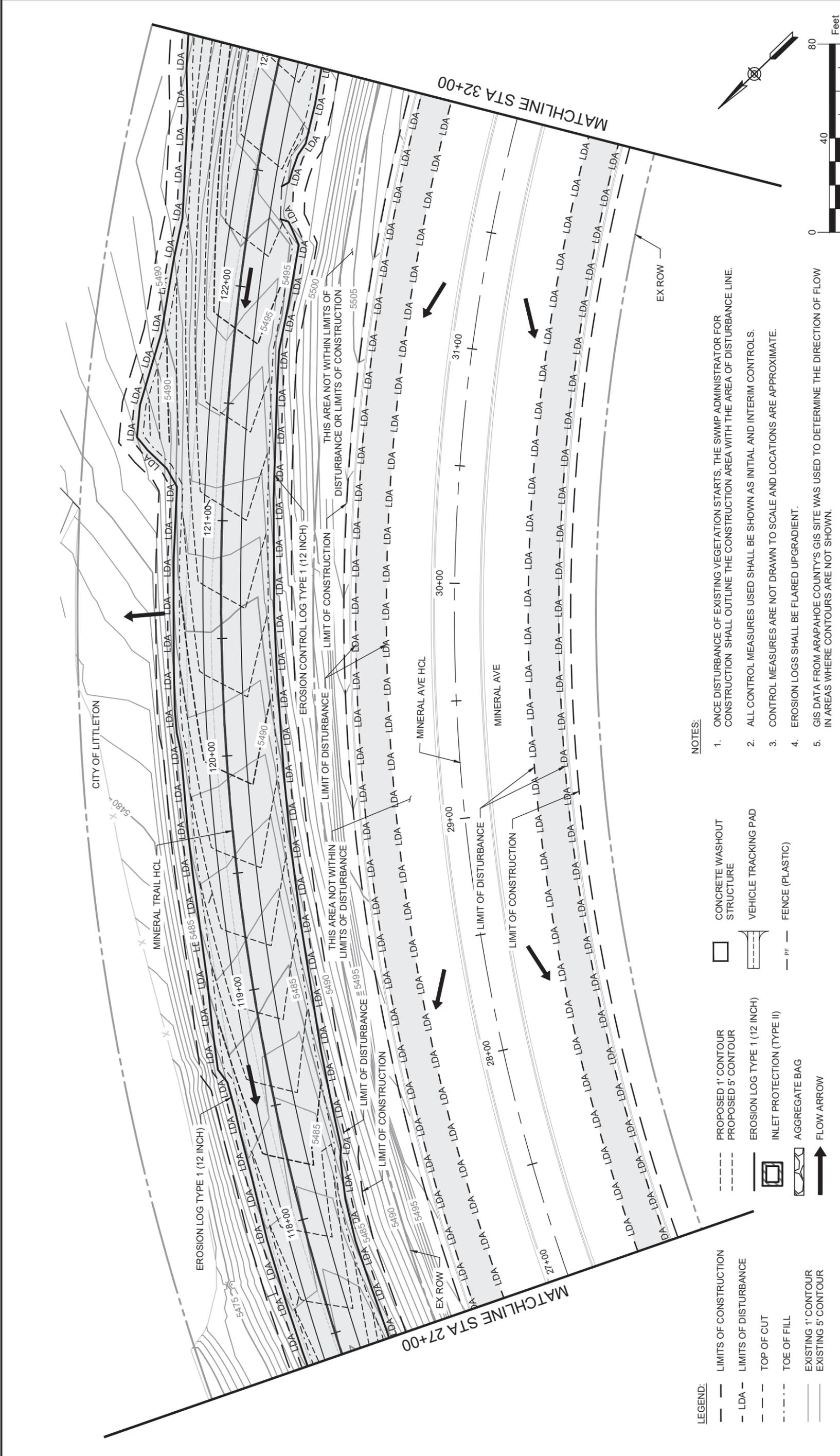
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| | | | | | | 9 of 32 | | 72 | |



- LEGEND:**
- LIMITS OF CONSTRUCTION
 - - - LIMITS OF DISTURBANCE
 - - - TOP OF CUT
 - - - TOE OF FILL
 - EXISTING 1' CONTOUR
 - EXISTING 5' CONTOUR
 - CONCRETE WASHOUT STRUCTURE
 - ▭ VEHICLE TRACKING PAD
 - ▭ EROSION LOG TYPE 1 (12 INCH)
 - ▭ INLET PROTECTION (TYPE II)
 - ▭ AGGREGATE BAG
 - PF --- FENCE (PLASTIC)
 - FLOW ARROW
- NOTES:**
- ONCE DISTURBANCE OF EXISTING VEGETATION STARTS, THE SWMP ADMINISTRATOR FOR CONSTRUCTION SHALL OUTLINE THE CONSTRUCTION AREA WITH THE AREA OF DISTURBANCE LINE.
 - ALL CONTROL MEASURES USED SHALL BE SHOWN AS INITIAL AND INTERIM CONTROLS.
 - CONTROL MEASURES ARE NOT DRAWN TO SCALE AND LOCATIONS ARE APPROXIMATE.
 - EROSION LOGS SHALL BE FLARED UPGRADIENT.
 - GIS DATA FROM ARAPAHOE COUNTY'S GIS SITE WAS USED TO DETERMINE THE DIRECTION OF FLOW IN AREAS WHERE CONTOURS ARE NOT SHOWN.

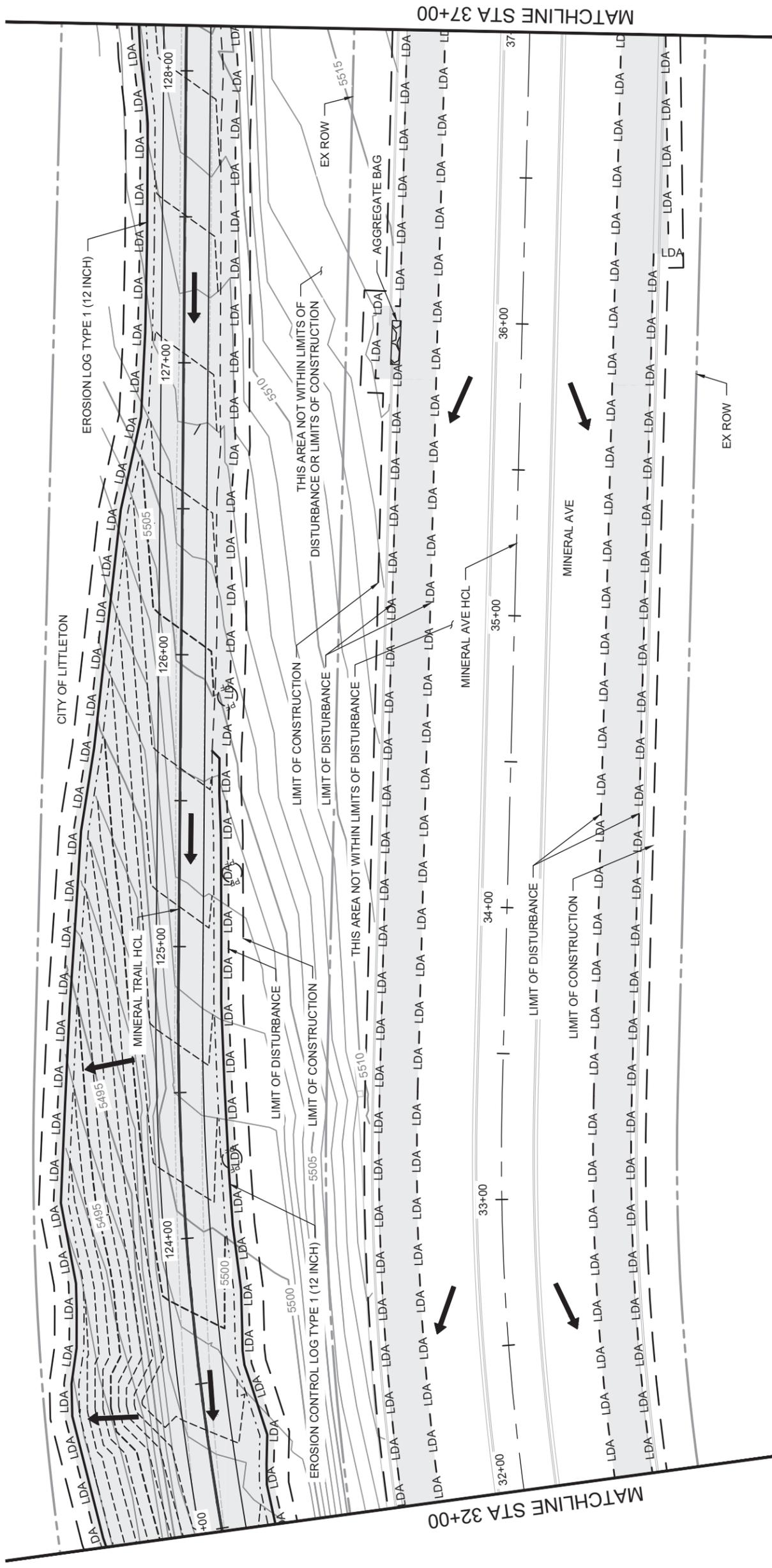


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| Print Date: 8/27/2024 | | Sheet Revisions | | As Constructed | | MINERAL MOBILITY IMPROVEMENTS - BID 1 | | Project No./Code | |
| File Name: LITN0001_EN_BID-1-SWMP_Plans_Initial.dwg | | Date: | | No Revisions: | | SWMP PLAN - INITIAL & INTERIM | | C M810-019 | |
| Horiz. Scale: 1"=40' | | Comments: | | Revised: | | Designer: NXGE | | Structure Numbers | |
| Vert. Scale: N/A | | Init.: | | Void: | | Detailer: CLLE | | N/A | |
| DAVID EVANS AND ASSOCIATES INC. 1600 Broadway Street Suite 600 Denver Colorado 80202 Phone: 720.946.0969 | | PUBLIC WORKS DEPT. 2255 W. Berry Avenue Littleton, CO 80120 PHONE 303-795-3863 FAX 303-795-3856 | | Sheet Subset: SWMP | | Sheet Numbers | | 24364 | |
| | | | | Sheet Subset: SWMP | | Subset Sheets: | | 10 of 32 | |
| | | | | | | | | Sheet | |
| | | | | | | | | 73 | |



- LEGEND:**
- LIMITS OF CONSTRUCTION
 - - - - - LIMITS OF DISTURBANCE
 - - - - - TOP OF CUT
 - - - - - TOE OF FILL
 - EXISTING 1' CONTOUR
 - EXISTING 5' CONTOUR
 - PROPOSED 1' CONTOUR
 - PROPOSED 5' CONTOUR
 - EROSION LOG TYPE 1 (12 INCH)
 - INLET PROTECTION (TYPE II)
 - AGGREGATE BAG
 - FLOW ARROW
 - CONCRETE WASHOUT STRUCTURE
 - ▭ VEHICLE TRACKING PAD
 - PF --- FENCE (PLASTIC)
- NOTES:**
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| Print Date: 8/27/2024 | | Sheet Revisions | | As Constructed | | MINERAL MOBILITY IMPROVEMENTS - BID 1 | | Project No./Code | |
| File Name: LITN0001_EN_BID-1-SWMP_Plans_Initial.dwg | | Date: | Comments | No Revisions: | | SWMP PLAN - INITIAL & INTERIM | | C M810-019 | |
| Horiz. Scale: 1"=40' | | | | Revised: | | Designer: NXGE | | Structure Numbers | |
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| DAVID EVANS AND ASSOCIATES INC. 1600 Broadway Street Suite 600 Denver Colorado 80202 Phone: 720.946.0969 | | PUBLIC WORKS DEPT. 2255 W. Berry Avenue Littleton, CO 80120 PHONE 303-795-3863 FAX 303-795-3856 | | Sheet Subset: SWMP | | Sheet Subset: N/A | | Sheet | |
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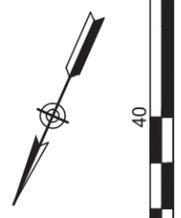


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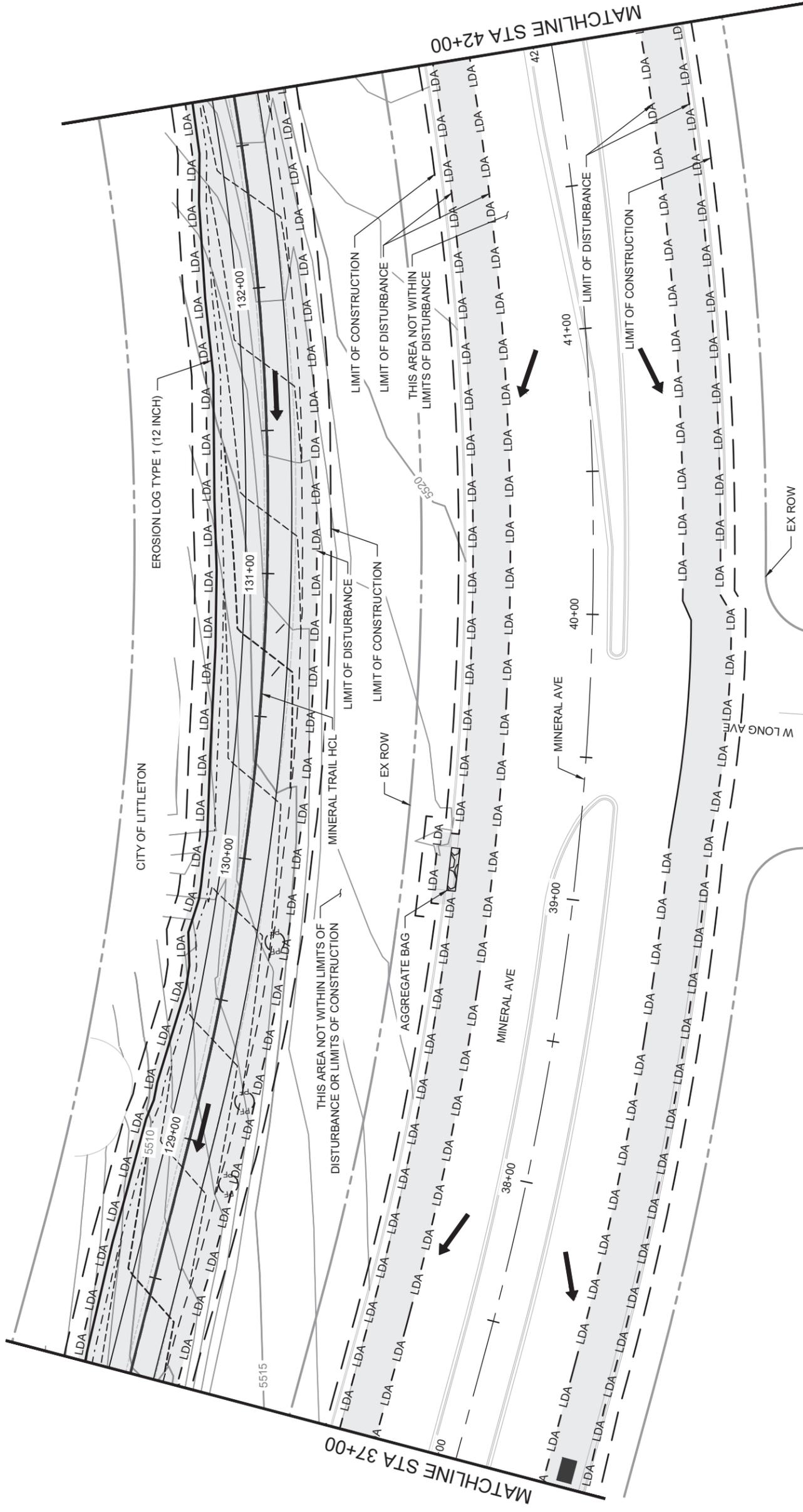
- LIMITS OF CONSTRUCTION
- - - - - LIMITS OF DISTURBANCE
- TOP OF CUT
- · · · · TOE OF FILL
- EXISTING 1' CONTOUR
- - - - - EXISTING 5' CONTOUR
- CONCRETE WASHOUT STRUCTURE
- ▭ VEHICLE TRACKING PAD
- ▭ EROSION LOG TYPE 1 (12 INCH)
- ▭ INLET PROTECTION (TYPE II)
- ▭ AGGREGATE BAG
- ▭ FENCE (PLASTIC)
- ▭ FLOW ARROW

NOTES:

1. ONCE DISTURBANCE OF EXISTING VEGETATION STARTS, THE SWMP ADMINISTRATOR FOR CONSTRUCTION SHALL OUTLINE THE CONSTRUCTION AREA WITH THE AREA OF DISTURBANCE LINE.
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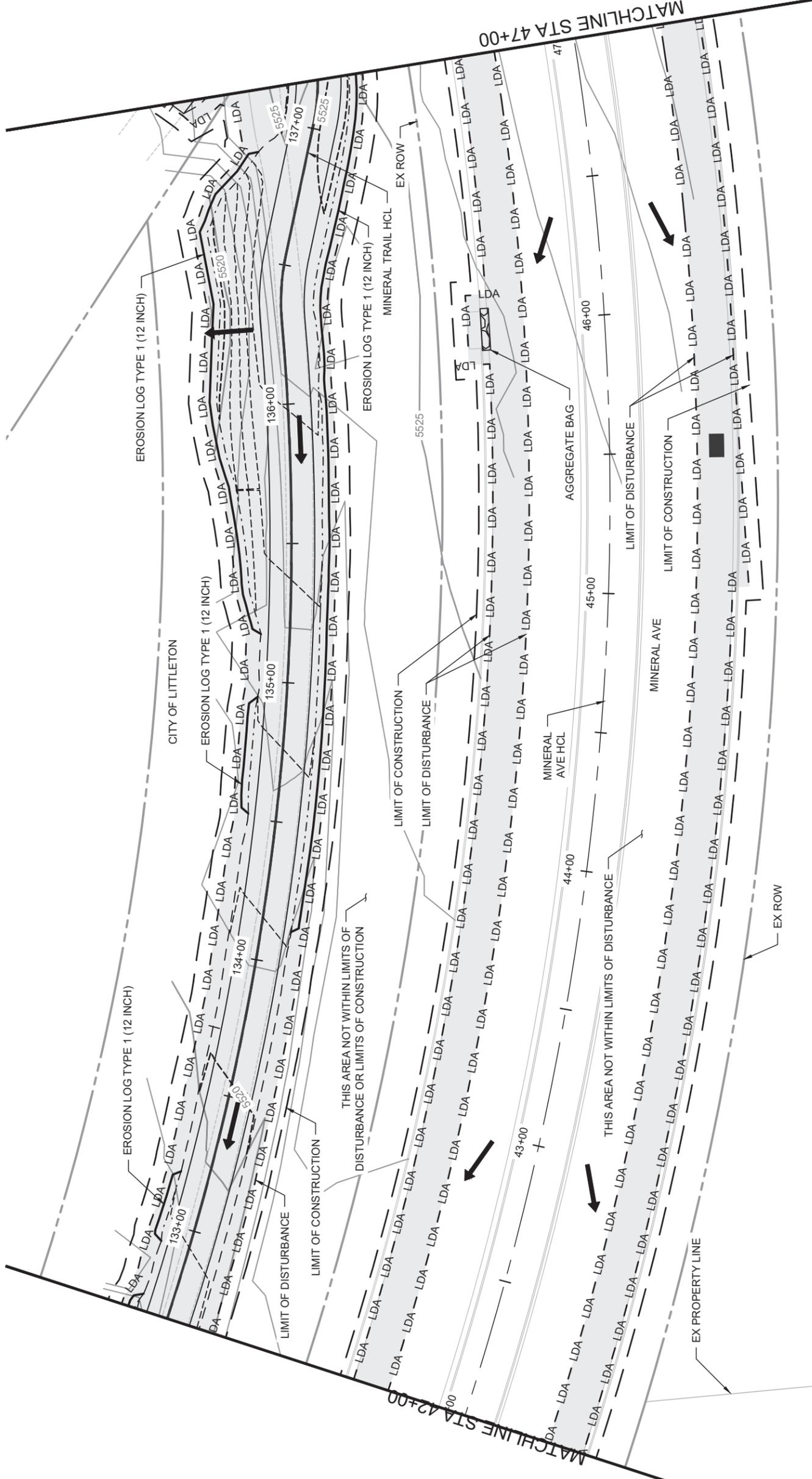


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| Print Date: 8/27/2024 | | Sheet Revisions | | As Constructed | | MINERAL MOBILITY IMPROVEMENTS – BID 1 | | Project No./Code | |
| File Name: LITN0001_EN_BID-1-SWMP_Plans_Initial.dwg | | Comments | | No Revisions: | | SWMP PLAN – INITIAL & INTERIM | | C M810-019 | |
| Horiz. Scale: 1"=40' | | Date: | | Revised: | | Designer: NXGE | | Structure Numbers | |
| Vert. Scale: N/A | | Init. | | Void: | | Detailer: CLLE | | N/A | |
| DAVID EVANS AND ASSOCIATES INC. 1800 Broadway Street Suite 800 Denver Colorado 80202 Phone: 720.946.0969 | | Littleton Colorado PUBLIC WORKS DEPT. 2255 W. Berry Avenue Littleton, CO 80120 PHONE 303-795-3863 FAX 303-795-3856 | | Sheet Subset: SWMP Sheet Sheets: 12 of 32 | | Sheet Subset: SWMP Sheet Sheets: 12 of 32 | | Sheet 75 | |



- LEGEND:**
- LIMITS OF CONSTRUCTION
 - - - - - LIMITS OF DISTURBANCE
 - - - - - TOP OF CUT
 - - - - - TOE OF FILL
 - EXISTING 1' CONTOUR
 - EXISTING 5' CONTOUR
 - CONCRETE WASHOUT STRUCTURE
 - ▭ VEHICLE TRACKING PAD
 - ▭ EROSION LOG TYPE 1 (12 INCH)
 - ▭ INLET PROTECTION (TYPE II)
 - ▭ AGGREGATE BAG
 - ▭ FENCE (PLASTIC)
 - ▭ FLOW ARROW
- NOTES:**
1. ONCE DISTURBANCE OF EXISTING VEGETATION STARTS, THE SWMP ADMINISTRATOR FOR CONSTRUCTION SHALL OUTLINE THE CONSTRUCTION AREA WITH THE AREA OF DISTURBANCE LINE.
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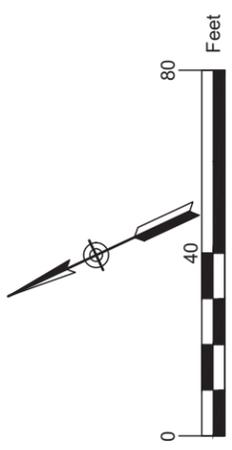
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| Print Date: 8/27/2024 | | Sheet Revisions | | As Constructed | | MINERAL MOBILITY IMPROVEMENTS – BID 1 | | Project No./Code | |
| File Name: LITN0001_EN_BID-1-SWMP_Plans_Initial.dwg | | Date: | Comments | No Revisions: | | SWMP PLAN – INITIAL & INTERIM | | C M810-019 | |
| Horiz. Scale: 1"=40' | | | | Revised: | | Designer: NXGE | | Structure Numbers | |
| Vert. Scale: N/A | | | | Void: | | Detailer: CLLE | | N/A | |
| DAVID EVANS AND ASSOCIATES INC. 1800 Broadway Street Suite 800 Denver Colorado 80202 Phone: 720.946.0969 | | PUBLIC WORKS DEPT. 2255 W. Berry Avenue Littleton, CO 80120 PHONE 303-795-3863 FAX 303-795-3856 | | Sheet Subset: SWMP 13 of 32 | | Sheet Subset: SWMP 13 of 32 | | Sheet 76 | |



LEGEND:
 --- LIMITS OF CONSTRUCTION
 - - - - - LIMITS OF DISTURBANCE
 --- TOP OF CUT
 - - - - - TOE OF FILL
 --- EXISTING 1' CONTOUR
 - - - - - EXISTING 5' CONTOUR

NOTES:
 1. ONCE DISTURBANCE OF EXISTING VEGETATION STARTS, THE SWMP ADMINISTRATOR FOR CONSTRUCTION SHALL OUTLINE THE CONSTRUCTION AREA WITH THE AREA OF DISTURBANCE LINE.
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 4. EROSION LOGS SHALL BE FLARED UPGRADIENT.
 5. GIS DATA FROM ARAPAHOE COUNTY'S GIS SITE WAS USED TO DETERMINE THE DIRECTION OF FLOW IN AREAS WHERE CONTOURS ARE NOT SHOWN.

LEGEND:
 [Symbol] CONCRETE WASHOUT STRUCTURE
 [Symbol] VEHICLE TRACKING PAD
 [Symbol] FENCE (PLASTIC)
 [Symbol] AGGREGATE BAG
 [Symbol] FLOW ARROW



Print Date: 8/27/2024
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 Denver Colorado 80202
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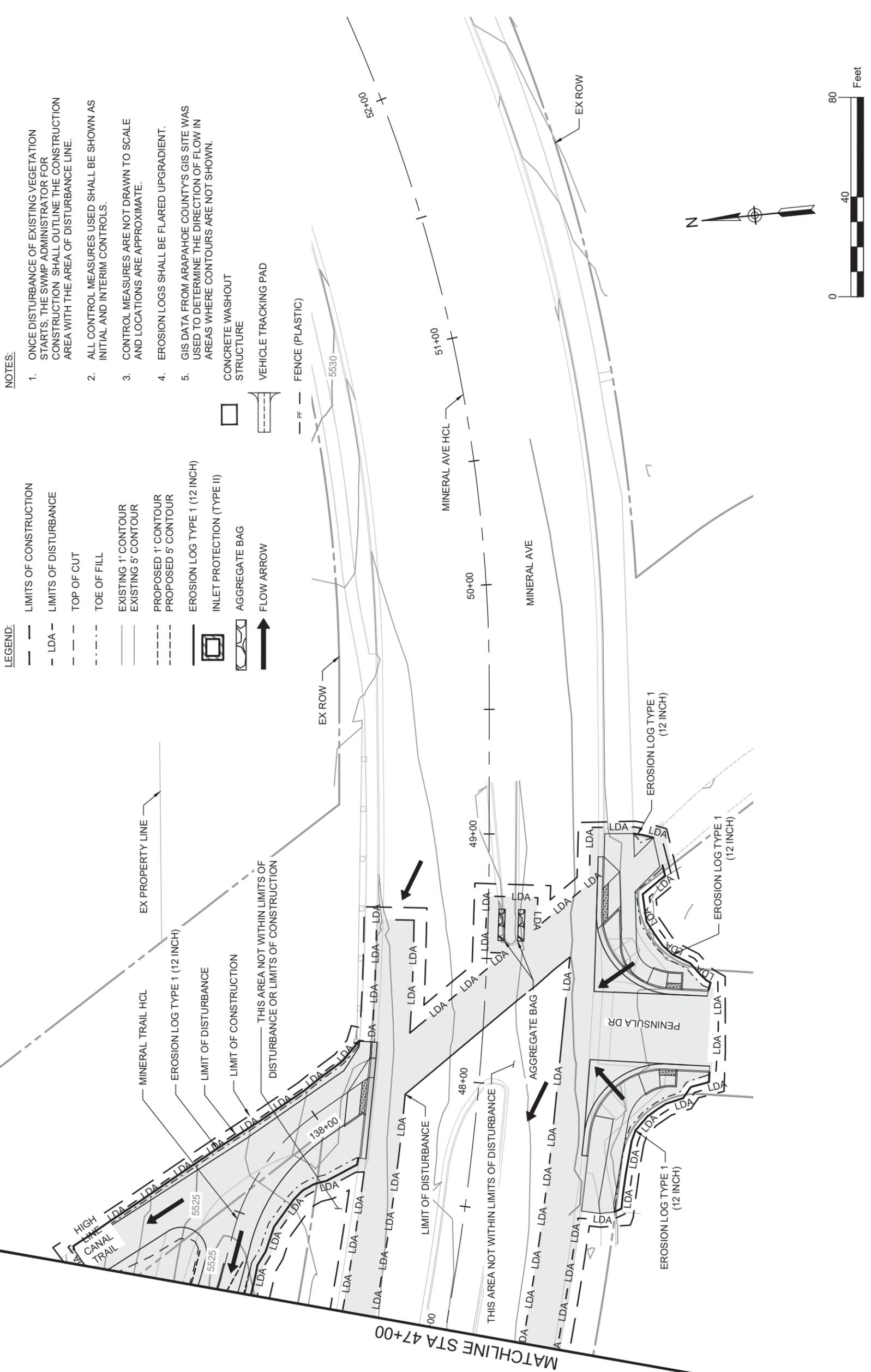
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 No Revisions:
 Revised:
 Void:

MINERAL MOBILITY IMPROVEMENTS - BID 1
 SWMP PLAN - INITIAL & INTERIM
 Designer: NXGE
 Detailer: CLLE
 Sheet Subset: SWMP
 Sheet Sheets: 14 of 32

Project No./Code
 C M810-019
 Structure Numbers
 24364
 N/A
 N/A
 Sheet 77



LEGEND:

- LIMITS OF CONSTRUCTION
- - - - - LIMITS OF DISTURBANCE
- - - - - TOP OF CUT
- - - - - TOE OF FILL
- EXISTING 1' CONTOUR
- EXISTING 5' CONTOUR
- PROPOSED 1' CONTOUR
- PROPOSED 5' CONTOUR
- EROSION LOG TYPE 1 (12 INCH)
- INLET PROTECTION (TYPE II)
- AGGREGATE BAG
- FLOW ARROW
- CONCRETE WASHOUT STRUCTURE
- VEHICLE TRACKING PAD
- FENCE (PLASTIC)

NOTES:

1. ONCE DISTURBANCE OF EXISTING VEGETATION STARTS, THE SWMP ADMINISTRATOR FOR CONSTRUCTION SHALL OUTLINE THE CONSTRUCTION AREA WITH THE AREA OF DISTURBANCE LINE.
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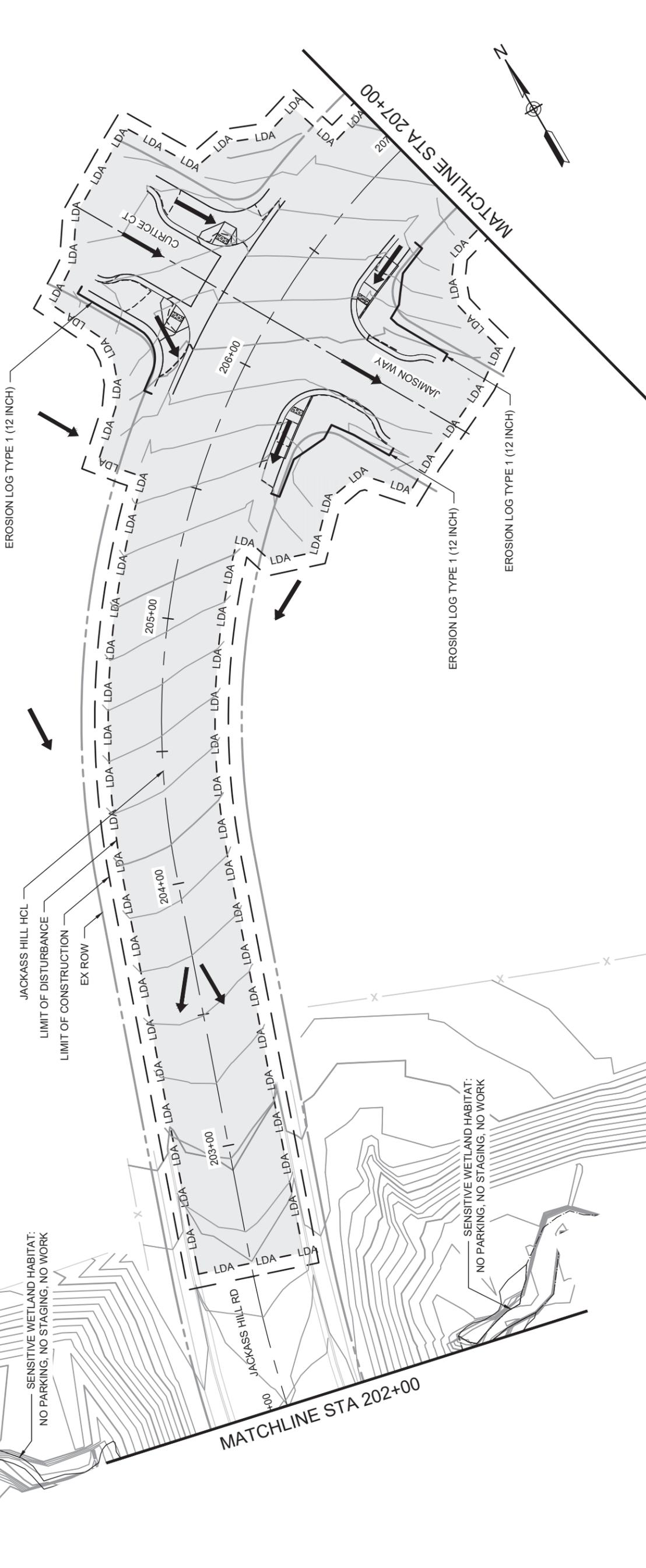


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| Print Date: 8/27/2024 File Name: LITN0001_EN_BID-1-SWMP_Plans_Initial.dwg Horiz. Scale: 1"=40' Vert. Scale: N/A | Sheet Revisions | | PUBLIC WORKS DEPT. 2255 W. Berry Avenue Littleton, CO 80120 PHONE 303-795-3863 FAX 303-795-3856 | As Constructed | MINERAL MOBILITY IMPROVEMENTS – BID 1 SWMP PLAN – INITIAL & INTERIM | Project No./Code C M810-019 |
| | Date: | Comments | | | | |
| 0000 | | | Designer: NXGE Detailer: CLLE | Structure Numbers N/A | Sheet Subset: SWMP 15 of 32 | Sheet 78 |
| DAVID EVANS AND ASSOCIATES INC. 1800 Broadway Street Suite 800 Denver Colorado 80202 Phone: 720.946.0969 | | | | | | |

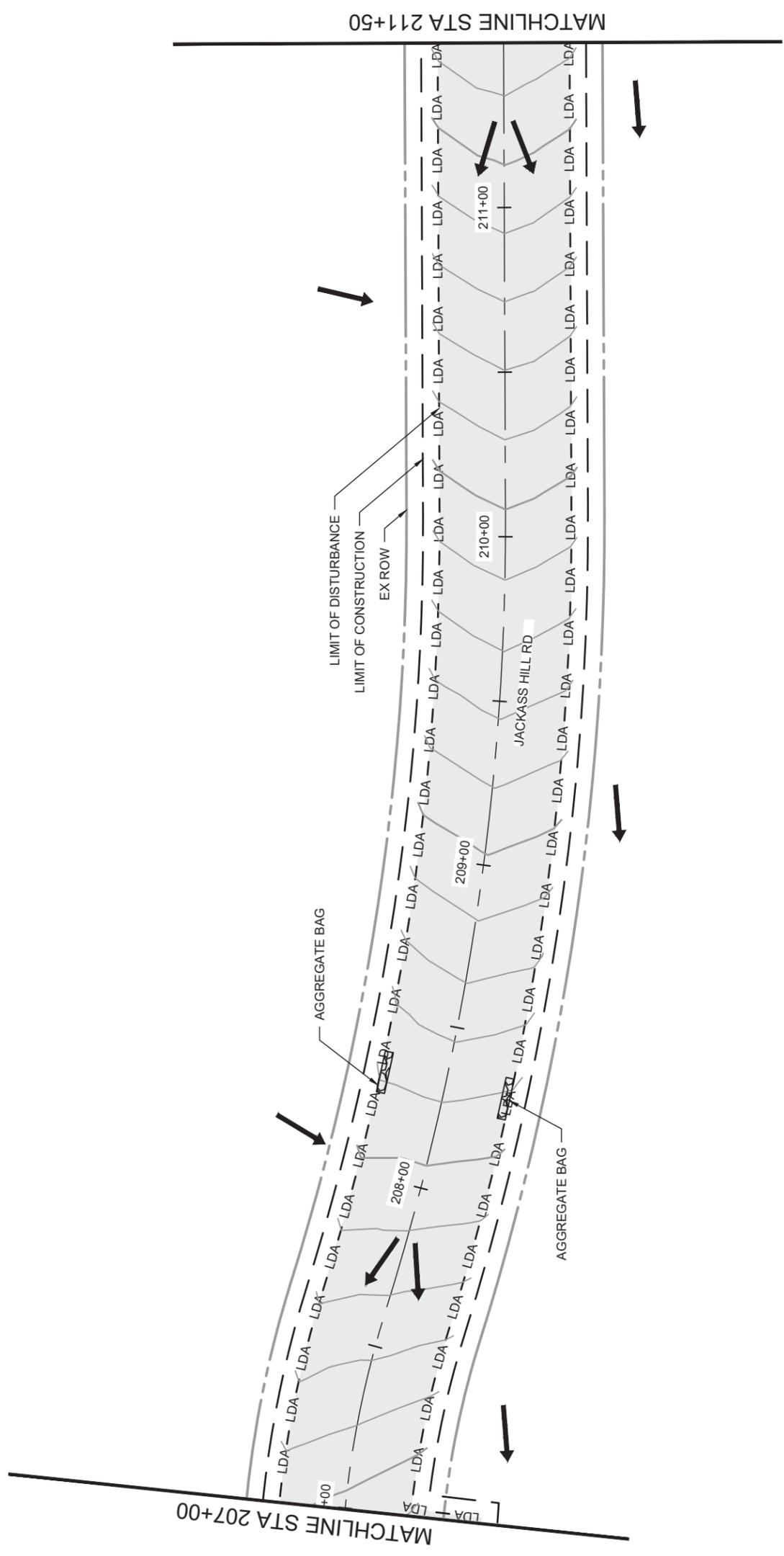
- LEGEND:**
- LIMITS OF CONSTRUCTION
 - - - - - LIMITS OF DISTURBANCE
 - - - - - TOP OF CUT
 - - - - - TOE OF FILL
 - EXISTING 1' CONTOUR
 - EXISTING 5' CONTOUR
 - PROPOSED 1' CONTOUR
 - PROPOSED 5' CONTOUR
- NOTES:**
1. ONCE DISTURBANCE OF EXISTING VEGETATION STARTS, THE SWMP ADMINISTRATOR FOR CONSTRUCTION SHALL OUTLINE THE CONSTRUCTION AREA WITH THE AREA OF DISTURBANCE LINE.
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 5. GIS DATA FROM ARAPAHOE COUNTY'S GIS SITE WAS USED TO DETERMINE THE DIRECTION OF FLOW IN AREAS WHERE CONTOURS ARE NOT SHOWN.

- EROSION LOG TYPE 1 (12 INCH)
- INLET PROTECTION (TYPE II)
- AGGREGATE BAG
- FLOW ARROW
- CONCRETE WASHOUT STRUCTURE
- VEHICLE TRACKING PAD
- FENCE (PLASTIC)

- JACKASS HILL HCL
- LIMIT OF DISTURBANCE
- LIMIT OF CONSTRUCTION
- EX ROW



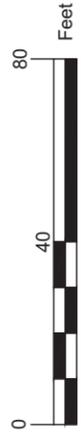
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| Horiz. Scale: 1"=40' | Comments | SWMP PLAN - INITIAL & INTERIM |
| Vert. Scale: N/A | Init. | C M810-019 |
| DAVID EVANS AND ASSOCIATES INC. 1800 Broadway Street Suite 800 Denver Colorado 80202 Phone: 720.946.0969 | | Designer: NXGE |
| | | Detailer: CLLE |
| | | Structure Numbers |
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| | | Sheet Subsets: SWMP |
| | | Sheet Subsets: 16 of 32 |
| | | Sheet 79 |



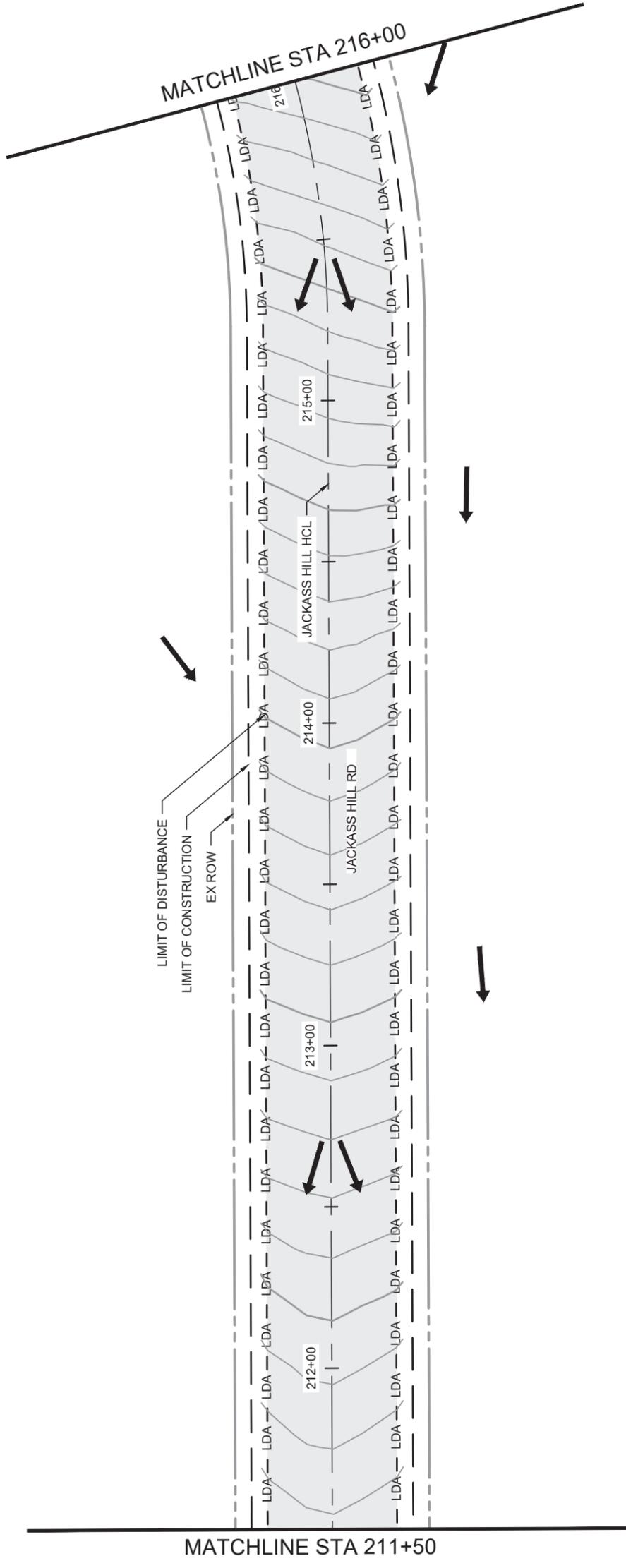
LEGEND:
 --- LIMITS OF CONSTRUCTION
 - LDA - LIMITS OF DISTURBANCE
 - - - - - TOP OF CUT
 - - - - - TOE OF FILL
 --- EXISTING 1' CONTOUR
 --- EXISTING 5' CONTOUR

--- PROPOSED 1' CONTOUR
 --- PROPOSED 5' CONTOUR
 [Symbol] CONCRETE WASHOUT STRUCTURE
 [Symbol] VEHICLE TRACKING PAD
 [Symbol] EROSION LOG TYPE 1 (12 INCH)
 [Symbol] INLET PROTECTION (TYPE II)
 [Symbol] AGGREGATE BAG
 [Symbol] FLOW ARROW
 --- PF --- FENCE (PLASTIC)

NOTES:
 1. ONCE DISTURBANCE OF EXISTING VEGETATION STARTS, THE SWMP ADMINISTRATOR FOR CONSTRUCTION SHALL OUTLINE THE CONSTRUCTION AREA WITH THE AREA OF DISTURBANCE LINE.
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| Print Date: 8/27/2024 | Sheet Revisions | | Project No./Code |
| File Name: LITN0001_EN_BID-1-SWMP_Plans_Initial.dwg | Date: | Comments | MINERAL MOBILITY IMPROVEMENTS - BID 1 |
| Horiz. Scale: 1"=40' | | | SWMP PLAN - INITIAL & INTERIM |
| DAVID EVANS AND ASSOCIATES INC. 1800 Broadway Street Suite 800 Denver Colorado 80202 Phone: 720.946.0969 | | | Designer: NXGE |
| | | | Detailer: CLLE |
| | | | Structure Numbers |
| | | | Sheet Subst: SWMP |
| | | | Sheet Subst: 17 of 32 |
| | | | Project No./Code |
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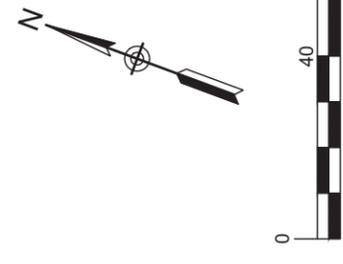
- LIMITS OF CONSTRUCTION
- LDA - LIMITS OF DISTURBANCE
- - - TOP OF CUT
- . . . TOE OF FILL
- EXISTING 1' CONTOUR
- EXISTING 5' CONTOUR
- - - PROPOSED 1' CONTOUR
- - - PROPOSED 5' CONTOUR

NOTES:

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LEGEND:

- EROSION LOG TYPE 1 (12 INCH)
- INLET PROTECTION (TYPE II)
- AGGREGATE BAG
- FLOW ARROW
- CONCRETE WASHOUT STRUCTURE
- VEHICLE TRACKING PAD
- PF — FENCE (PLASTIC)



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| Print Date: 8/27/2024 | Sheet Revisions | | Project No./Code |
| File Name: LITN0001_EN_BID-1-SWMP_Plans_Initial.dwg | Date: | Comments | MINERAL MOBILITY IMPROVEMENTS – BID 1 |
| Horiz. Scale: 1"=40' | | | SWMP PLAN – INITIAL & INTERIM |
| DAVID EVANS AND ASSOCIATES INC. 1600 Broadway Street Suite 600 Denver Colorado 80202 Phone: 720.946.0969 | | | Designer: NXGE |
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| | | | Sheet Subsets: SWMP |
| | | | Sheet Subsets: 18 of 32 |
| | | | Sheet 81 |

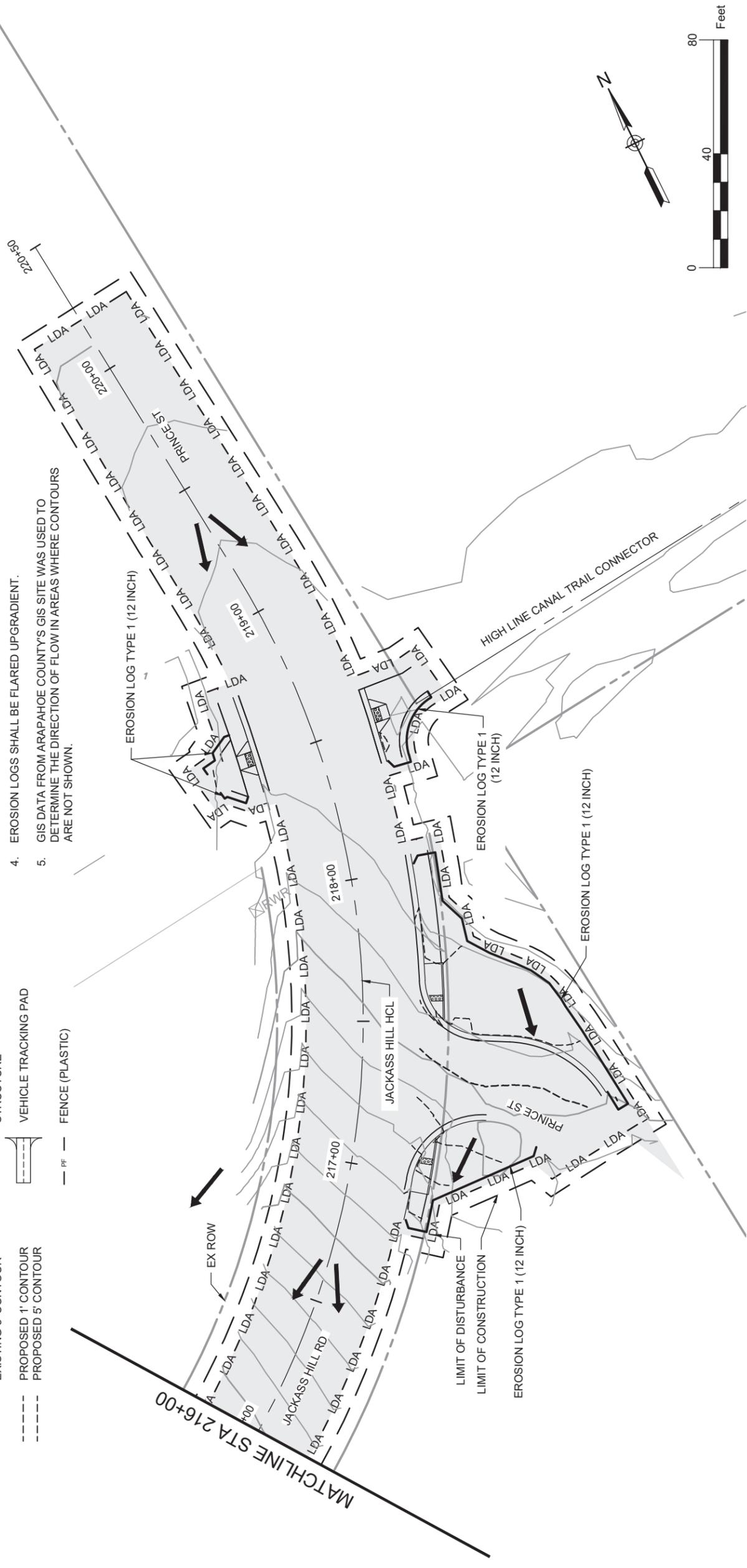
LEGEND:

- LIMITS OF CONSTRUCTION
- - - - - LIMITS OF DISTURBANCE
- - - - - TOP OF CUT
- - - - - TOE OF FILL
- EXISTING 1' CONTOUR
- EXISTING 5' CONTOUR
- - - - - PROPOSED 1' CONTOUR
- - - - - PROPOSED 5' CONTOUR

- EROSION LOG TYPE 1 (12 INCH)
- INLET PROTECTION (TYPE II)
- AGGREGATE BAG
- FLOW ARROW
- CONCRETE WASHOUT STRUCTURE
- VEHICLE TRACKING PAD
- FENCE (PLASTIC)

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| No Revisions: | |
| Revised: | |
| Void: | |

| MINERAL MOBILITY IMPROVEMENTS – BID 1 | |
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| SWMP PLAN – INITIAL & INTERIM | |
| Designer: NXGE | Structure Numbers: N/A |
| Detailer: CLLE | Structure Numbers: N/A |
| Sheet Subset: SWMP | Sheet Sheets: 19 of 32 |

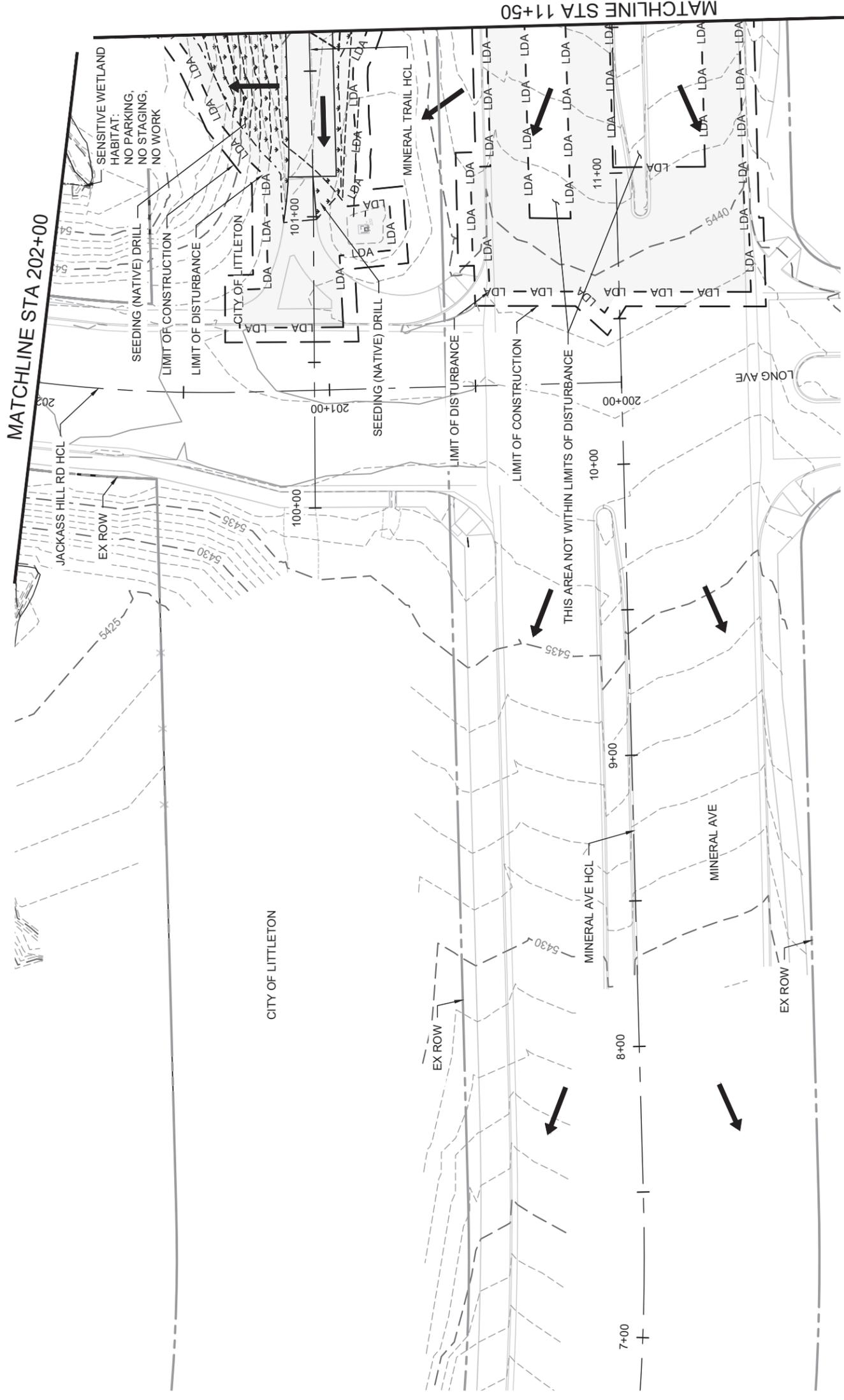
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| C M810-019 | |
| 24364 | |
| 82 | |

LEGEND:

- LIMITS OF CONSTRUCTION
- - - LDA
- - - - - TOP OF CUT
- - - - - TOE OF FILL
- EXISTING 1' CONTOUR
- EXISTING 5' CONTOUR
- - - - - PROPOSED 1' CONTOUR
- - - - - PROPOSED 5' CONTOUR
- SEEDING (NATIVE) DRILL
- FLOW ARROW

NOTES:

1. THE FINAL SWMP REPRESENTS BMPs THAT SHALL BE INSTALLED AT THE END OF CONSTRUCTION.
2. ONCE AN AREA HAS BEEN PERMANENTLY STABILIZED, THE SWMP ADMINISTRATOR FOR CONSTRUCTION SHALL IDENTIFY THE AREA ON THE PLANS AND DATE WHEN THE WORK WAS COMPLETED.
3. BMPs ARE NOT DRAWN TO SCALE AND LOCATIONS ARE APPROXIMATE.
4. GIS DATA FROM ARAPAHOE COUNTY'S GIS SITE WAS USED TO DETERMINE THE DIRECTION OF FLOW IN AREAS WHERE CONTOURS ARE NOT SHOWN.



Print Date: 8/27/2024
 File Name: LITN001_EN_BID-1-SWMP_Plans_Final.dwg
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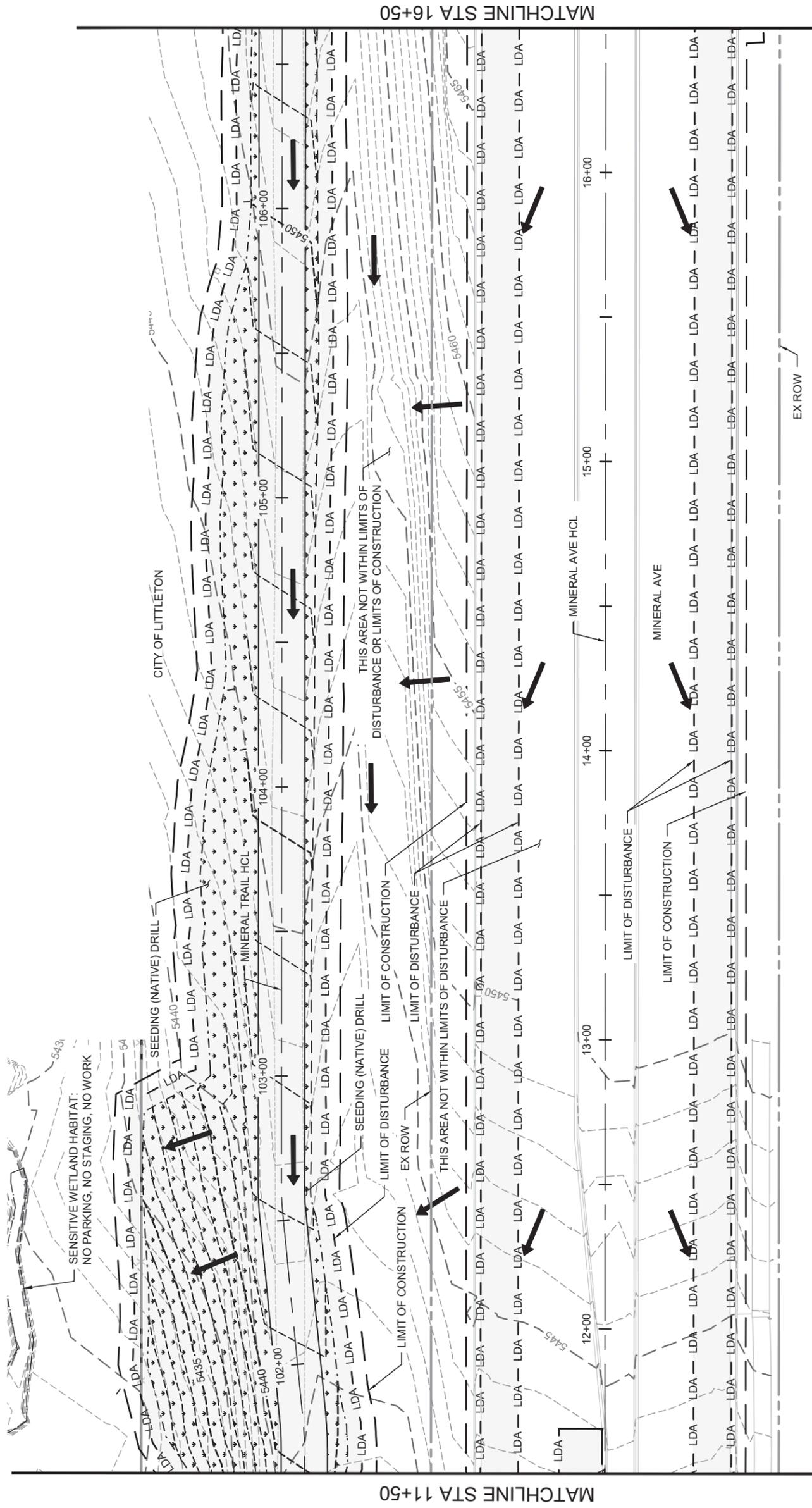
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**MINERAL MOBILITY IMPROVEMENTS - BID 1
 SWMP PLAN - FINAL**

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| Designer: NXGE | Structure Numbers |
| Detailer: CLLE | N/A |
| Sheet Subset: SWMP | Subset Sheets: 20 of 32 |

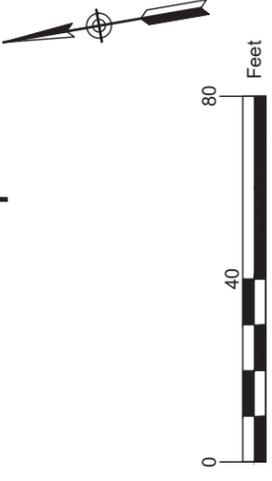
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| C M810-019 |
| 24364 |
| 83 |

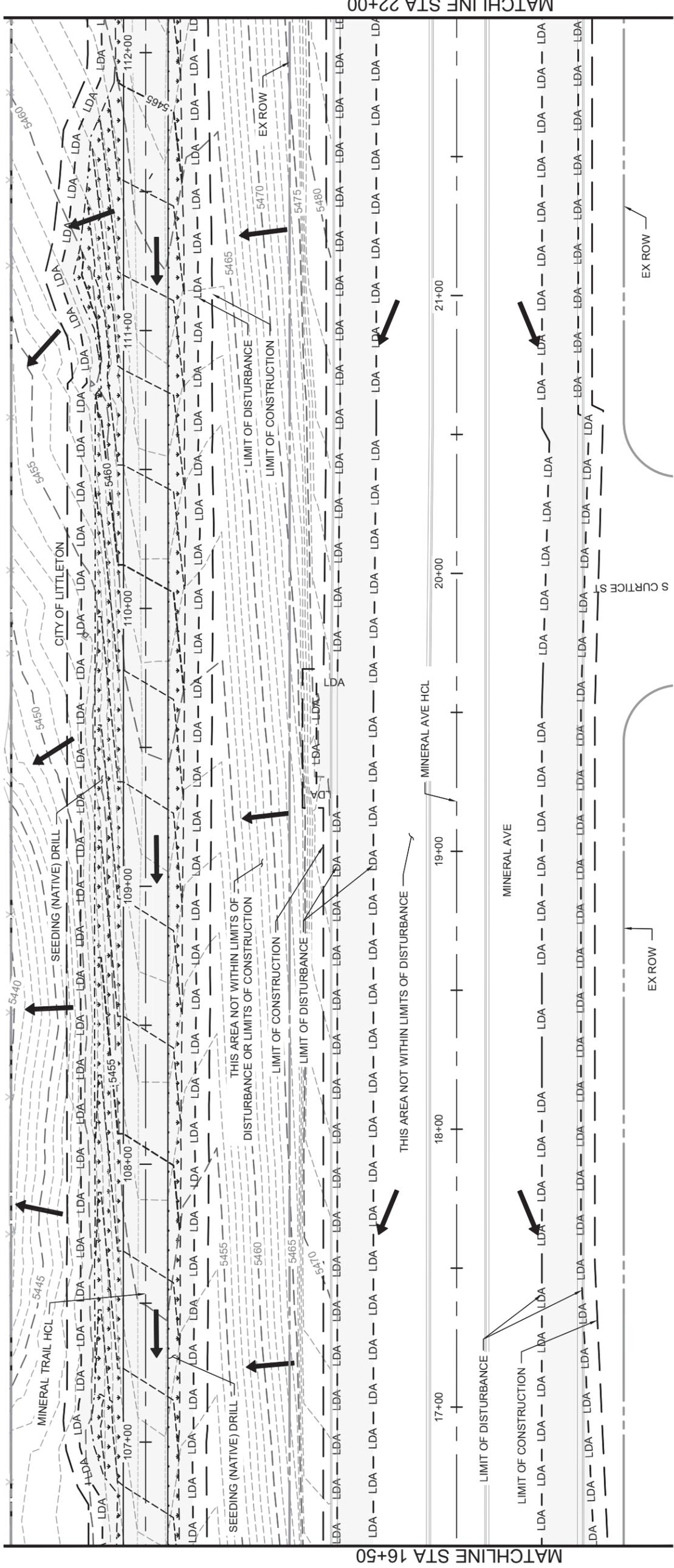


- LEGEND:**
- LIMITS OF CONSTRUCTION
 - LIMITS OF DISTURBANCE
 - TOP OF CUT
 - TOE OF FILL
 - EXISTING 1' CONTOUR
 - EXISTING 5' CONTOUR
 - PROPOSED 1' CONTOUR
 - PROPOSED 5' CONTOUR
 - SEEDING (NATIVE) DRILL
 - FLOW ARROW

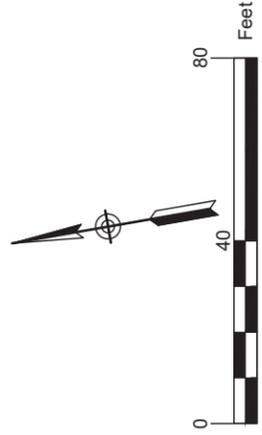
- NOTES:**
1. THE FINAL SWMP REPRESENTS BMPs THAT SHALL BE INSTALLED AT THE END OF CONSTRUCTION.
 2. ONCE AN AREA HAS BEEN PERMANENTLY STABILIZED, THE SWMP ADMINISTRATOR FOR CONSTRUCTION SHALL IDENTIFY THE AREA ON THE PLANS AND DATE WHEN THE WORK WAS COMPLETED.
 3. BMPs ARE NOT DRAWN TO SCALE AND LOCATIONS ARE APPROXIMATE.
 4. GIS DATA FROM ARAPAHOE COUNTY'S GIS SITE WAS USED TO DETERMINE THE DIRECTION OF FLOW IN AREAS WHERE CONTOURS ARE NOT SHOWN.



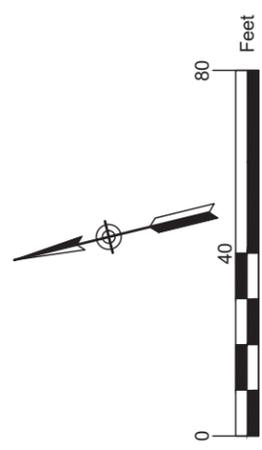
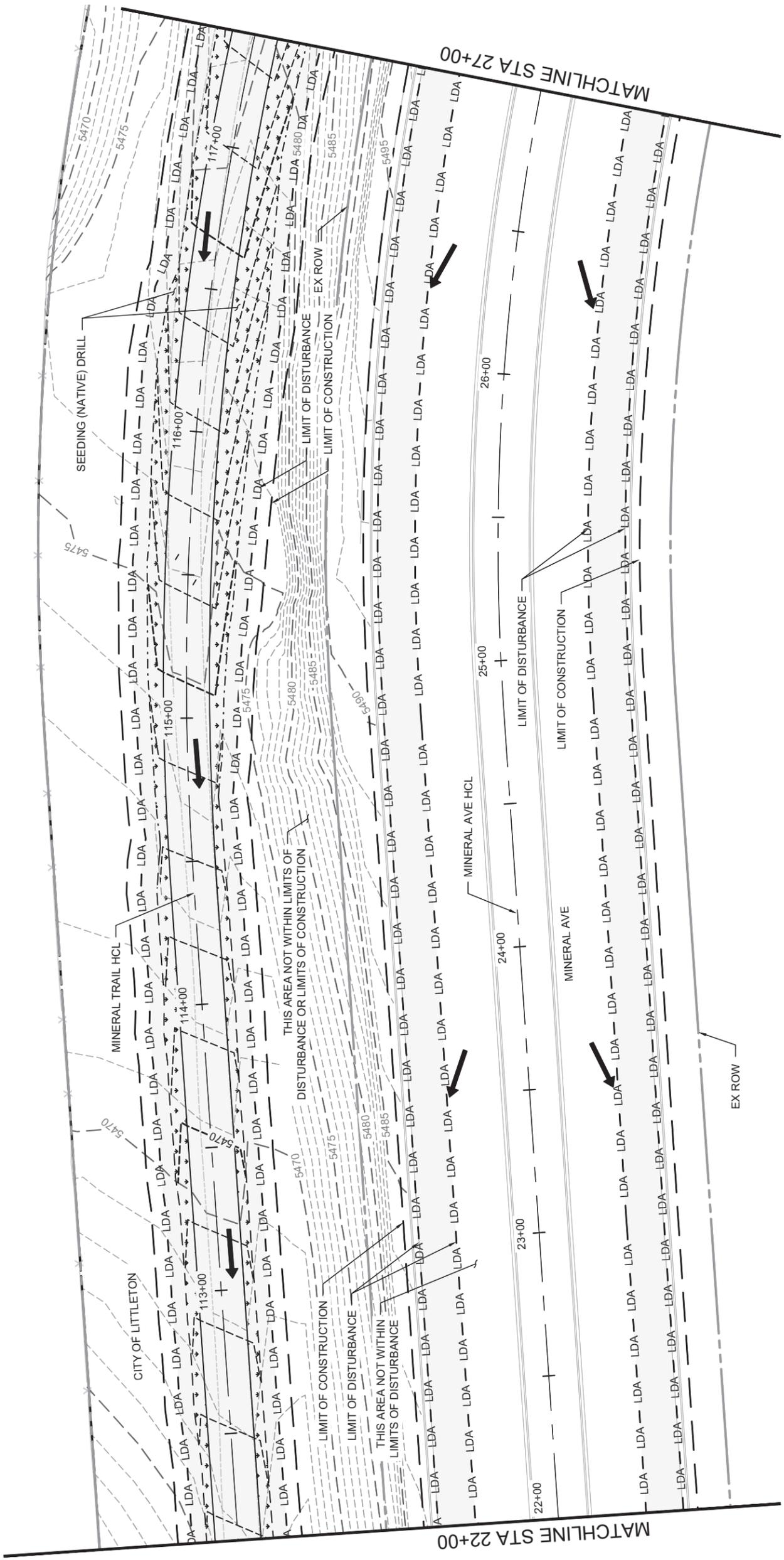
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| Print Date: 8/27/2024 | | Sheet Revisions | | As Constructed | | MINERAL MOBILITY IMPROVEMENTS - BID 1 | | Project No./Code | |
| File Name: LITN0001_EN_BID-1-SWMP_Plans_Final.dwg | | Date: | Comments | No Revisions: | | SWMP PLAN - FINAL | | C M810-019 | |
| Horiz. Scale: 1"=40' | | | | Revised: | | Designer: NXGE | | Structure Numbers | |
| Vert. Scale: N/A | | | | Void: | | Detailer: CLLE | | N/A | |
| DAVID EVANS AND ASSOCIATES INC. 1600 Broadway Street Suite 600 Denver Colorado 80202 Phone: 720.946.0969 | | | | Sheet Subset: SWMP | | Sheet Subset: SWMP | | Sheet | |
| 0000 | | | | 21 of 32 | | 21 of 32 | | 84 | |



- LEGEND:**
- LIMITS OF CONSTRUCTION
 - - - - - LIMITS OF DISTURBANCE
 - - - - - TOP OF CUT
 - - - - - TOE OF FILL
 - EXISTING 1' CONTOUR
 - - - - - EXISTING 5' CONTOUR
 - PROPOSED 1' CONTOUR
 - - - - - PROPOSED 5' CONTOUR
 - SEEDING (NATIVE) DRILL
 - FLOW ARROW
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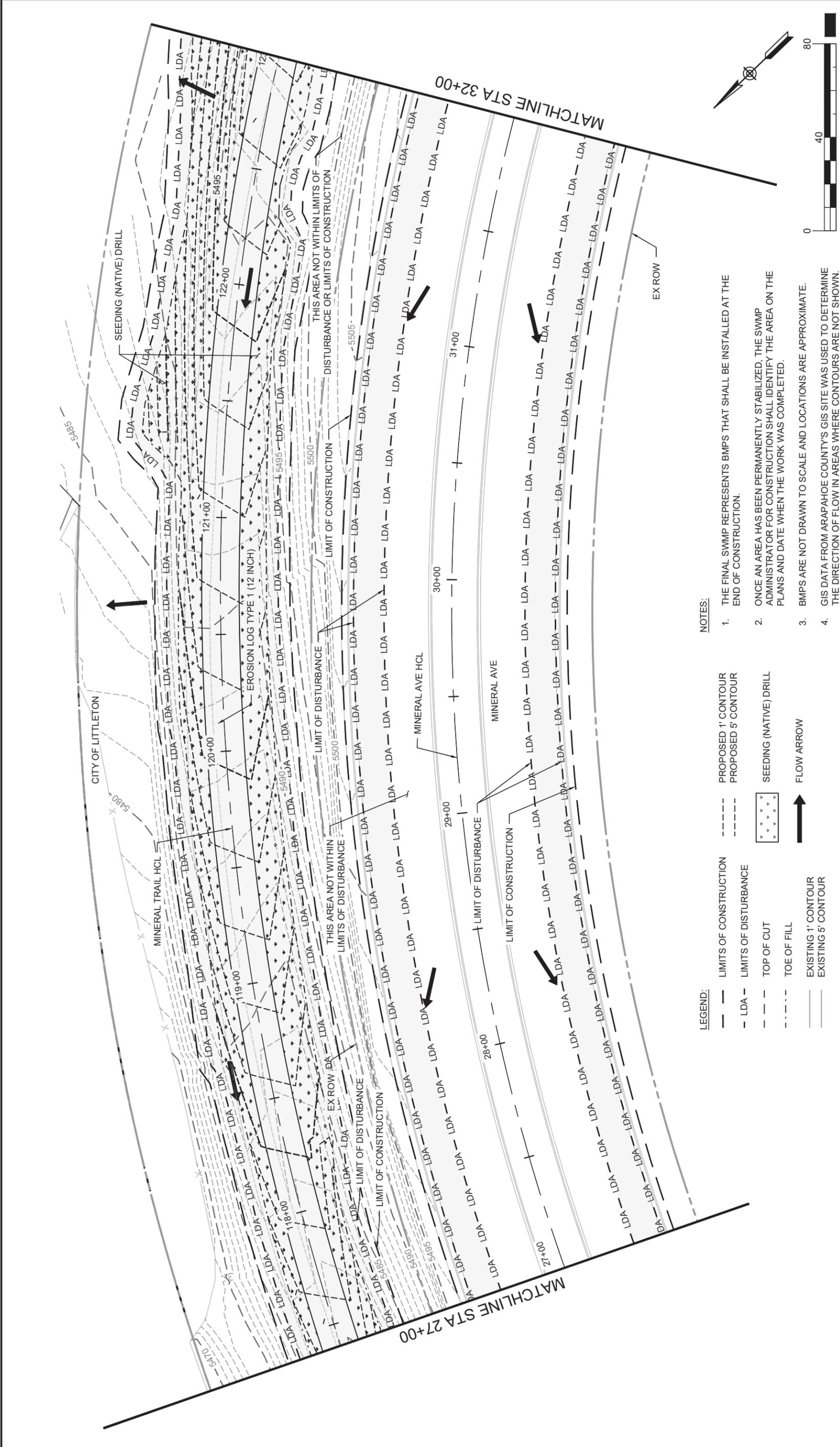


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| Print Date: 8/27/2024 | | Sheet Revisions | | As Constructed | | MINERAL MOBILITY IMPROVEMENTS - BID 1 | | Project No./Code | |
| File Name: LITN0001_EN_BID-1-SWMP_Plans_Final.dwg | | Comments | | No Revisions: | | SWMP PLAN - FINAL | | C M810-019 | |
| Horiz. Scale: 1"=40' | | Date: | | Revised: | | Designer: NXGE | | Structure Numbers | |
| Vert. Scale: N/A | | Init.: | | Void: | | Detailer: CLLE | | N/A | |
| DAVID EVANS AND ASSOCIATES INC. 1600 Broadway Street Suite 600 Denver Colorado 80202 Phone: 720.946.0969 | | PUBLIC WORKS DEPT. 2255 W. Berry Avenue Littleton, CO 80120 PHONE 303-795-3863 FAX 303-795-3856 | | Sheet Subset: SWMP Sheet: 22 of 32 | | Sheet Subset: SWMP Sheet: 22 of 32 | | Structure Numbers: 24364 Sheet: 85 | |



- LEGEND:**
- LIMITS OF CONSTRUCTION
 - - - - - LIMITS OF DISTURBANCE
 - - - - - TOP OF CUT
 - - - - - TOE OF FILL
 - EXISTING 1' CONTOUR
 - EXISTING 5' CONTOUR
 - PROPOSED 1' CONTOUR
 - PROPOSED 5' CONTOUR
 - SEEDING (NATIVE) DRILL
 - FLOW ARROW
- NOTES:**
- THE FINAL SWMP REPRESENTS BMPs THAT SHALL BE INSTALLED AT THE END OF CONSTRUCTION.
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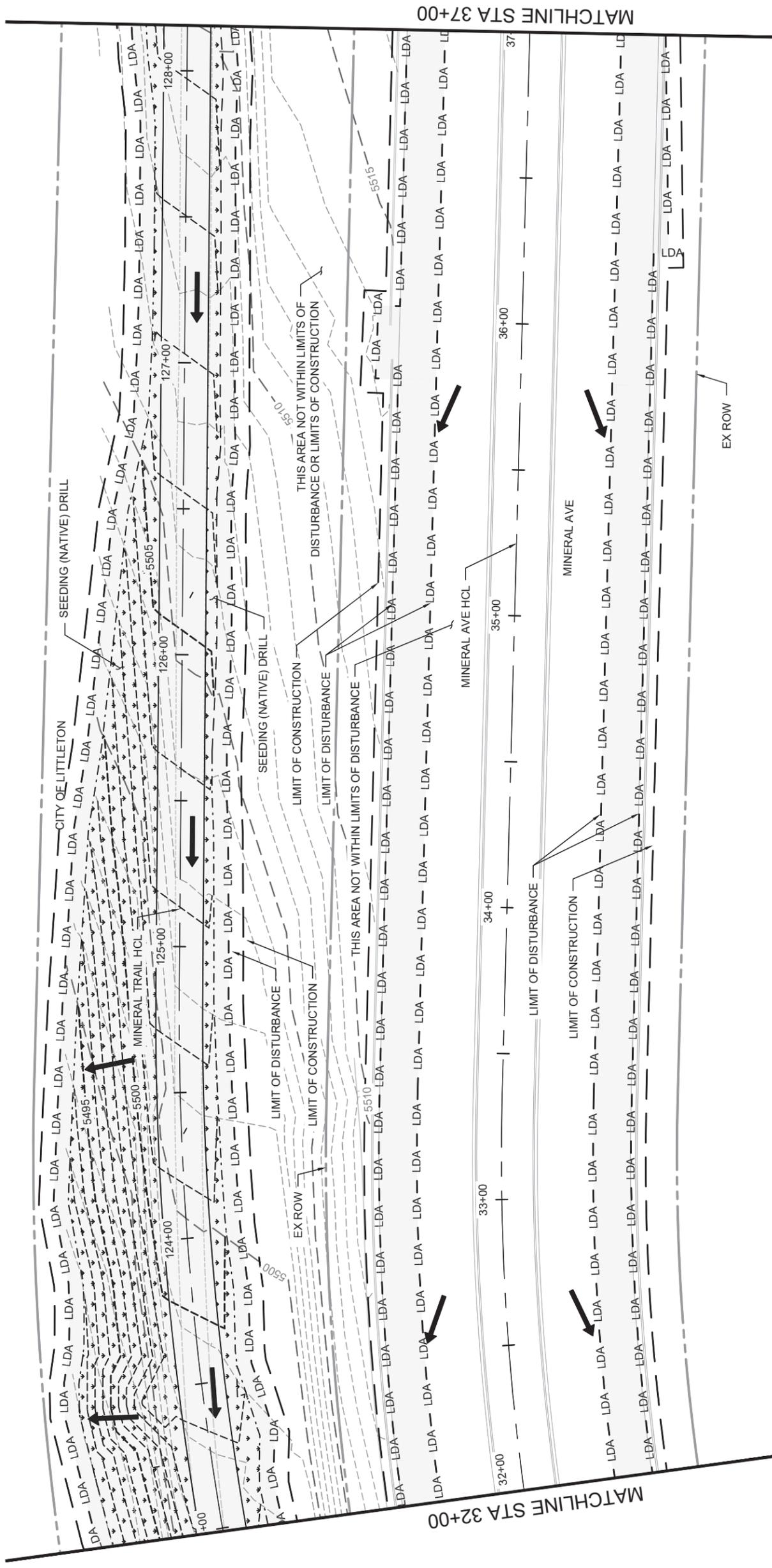
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| Print Date: 8/27/2024 | | Sheet Revisions | | As Constructed | | MINERAL MOBILITY IMPROVEMENTS - BID 1 | | Project No./Code | |
| File Name: LITN0001_EN_BID-1-SWMP_Plans_Final.dwg | | Comments | | No Revisions: | | SWMP PLAN - FINAL | | C M810-019 | |
| Horiz. Scale: 1"=40' | | Date: | | Revised: | | Designer: NXGE | | Structure Numbers | |
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| DAVID EVANS AND ASSOCIATES INC. 1600 Broadway Street Suite 600 Denver Colorado 80202 Phone: 720.946.0969 | | PUBLIC WORKS DEPT. 2255 W. Berry Avenue Littleton, CO 80120 PHONE 303-795-3863 FAX 303-795-3856 | | Sheet Subset: SWMP Sheet Sheets: 23 of 32 | | Sheet Subset: SWMP Sheet Sheets: 23 of 32 | | Structure Numbers N/A | |
| | | | | | | | | 86 | |



- LEGEND:**
- LIMITS OF CONSTRUCTION
 - - - - - LIMITS OF DISTURBANCE
 - LDA - - - - - TOP OF CUT
 - - - - - TOE OF FILL
 - EXISTING 1' CONTOUR
 - EXISTING 5' CONTOUR
 - PROPOSED 1' CONTOUR
 - PROPOSED 5' CONTOUR
 - SEEDING (NATIVE) DRILL
 - FLOW ARROW
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| Print Date: 8/27/2024 | | Sheet Revisions | | As Constructed | | MINERAL MOBILITY IMPROVEMENTS - BID 1 | | Project No./Code | |
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| DAVID EVANS AND ASSOCIATES INC. 1600 Broadway Street Suite 600 Denver Colorado 80202 Phone: 720.946.0969 | | | | Sheet Subset: SWMP | | Sheet Subset: SWMP | | 24 of 32 | |
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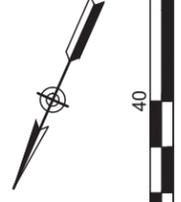
Littleton Colorado
PUBLIC WORKS DEPT.
2255 W. Berry Avenue
Littleton, CO 80120
PHONE 303-795-3863
FAX 303-795-3856



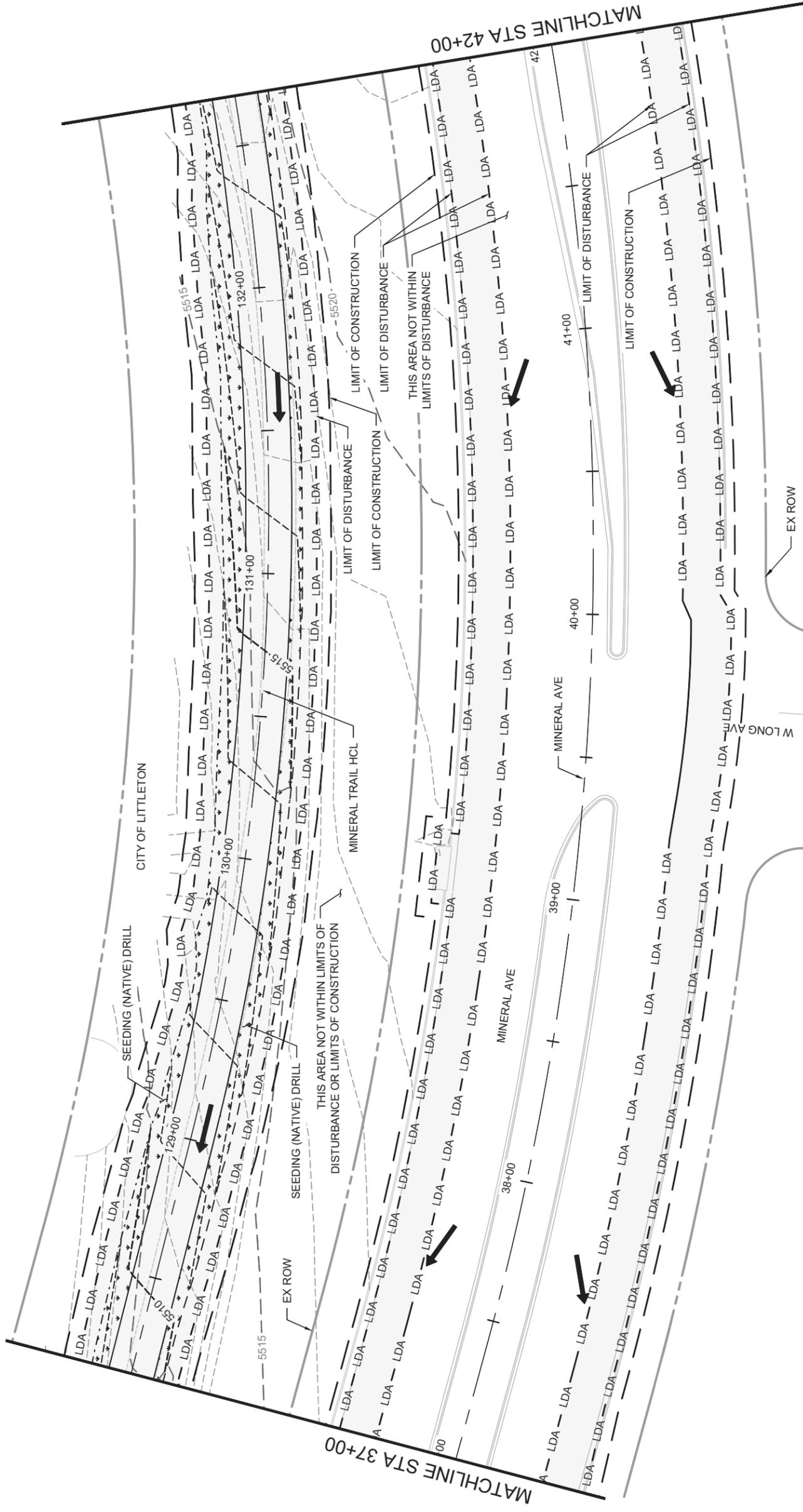
MATCHLINE STA 37+00

MATCHLINE STA 32+00

- LEGEND:**
- LIMITS OF CONSTRUCTION
 - - - - - PROPOSED 1' CONTOUR
 - - - - - PROPOSED 5' CONTOUR
 - - - - - SEEDING (NATIVE) DRILL
 - - - - - FLOW ARROW
 - EXISTING 1' CONTOUR
 - EXISTING 5' CONTOUR
- NOTES:**
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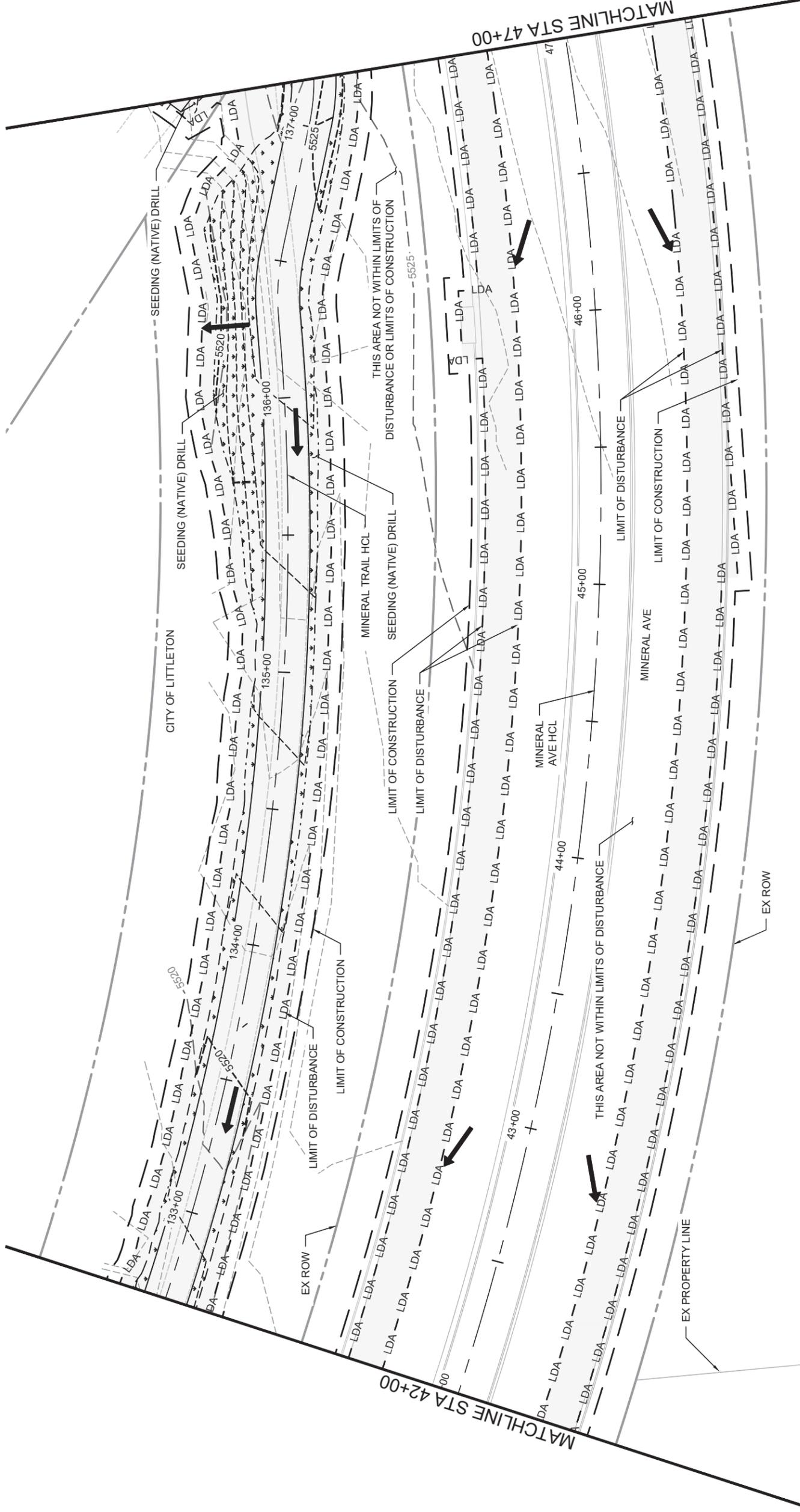
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| Print Date: 8/27/2024 | | Sheet Revisions | | As Constructed | | MINERAL MOBILITY IMPROVEMENTS - BID 1 | | Project No./Code | |
| File Name: LITN0001_EN_BID-1-SWMP_Plans_Final.dwg | | Date: | Comments | No Revisions: | | SWMP PLAN - FINAL | | C M810-019 | |
| Horiz. Scale: 1"=40' | | | | Revised: | | Designer: NXGE | | Structure Numbers | |
| Vert. Scale: N/A | | | | Void: | | Detailer: CLLE | | N/A | |
| DAVID EVANS AND ASSOCIATES INC. 1800 Broadway Street Suite 800 Denver Colorado 80202 Phone: 720.946.0969 | | | | Sheet Subset: SWMP | | Sheet Subset: SWMP | | 25 of 32 | |
| PUBLIC WORKS DEPT. 2255 W. Berry Avenue Littleton, CO 80120 PHONE 303-795-3863 FAX 303-795-3856 | | | | Sheet Numbers | | Sheet Numbers | | 24364 | |
| | | | | | | | | 88 | |



- LEGEND:**
- LIMITS OF CONSTRUCTION
 - - - - - PROPOSED 1' CONTOUR
 - - - - - PROPOSED 5' CONTOUR
 - LDA - LIMITS OF DISTURBANCE
 - - - - - TOP OF CUT
 - - - - - TOE OF FILL
 - EXISTING 1' CONTOUR
 - EXISTING 5' CONTOUR
 - SEEDING (NATIVE) DRILL
 - FLOW ARROW

- NOTES:**
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| Print Date: 8/27/2024 | | Sheet Revisions | | As Constructed | | MINERAL MOBILITY IMPROVEMENTS - BID 1 | | Project No./Code | |
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| Horiz. Scale: 1"=40' | | Comments: | | Revised: | | Designer: NXGE | | Structure Numbers | |
| Vert. Scale: N/A | | Init.: | | Void: | | Detailer: CLLE | | N/A | |
| DAVID EVANS AND ASSOCIATES INC. 1800 Broadway Street Suite 800 Denver Colorado 80202 Phone: 720.946.0969 | | PUBLIC WORKS DEPT. 2255 W. Berry Avenue Littleton, CO 80120 PHONE 303-795-3863 FAX 303-795-3856 | | Sheet Subset: SWMP Sheet: 26 of 32 | | Sheet Subset: SWMP Sheet: 26 of 32 | | Sheet: 89 | |

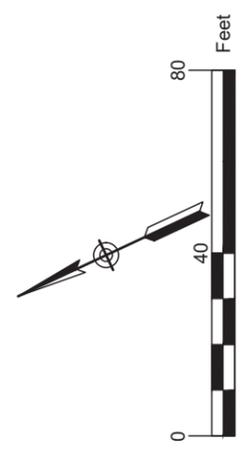


LEGEND:
 --- LIMITS OF CONSTRUCTION
 - - - - - LIMITS OF DISTURBANCE
 --- TOP OF CUT
 - - - - - TOE OF FILL
 --- EXISTING 1' CONTOUR
 - - - - - EXISTING 5' CONTOUR

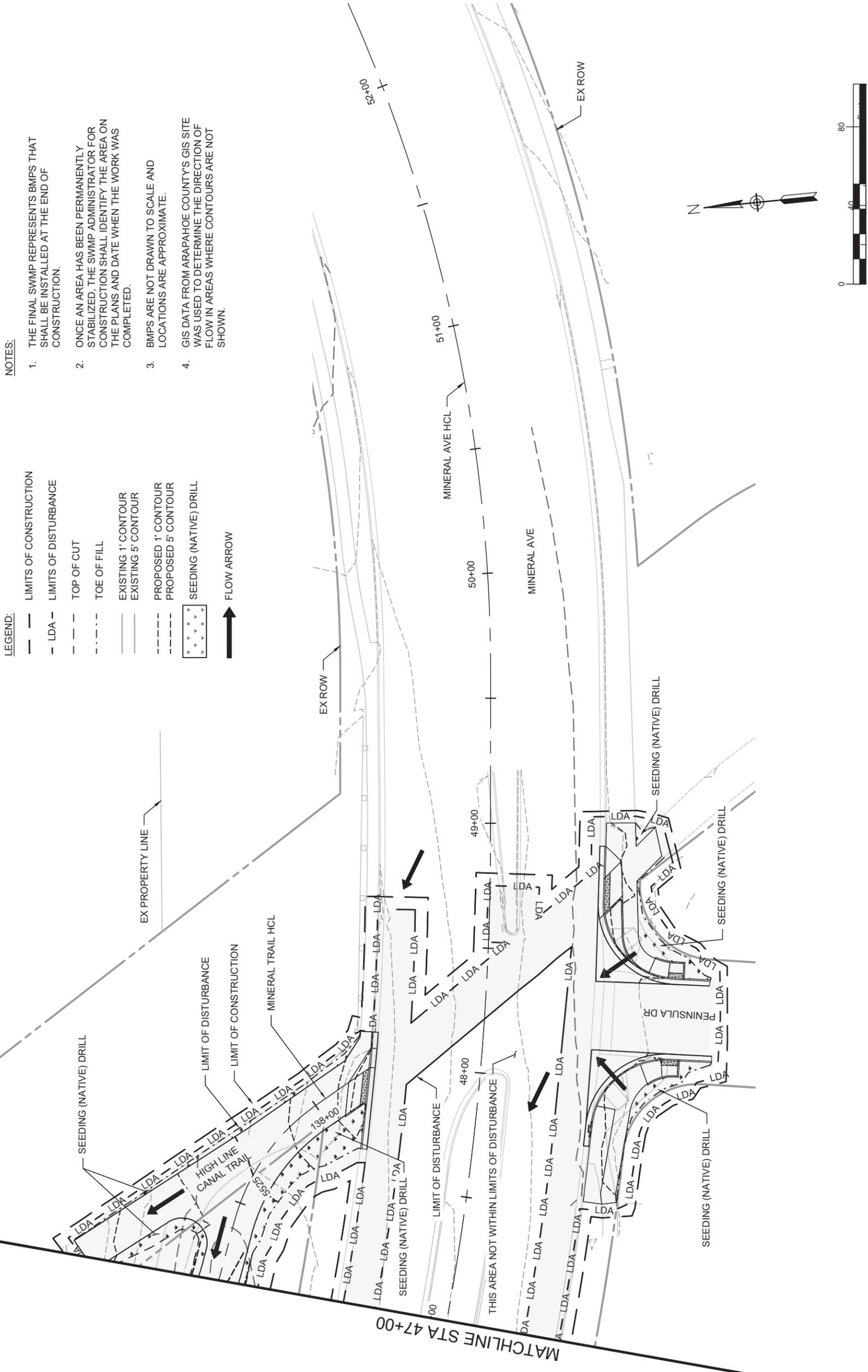
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LEGEND:
 - - - - - PROPOSED 1' CONTOUR
 - - - - - PROPOSED 5' CONTOUR
 [Symbol] SEEDING (NATIVE) DRILL
 [Arrow] FLOW ARROW

LEGEND:
 --- LIMIT OF CONSTRUCTION
 - - - - - LIMIT OF DISTURBANCE
 --- EX ROW
 --- EX PROPERTY LINE



| | | | | | | | | | |
|---|--|---|--|---------------------------------------|--|---------------------------------------|--|---------------------------------------|--|
| Print Date: 8/27/2024 | | Sheet Revisions | | As Constructed | | MINERAL MOBILITY IMPROVEMENTS - BID 1 | | Project No./Code | |
| File Name: LITN0001_EN_BID-1-SWMP_Plans_Final.dwg | | Comments | | No Revisions: | | SWMP PLAN - FINAL | | C M810-019 | |
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| DAVID EVANS AND ASSOCIATES INC. 1800 Broadway Street Suite 800 Denver Colorado 80202 Phone: 720.946.0969 | | PUBLIC WORKS DEPT. 2255 W. Berry Avenue Littleton, CO 80120 PHONE 303-795-3863 FAX 303-795-3856 | | Sheet Subset: SWMP Sheet: 27 of 32 | | Sheet Subset: SWMP Sheet: 27 of 32 | | Structure Numbers N/A | |
| | | | | | | | | Sheet Subset: SWMP Sheet: 27 of 32 | |



- LEGEND:**
- LIMITS OF CONSTRUCTION
 - LDA - LIMITS OF DISTURBANCE
 - - - TOP OF CUT
 - - - - - TOE OF FILL
 - EXISTING 1' CONTOUR
 - EXISTING 5' CONTOUR
 - PROPOSED 1' CONTOUR
 - PROPOSED 5' CONTOUR
 - SEEDING (NATIVE) DRILL
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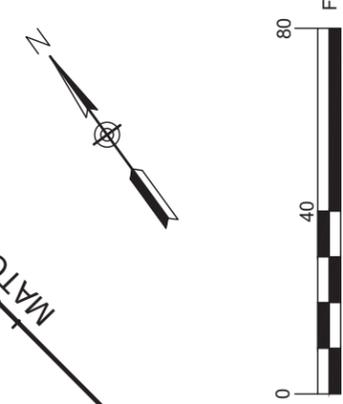
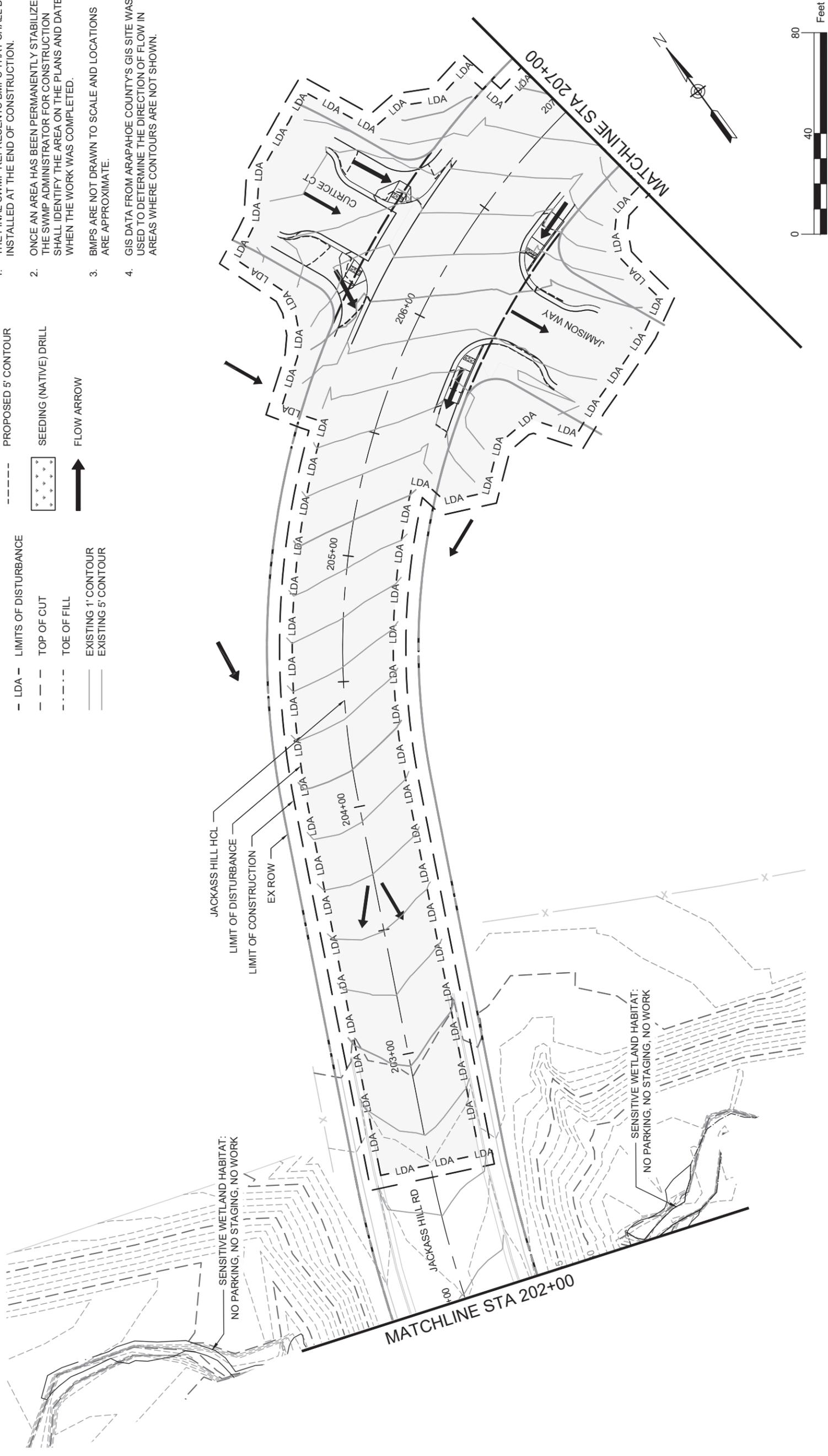
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| Print Date: 8/27/2024 | | Sheet Revisions | | Project No./Code | |
| File Name: LITN0001_EN_BID-1-SWMP_Plans_Final.dwg | | Date: | Comments | MINERAL MOBILITY IMPROVEMENTS - BID 1 | |
| Horiz. Scale: 1"=40' | | | | SWMP PLAN - FINAL | |
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| DAVID EVANS AND ASSOCIATES INC. 1800 Broadway Street Suite 800 Denver Colorado 80202 Phone: 720.946.0969 | | | | Designer: NXGE | Structure Numbers |
| | | | | Detailer: CLLE | N/A |
| | | | | Sheet Subset: SWMP | Subset Sheets: 28 of 32 |
| PUBLIC WORKS DEPT. 2255 W. Berry Avenue Littleton, CO 80120 PHONE 303-795-3863 FAX 303-795-3856 | | As Constructed No Revisions: Revised: Void: | | MINERAL MOBILITY IMPROVEMENTS - BID 1 SWMP PLAN - FINAL | |

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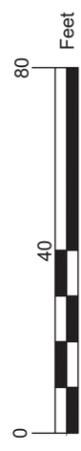
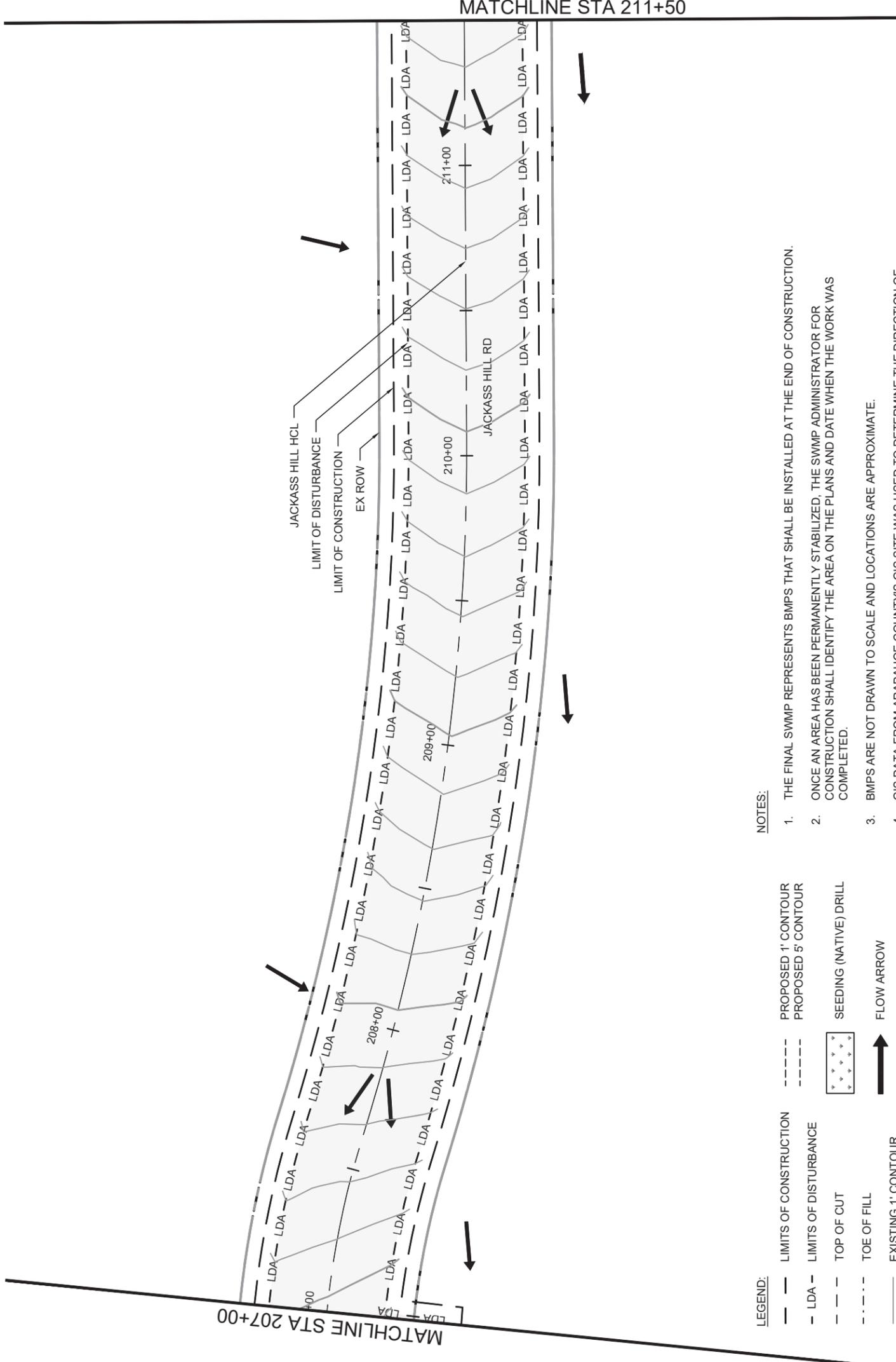
- LIMITS OF CONSTRUCTION
- LDA - LIMITS OF DISTURBANCE
- - - TOP OF CUT
- - - TOE OF FILL
- EXISTING 1' CONTOUR
- EXISTING 5' CONTOUR
- PROPOSED 1' CONTOUR
- PROPOSED 5' CONTOUR
- SEEDING (NATIVE) DRILL
- ↑ FLOW ARROW

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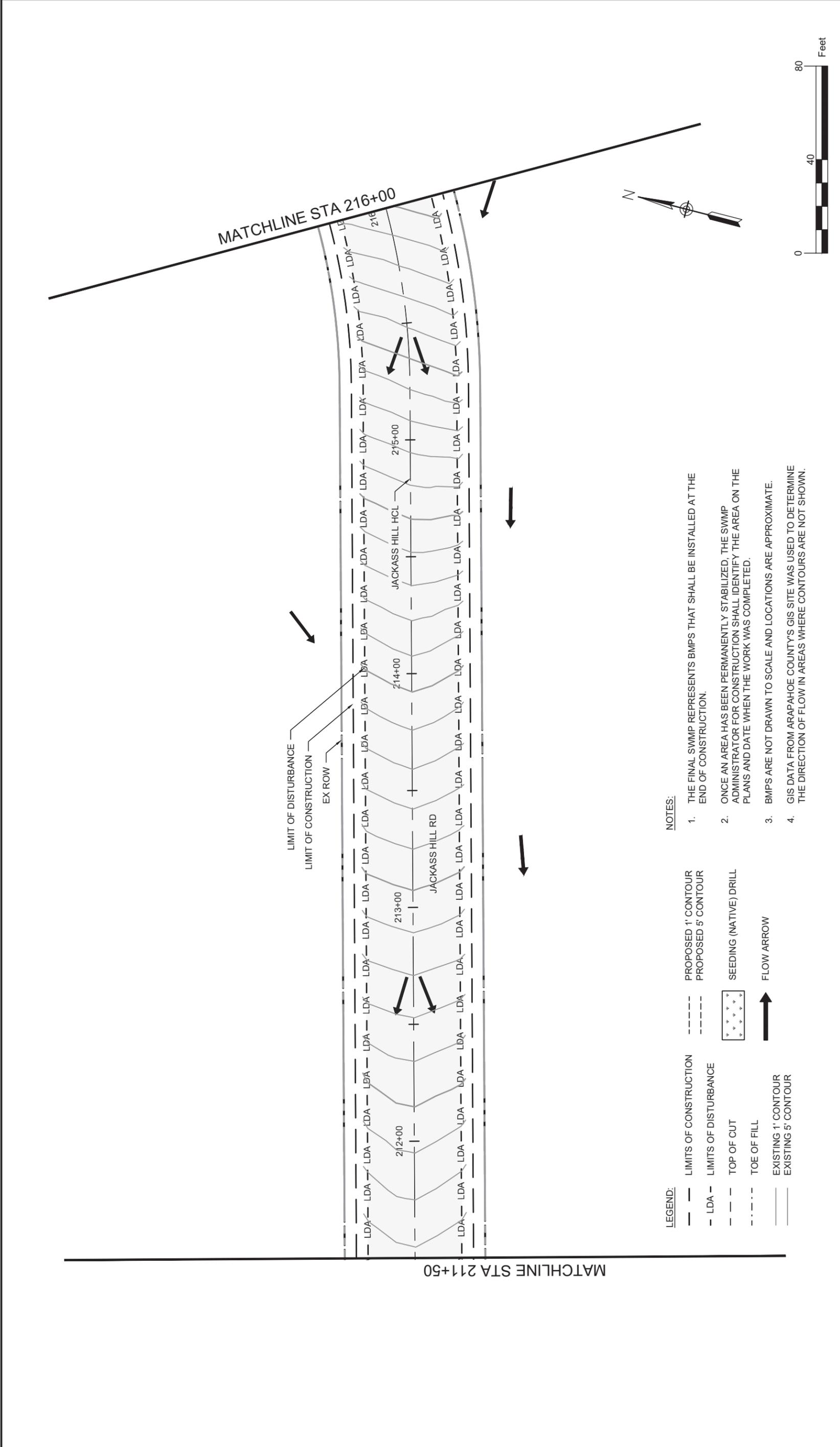


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| File Name: LITN0001_EN_BID-1-SWMP_Plans_Final.dwg | | Date: | Comments | No Revisions: | | SWMP PLAN - FINAL | | C M810-019 | |
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| 0000 | | | | | | Sheet Subset: SWMP | | 29 of 32 | |
| DAVID EVANS AND ASSOCIATES INC. 1800 Broadway Street Suite 800 Denver Colorado 80202 Phone: 720.946.0969 | | PUBLIC WORKS DEPT. 2255 W. Berry Avenue Littleton, CO 80120 PHONE 303-795-3863 FAX 303-795-3856 | | | | No Revisions: Revised: Void: | | Sheet Numbers 24364 Sheet 92 | |



- LEGEND:**
- LIMITS OF CONSTRUCTION
 - - - - - LIMITS OF DISTURBANCE
 - LDA -
 - - - - - TOP OF CUT
 - . - . - - TOE OF FILL
 - EXISTING 1' CONTOUR
 - - - - - EXISTING 5' CONTOUR
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| Print Date: 8/27/2024 | | Sheet Revisions | | Project No./Code | |
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| Horiz. Scale: 1"=40' | | | | SWMP PLAN - FINAL | |
| Vert. Scale: N/A | | | | Designer: NXGE | Structure Numbers |
| DAVID EVANS AND ASSOCIATES INC. 1600 Broadway Street Suite 600 Denver Colorado 80202 Phone: 720.946.0969 | | | | Detailer: CLLE | N/A |
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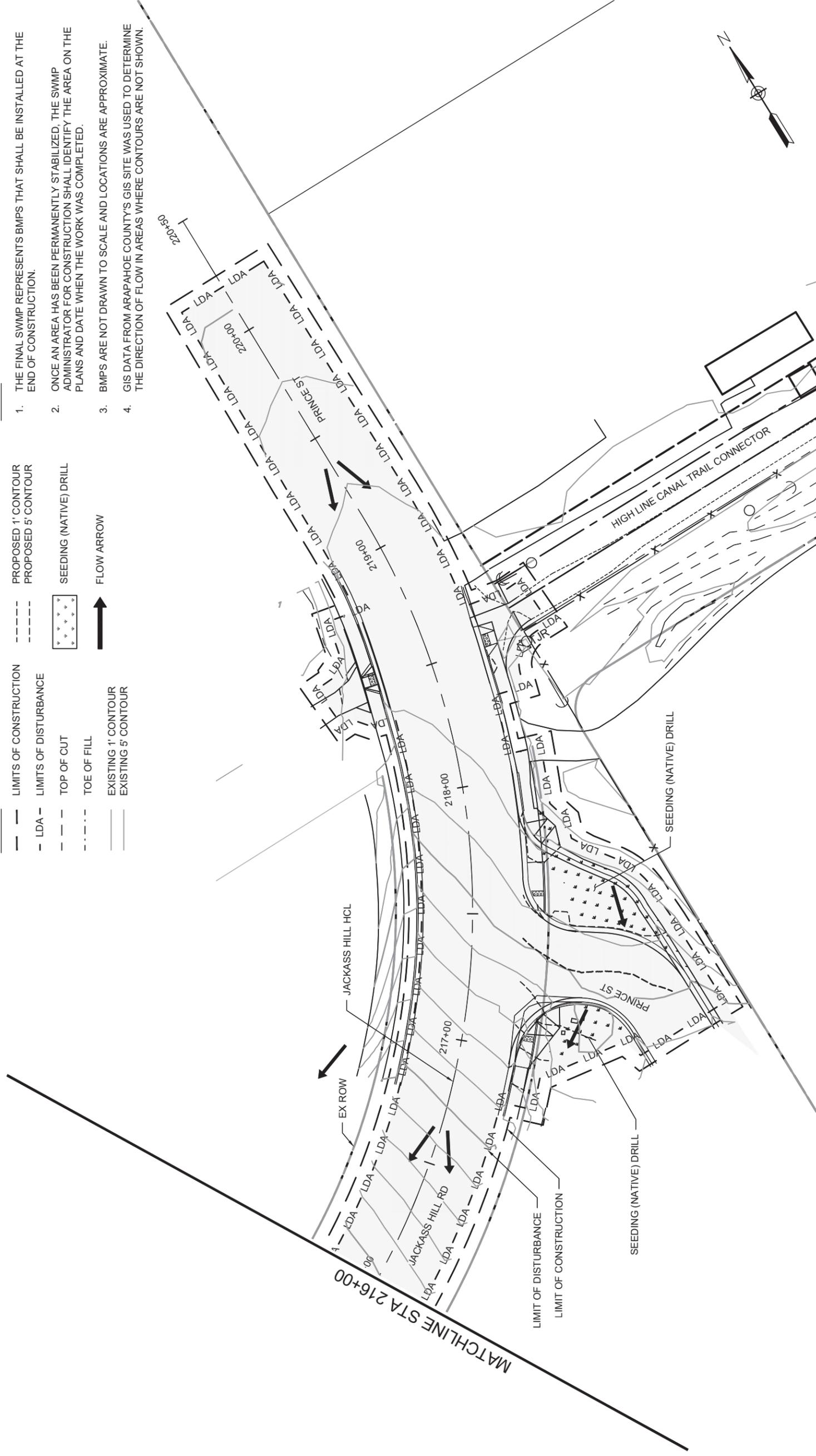
- LEGEND:**
- LIMITS OF CONSTRUCTION
 - LDA - LIMITS OF DISTURBANCE
 - - - - - TOP OF CUT
 - - TOE OF FILL
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| DAVID EVANS AND ASSOCIATES INC. 1800 Broadway Street Suite 800 Denver Colorado 80202 Phone: 720.946.0969 | | | | Designer: NXGE | Structure Numbers |
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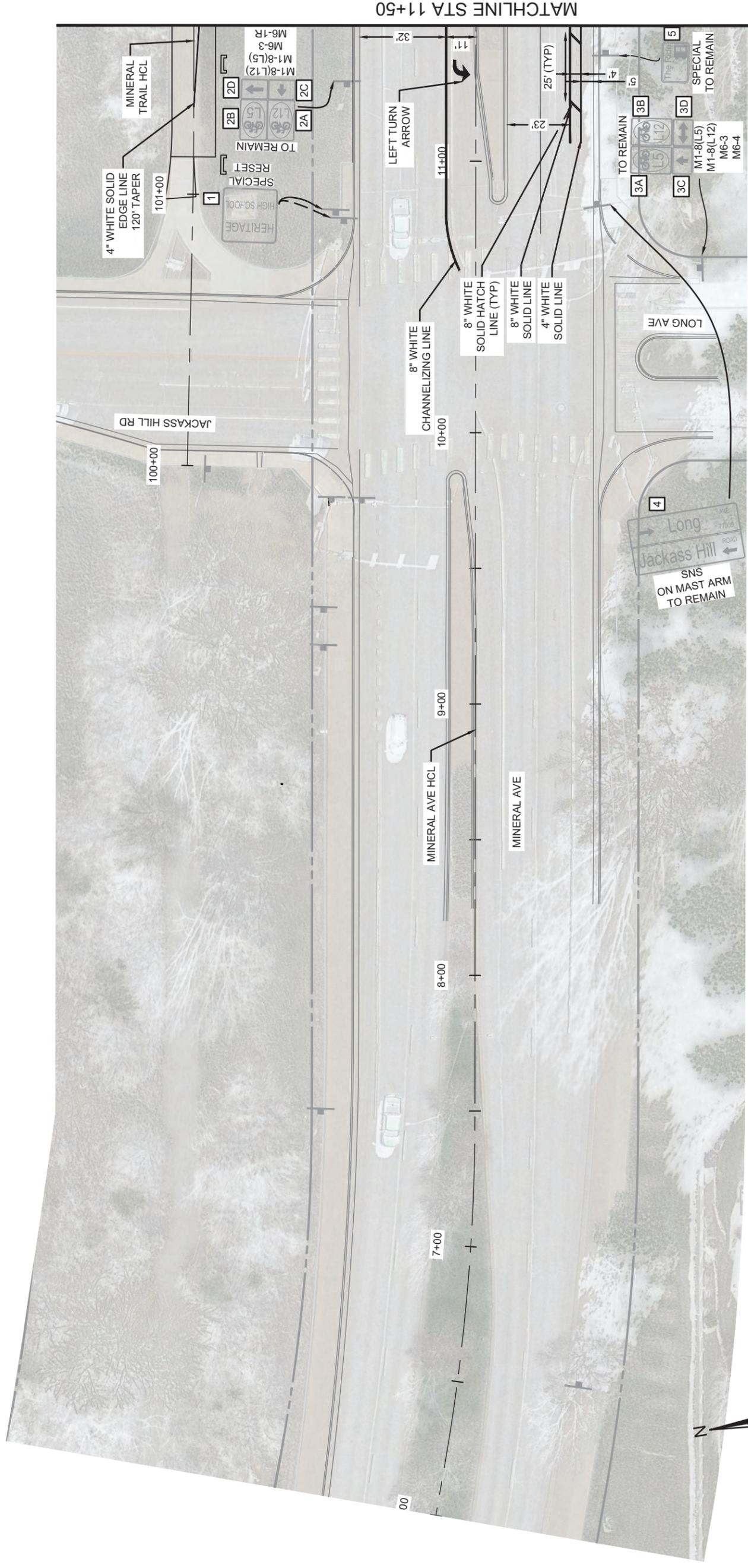
- LEGEND:**
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 - EXISTING 1' CONTOUR
 - EXISTING 5' CONTOUR
 - PROPOSED 1' CONTOUR
 - PROPOSED 5' CONTOUR
 - SEEDING (NATIVE) DRILL
 - FLOW ARROW

NOTES:

1. THE FINAL SWMP REPRESENTS BMPs THAT SHALL BE INSTALLED AT THE END OF CONSTRUCTION.
2. ONCE AN AREA HAS BEEN PERMANENTLY STABILIZED, THE SWMP ADMINISTRATOR FOR CONSTRUCTION SHALL IDENTIFY THE AREA ON THE PLANS AND DATE WHEN THE WORK WAS COMPLETED.
3. BMPs ARE NOT DRAWN TO SCALE AND LOCATIONS ARE APPROXIMATE.
4. GIS DATA FROM ARAPAHOE COUNTY'S GIS SITE WAS USED TO DETERMINE THE DIRECTION OF FLOW IN AREAS WHERE CONTOURS ARE NOT SHOWN.

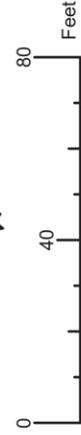
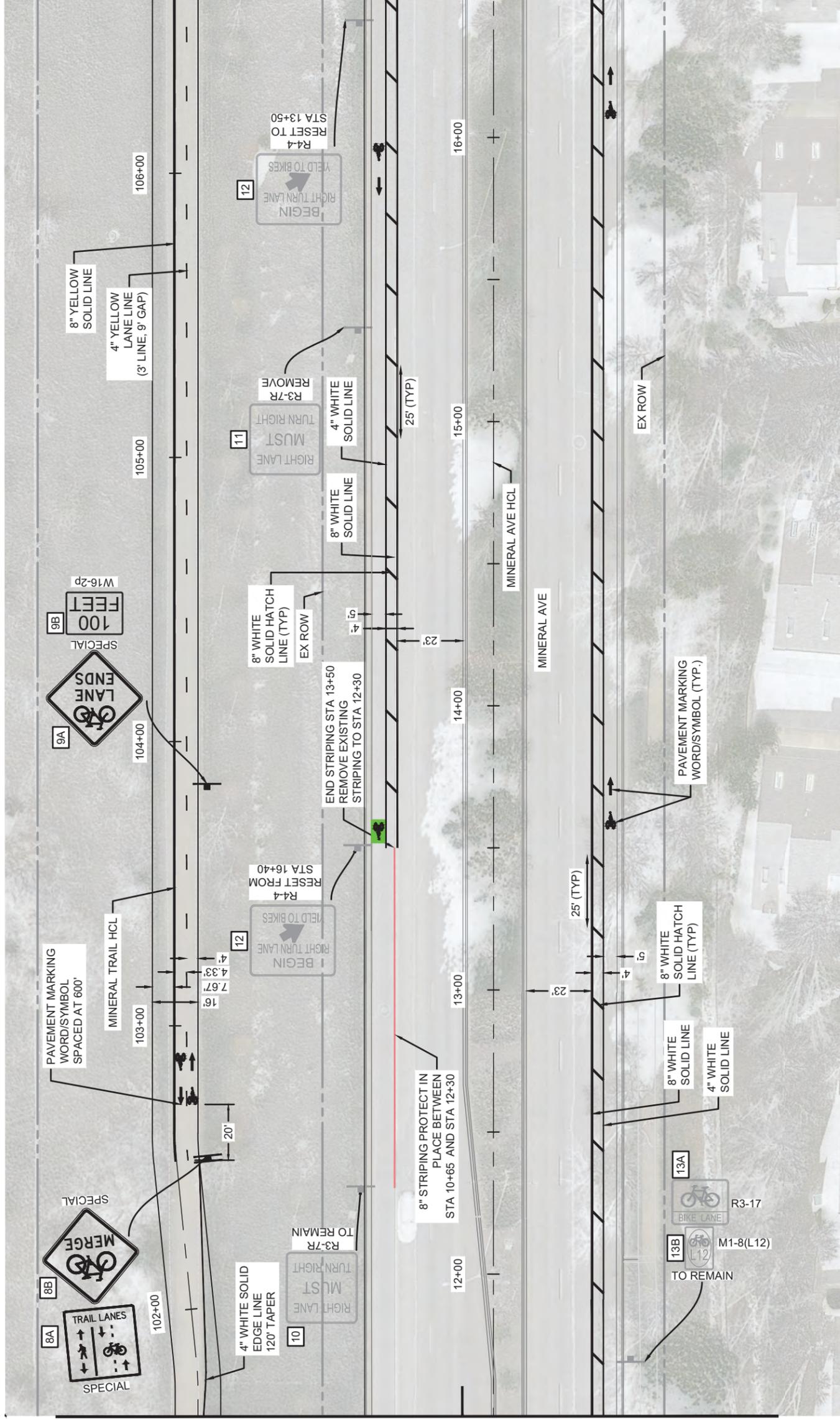


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| | Date: | Comments: | No Revisions: | Revised: | Void: | Designer: NXGE | Structure Numbers | 24364 |
| 0000 | | | PUBLIC WORKS DEPT. 2255 W. Berry Avenue Littleton, CO 80120 PHONE 303-795-3863 FAX 303-795-3856 | | Designer: NXGE Detailer: CLLE | | N/A N/A | |
| DAVID EVANS AND ASSOCIATES INC. 1800 Broadway Street Suite 800 Denver Colorado 80202 Phone: 720.946.0969 | | | Littleton Colorado | | Sheet Subset: SWMP | | Sheet 95 of 32 | |



MATCHLINE STA 11+50

| Print Date: 8/22/2024 File Name: LITN0001_TT_Plans - BID 1.dwg Horiz. Scale: 1"=40' Vert. Scale: N/A DAVID EVANS AND ASSOCIATES INC. 1800 Broadway Street Suite 800 Denver Colorado 80202 Phone: 720.946.0969 | As Constructed No Revisions: Revised: Void: | | MINERAL MOBILITY IMPROVEMENTS - BID 1 MINERAL AVE - SIGNING & STRIPING PLAN Designer: AMSC Detailer: TMSM Sheet Subset: TRAF | | Project No./Code C M810-019 | | | | | | | | | | | | | | |
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LEGEND
— STRIPING REMOVAL

Print Date: 8/22/2024
 File Name: LITN0001_TT_Plans - BID 1.dwg
 Horiz. Scale: 1"=40' Vert. Scale: N/A



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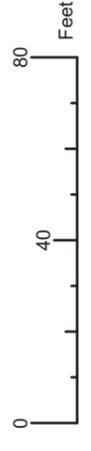
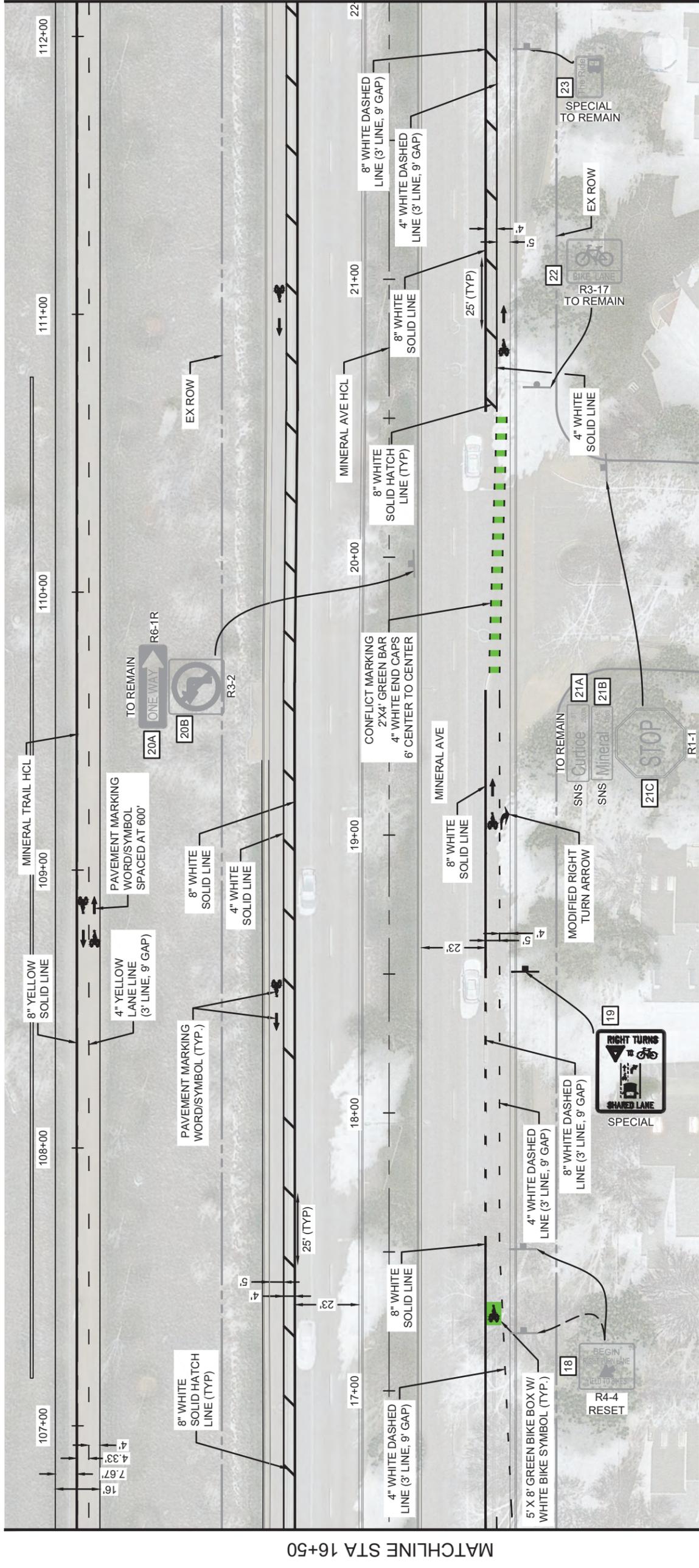
As Constructed
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MINERAL MOBILITY IMPROVEMENTS - BID 1
 MINERAL AVE - SIGNING & STRIPING PLAN
 Designer: AMSC
 Detailer: TMSM
 Sheet Subset: TRAF

Project No./Code
 C M810-019
 Structure Numbers
 24364
 Subset Sheets: 2 of 10
 Sheet 97

MATCHLINE STA 16+50

MATCHLINE STA 11+50



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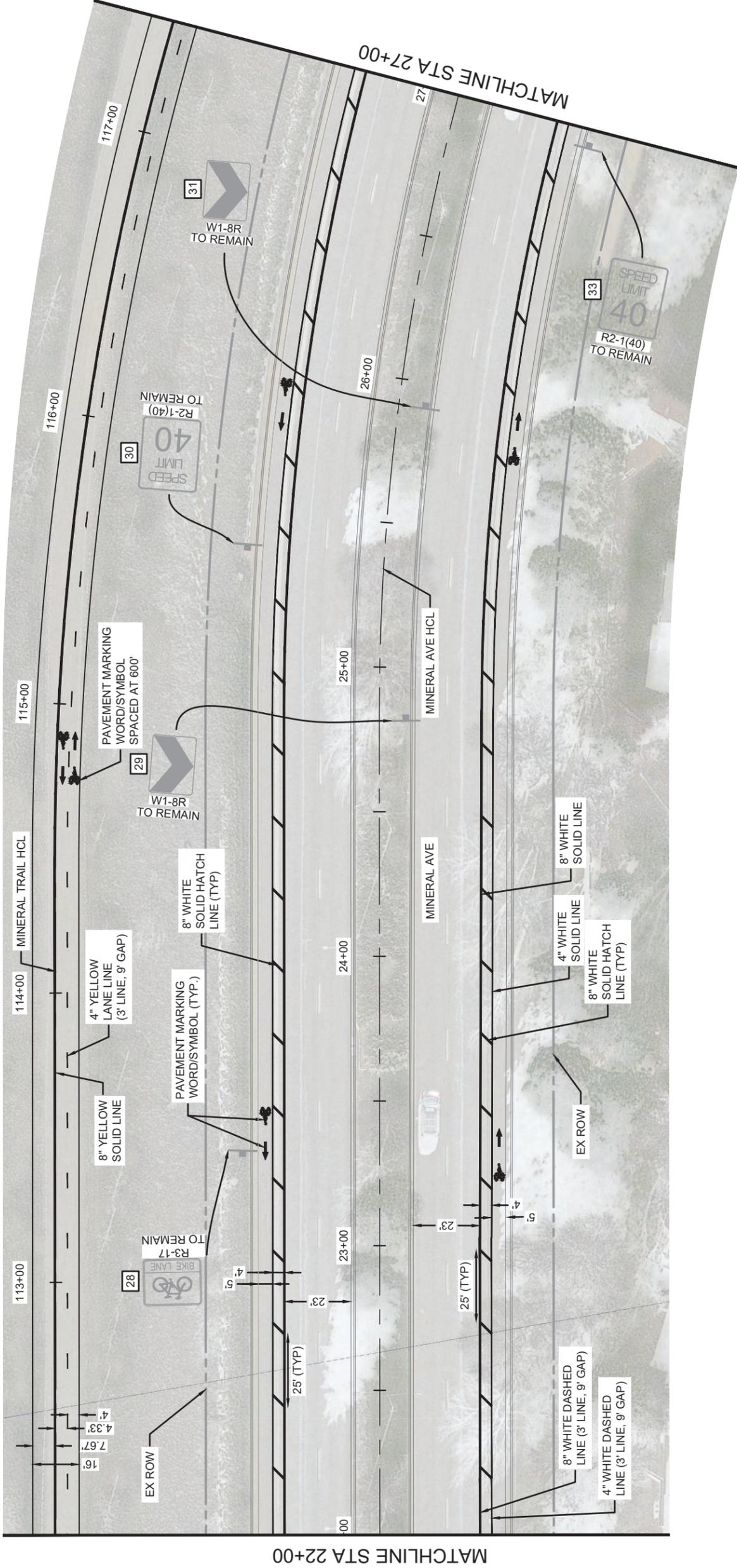
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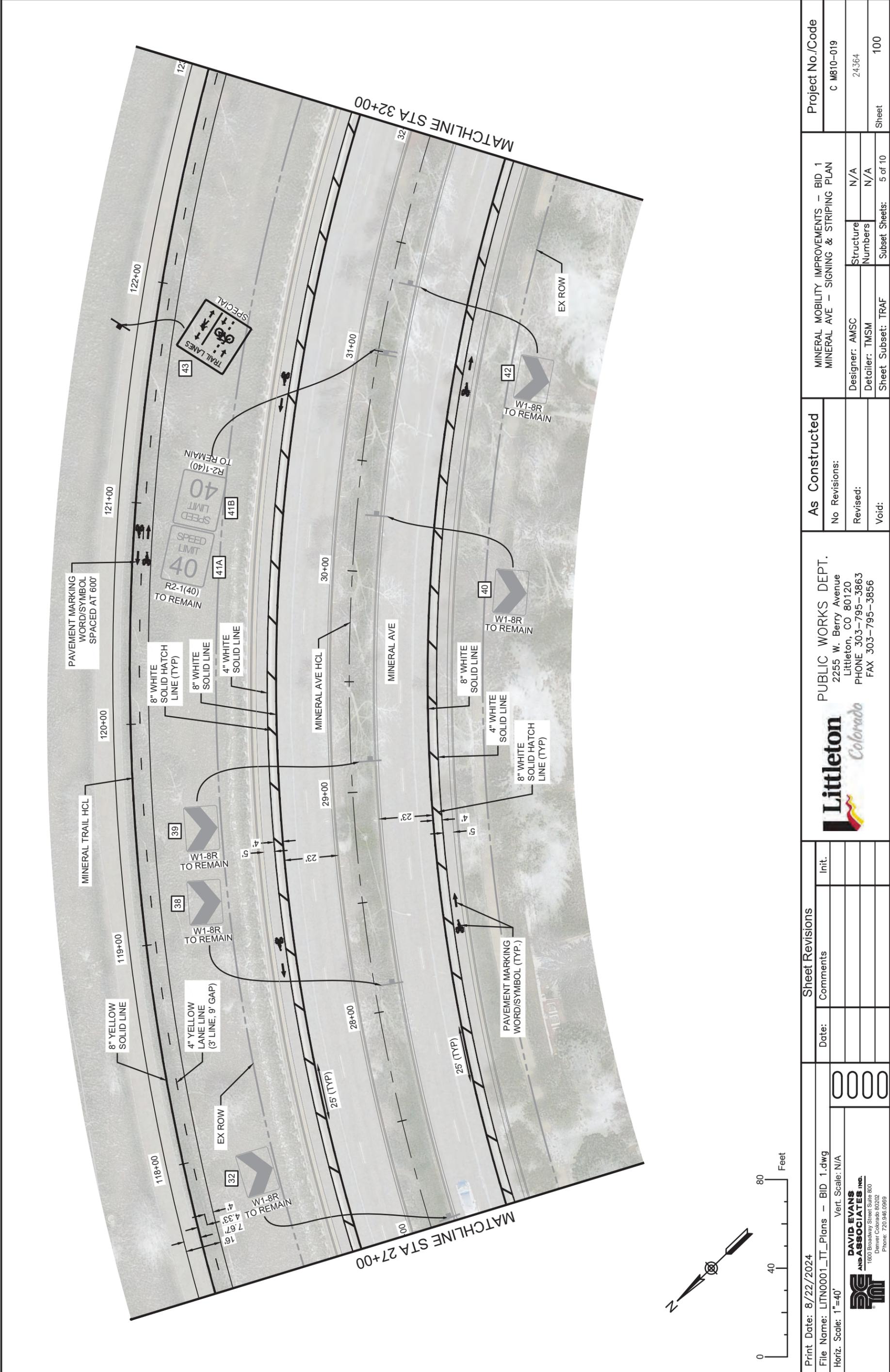
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MINERAL MOBILITY IMPROVEMENTS - BID 1
 MINERAL AVE - SIGNING & STRIPING PLAN
 Project No./Code
 C M810-019
 Designer: AMSC
 Detailer: TMSM
 Structure Numbers: N/A
 Sheet Subset: TRAF
 Subset Sheets: 3 of 10
 Sheet: 98

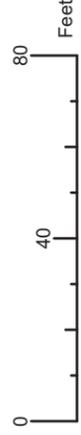
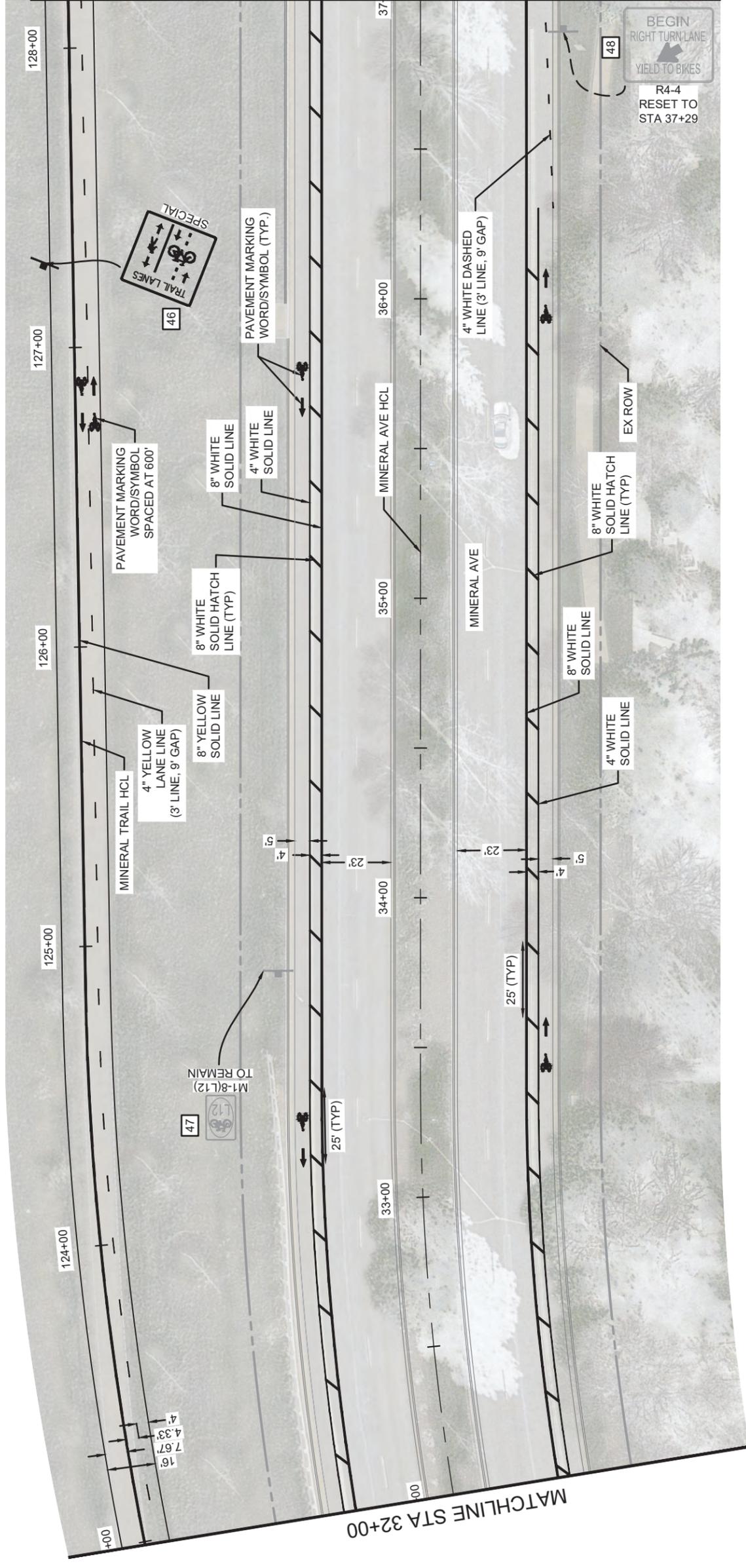


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| 0000 | | Sheet Subsets: TRAF | |
| DAVID EVANS AND ASSOCIATES INC. 1600 Broadway Street Suite 600 Denver Colorado 80202 Phone: 720.946.0969 | | Sheet 99 | |
| Sheet Revisions | | As Constructed | |
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| DAVID EVANS AND ASSOCIATES INC. 1600 Broadway Street Suite 600 Denver Colorado 80202 Phone: 720.946.0969 | | | | Revised: | Designer: AMSC Detailer: TMSM |
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Print Date: 8/22/2024
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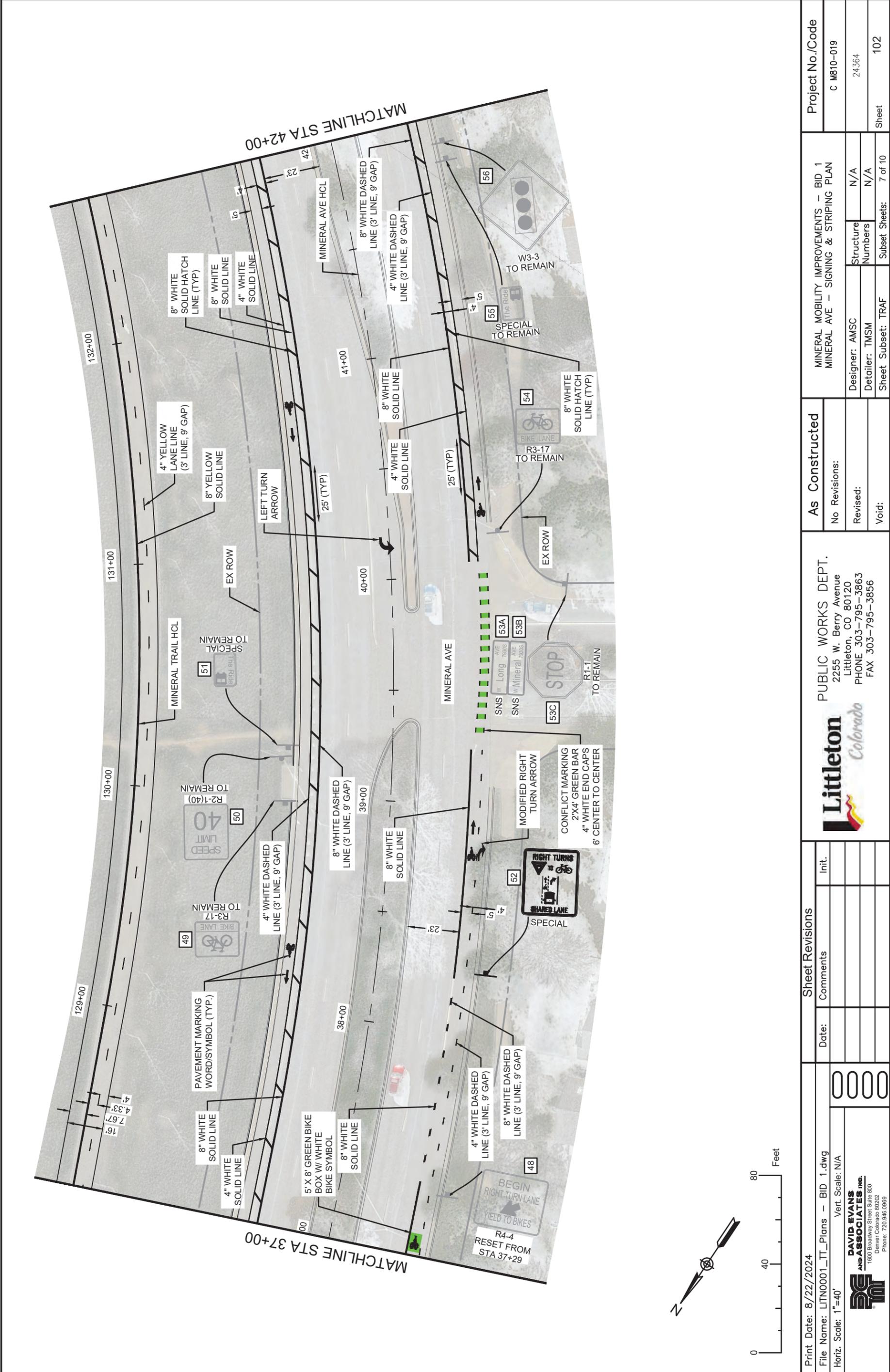
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| MINERAL MOBILITY IMPROVEMENTS - BID 1 | |
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| Project No./Code | |
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| | 24364 |
| | 101 |

MATCHLINE STA 37+00

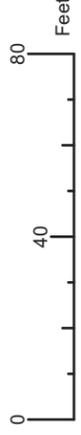
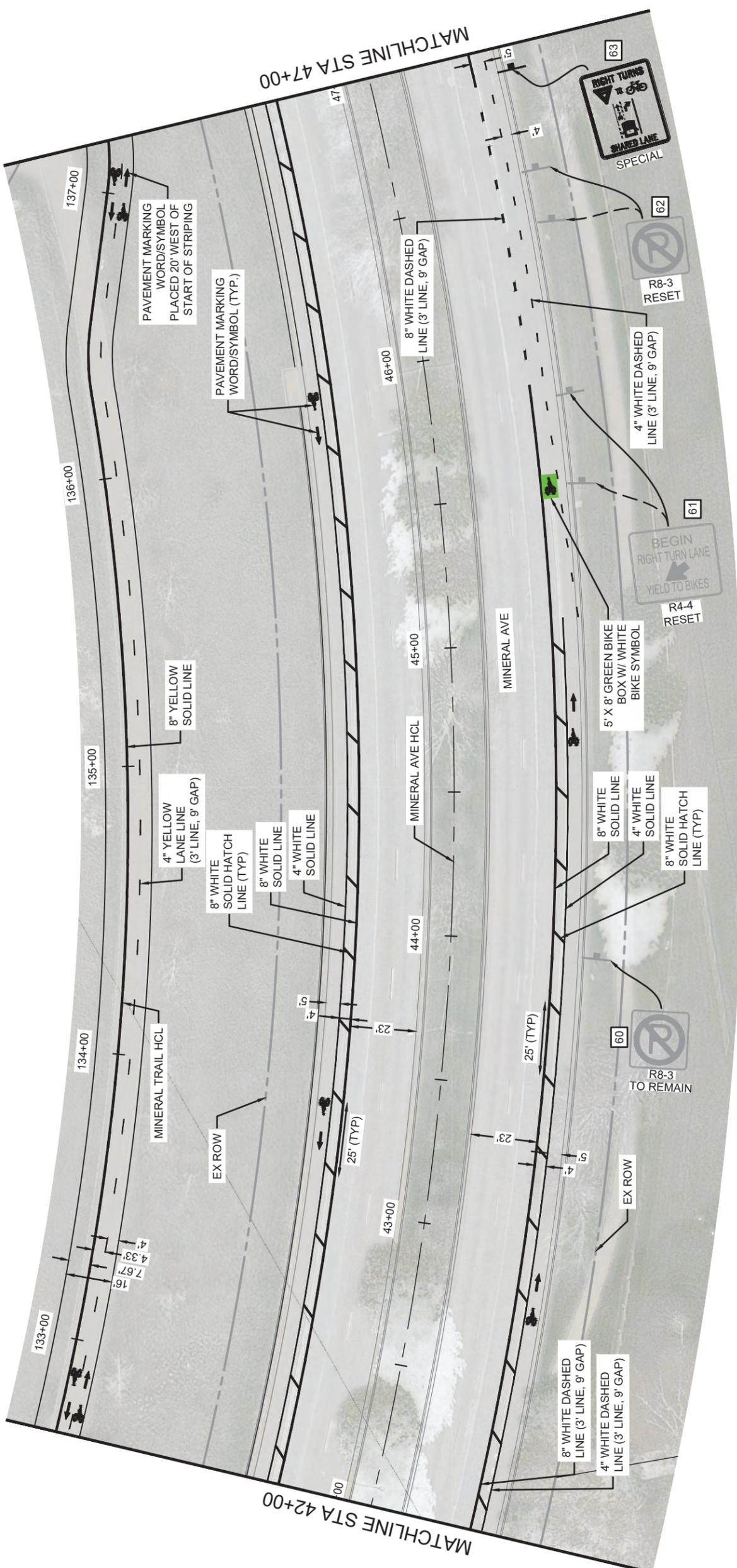
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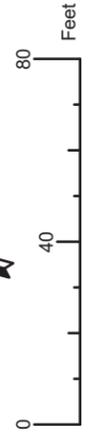
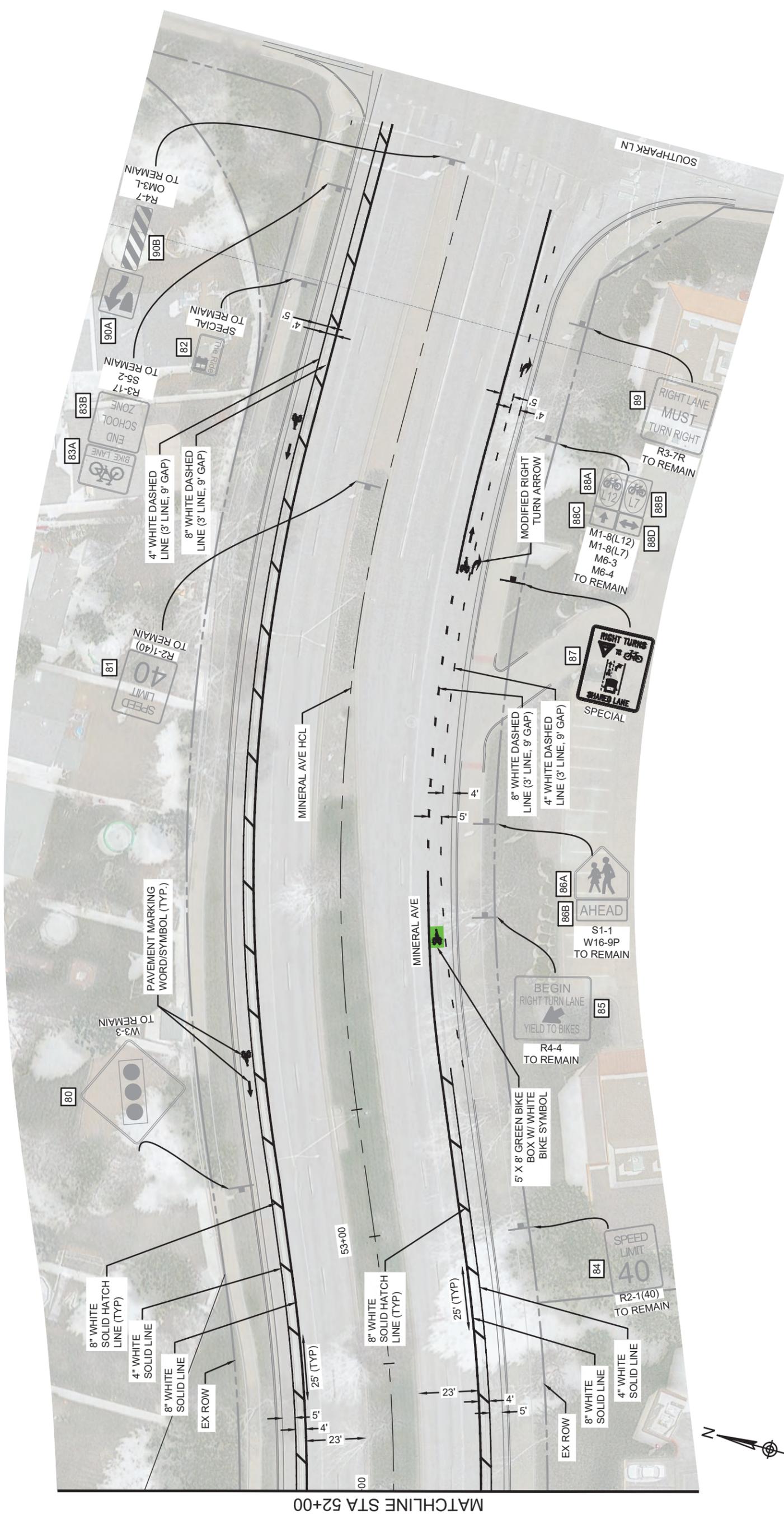
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 Phone: 720.946.0969

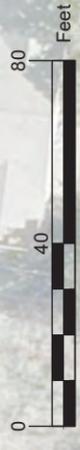
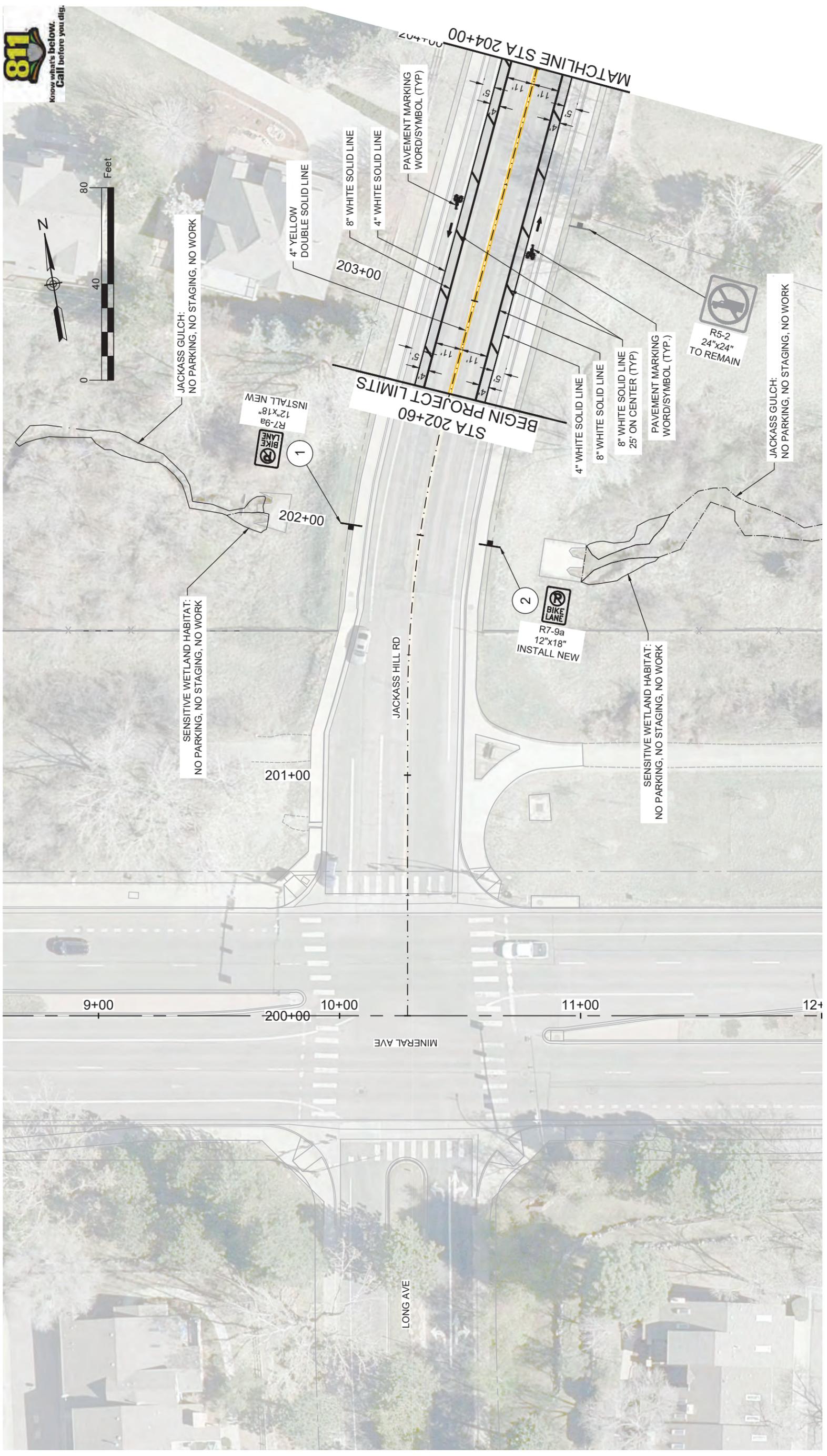


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| PUBLIC WORKS DEPT. 2255 W. Berry Avenue Littleton, CO 80120 PHONE 303-795-3863 FAX 303-795-3856 | | As Constructed No Revisions: Revised: Void: | | MINERAL MOBILITY IMPROVEMENTS - BID 1 MINERAL AVE - SIGNING & STRIPING PLAN | | | | | | | | | | | | | | | | |
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| DAVID EVANS AND ASSOCIATES INC. 1600 Broadway Street Suite 600 Denver Colorado 80202 Phone: 720.946.0969 | | Sheet Subset: TRAF | | Sheet Sheets: 8 of 10 Sheet 103 | | | | | | | | | | | | | | | | |

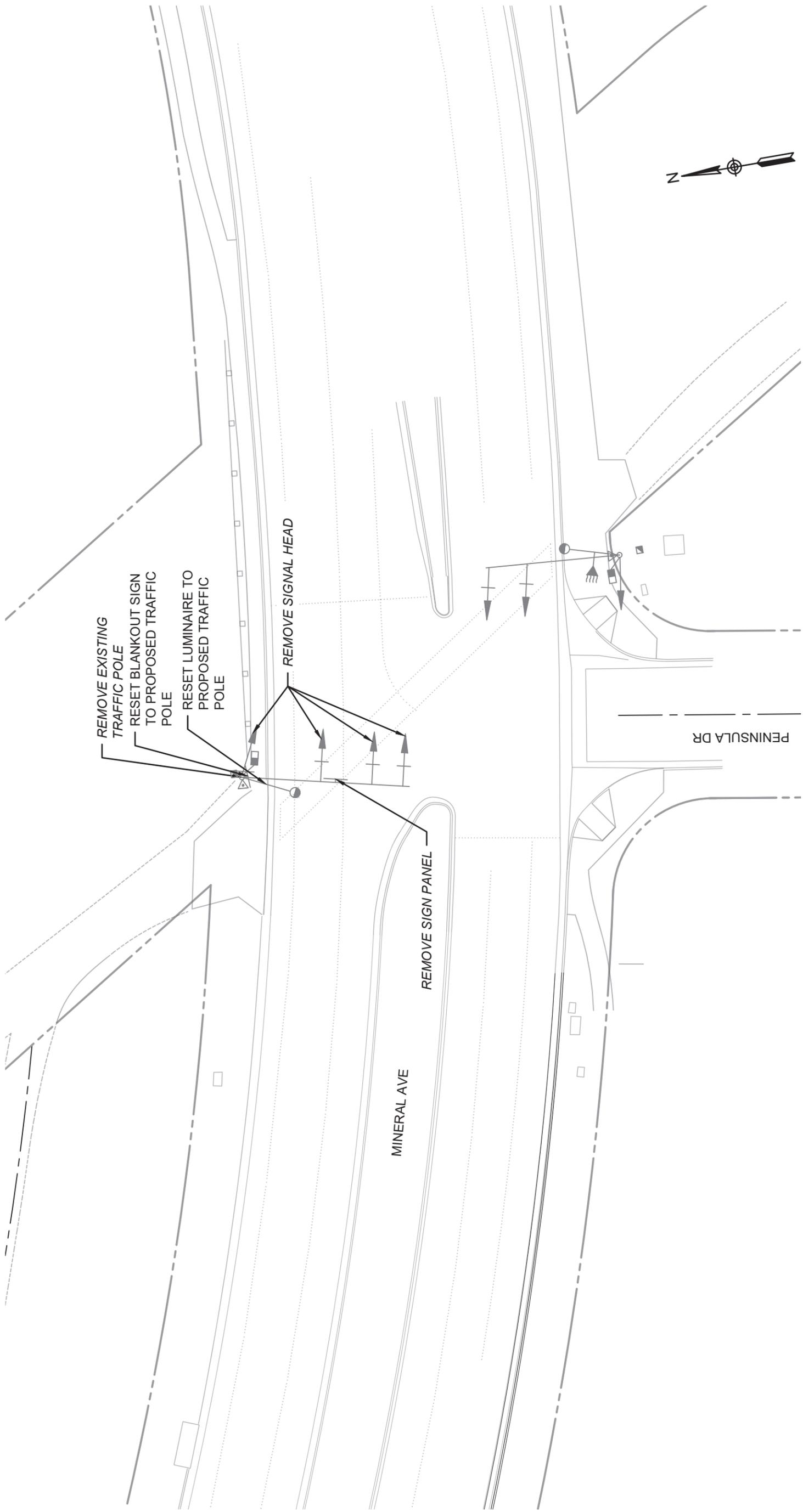


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| Vert. Scale: N/A | | Designer: AMSC | |
| 0000 | | Detailer: TMSM | |
| DAVID EVANS AND ASSOCIATES INC. | | Structure Numbers | |
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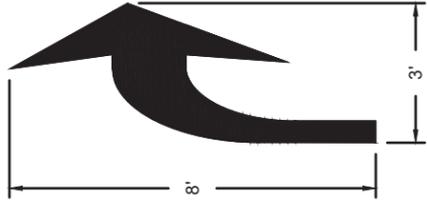


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| Print Date: 8/26/2024 File Name: SM-PLN.dwg Horiz. Scale: 1" = 40' Vert. Scale: N/A | Sheet Revisions | | 0000 | DAVID EVANS AND ASSOCIATES INC. 1600 Broadway Street, Suite 800 Denver, Colorado 80202 Phone: 720.946.0969 | | Y&K ENGINEERING 1921 S. Alma School Rd. Suite 204 Denver, Colorado 80210 www.y&k.com | Littleton Colorado PUBLIC WORKS DEPT. 2255 W. Berry Avenue Littleton, CO 80120 PHONE 303-795-3863 FAX 303-795-3856 | As Constructed No Revisions: Revised: Void: | MINERAL MOBILITY IMPROVEMENTS – BID 1 JACKASS HILL ROAD – SIGNING AND STRIPING PLANS STA 202+60 TO STA 204+00 | Project No./Code C MB10-019 |
| | Date: | Comments: | | | | | | | | |

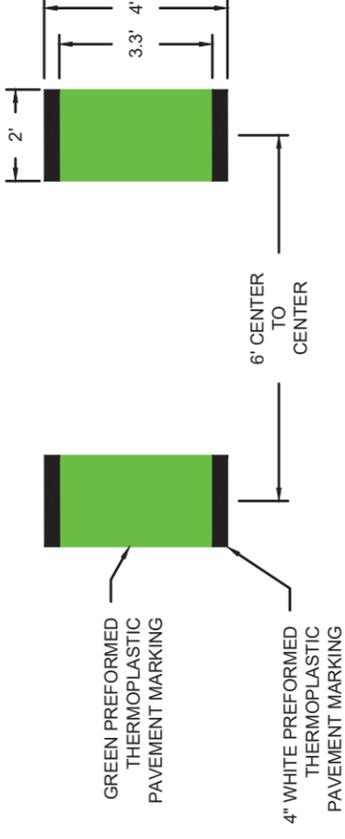


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| PUBLIC WORKS DEPT. 2255 W. Berry Avenue Littleton, CO 80120 PHONE 303-795-3863 FAX 303-795-3856 | | REMOVE EXISTING TRAFFIC POLE RESET BLANKOUT SIGN TO PROPOSED TRAFFIC POLE RESET LUMINAIRE TO PROPOSED TRAFFIC POLE | | Revised: | | Designer: AMSC Detailer: AMSC | | Structure Numbers N/A | |
| | | REMOVE SIGN PANEL REMOVE SIGNAL HEAD | | Void: | | Sheet Subset: SIG | | Sheet Subset: SIG Sheet 1 of 2 | |
| 1800 Broadway Street Suite 800 Denver Colorado 80202 Phone: 720.946.0969 | | 0000 | | 0 | | 30 | | 60 Feet | |

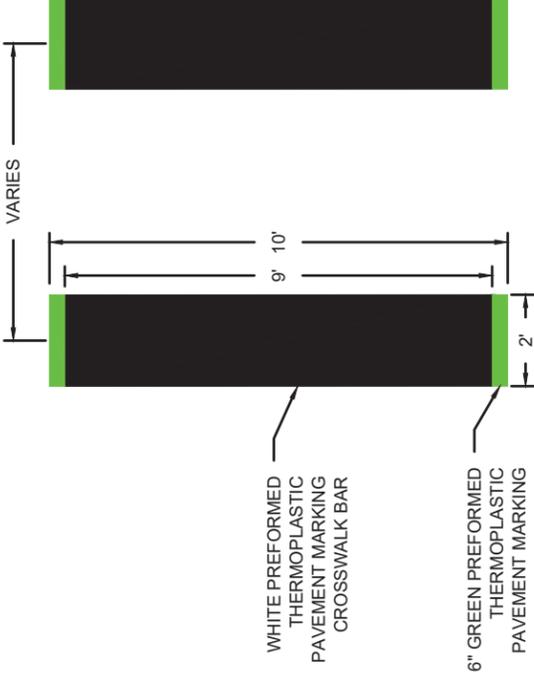
RIGHT TURN ARROW - MODIFIED DETAIL



CONFLICT MARKING DETAIL

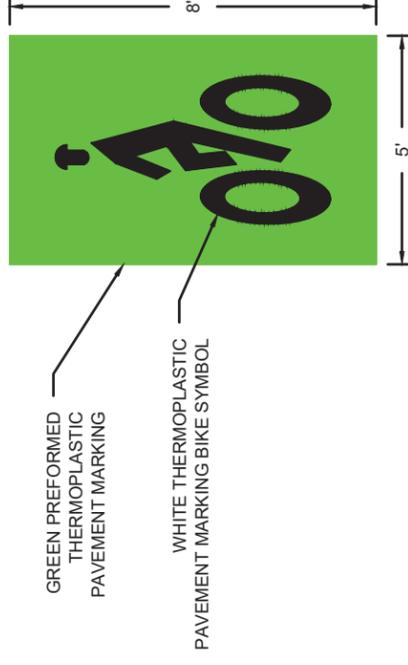


HYBRID CROSSING BAR DETAIL



NOTE: HYBRID CROSSING BARS TO BE PLACED TO AVOID WHEEL WEAR, AS DIRECTED IN MUTCD.

BIKE BOX DETAIL



Print Date: 8/22/2024

File Name: LITN0001_TT_BID-1-StripingDetail.dwg

Horiz. Scale: N/A Vert. Scale: N/A



Sheet Revisions

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No Revisions:

Revised:

Void:

MINERAL MOBILITY IMPROVEMENTS - BID 1
SPECIAL SIGN LAYOUT AND DETAIL SHEETS

Designer: AMSC

Detailer: AMSC

Structure Numbers: N/A

Sheet Subset: SSD

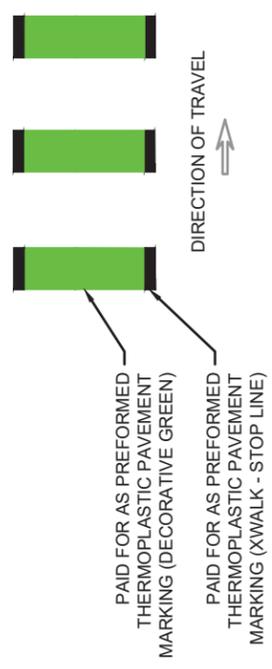
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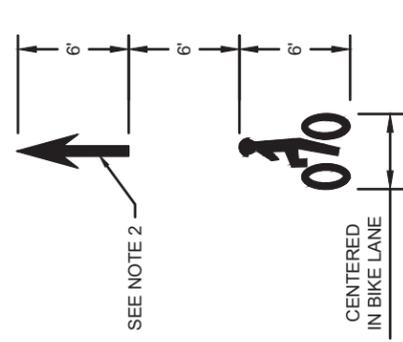
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24364

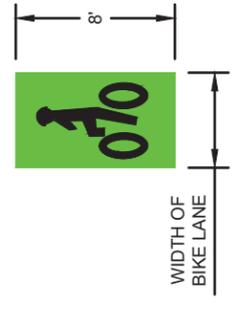
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TYPE 1 BIKEWAY CROSSING MARKINGS (ONE-WAY FACILITY)

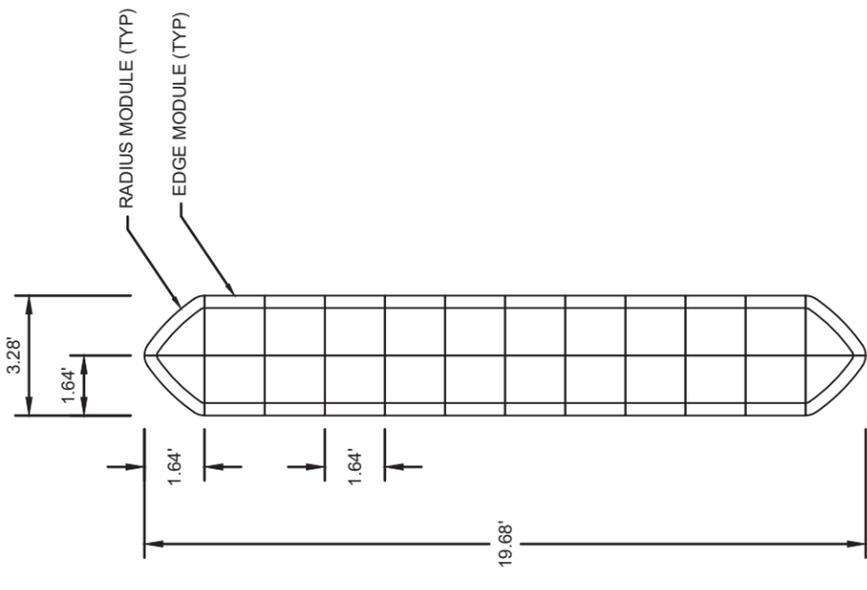


PREFORMED THERMOPLASTIC BICYCLE SYMBOL MARKING DETAIL

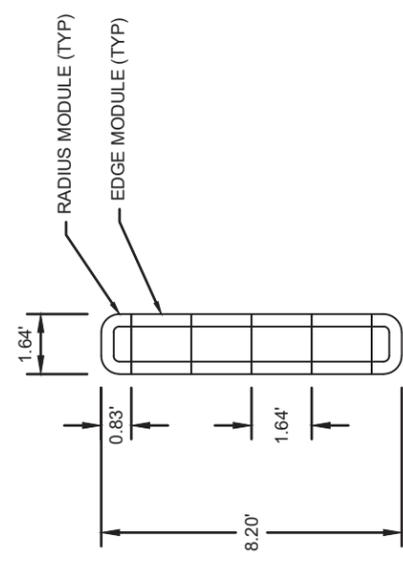


PREFORMED THERMOPLASTIC BICYCLE BOX MARKING DETAIL

- NOTES:**
1. WHEN ADJACENT TO PEDESTRIAN CROSSWALK BIKEWAY CROSSING MARKING SHALL ALIGN WITH CROSSWALK MARKING TO AVOID THE WHEEL PATH OF MOTOR VEHICLES.
 2. BIKE SYMBOL MARKINGS SHALL BE PLACED TO AVOID THE WHEEL PATH OF MOTOR VEHICLES. DRAINAGE INLETS AND LOW POINTS THAT REGULARLY COLLECT DEBRIS OR ARE INUNDATED.



CURB (MEDIAN) (SPECIAL) LAYOUT
JACKASS HILL ROAD
SCALE: 1" = 5'



CURB (MEDIAN) (SPECIAL) LAYOUT
TRAIL CROSSING
SCALE: 1" = 5'

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| Print Date: 8/26/2024 | Sheet Revisions | | Project No./Code |
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| Vert. Scale: N/A | | | Designer: CM |
| | | | Detailer: CM |
| DAVID EVANS AND ASSOCIATES INC. 1600 Broadway Street, Suite 800 Denver, Colorado 80202 Phone: 720.946.0989 | | | Structure Numbers |
| | | | Sheet Subset: TRAF |
| YZK ENGINEERING 1921 S Alma School Rd. Suite 204 Denver, Colorado 80210 www.yzkeng.com | | | Sheet |
| | | | 1 of 1 |
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| | | | 24364 |
| | | | C M810-019 |

TRAFFIC CONTROL NOTES & DEVICES

- THE CONTRACTOR TO SUBMIT PROPOSED TRAFFIC CONTROL PLAN FOR EACH WORK AREA TO THE CITY OF LITTLETON FOR APPROVAL IN ACCORDANCE WITH THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD), CDOT, AND LOCAL AGENCY STANDARDS. THESE PLANS WILL NEED TO BE APPROVED PRIOR TO THE PUBLIC IMPROVEMENTS PERMIT ISSUANCE.
- THE CONTRACTOR WILL NOT PLACE ANY SIGNS OR PAVEMENT MARKINGS WITHOUT AN APPROVED TRAFFIC CONTROL PLAN. ALL TRAFFIC CONTROL PLANS MUST BE APPROVED THROUGH THE PERMIT CENTER.
- ACCESS TO PUBLIC STREETS AND PRIVATE ACCESS WILL BE MAINTAINED AT ALL TIMES.
- THE CONTRACTOR SHALL PROVIDE A MINIMUM OF 72 HOURS WRITTEN NOTICE OF ANY NIGHTTIME CONSTRUCTION ACTIVITIES AND LANE CLOSURES.
- WHEN FLAGGERS ARE REQUIRED, THEY SHALL HAVE NO OTHER DUTY THAN TO DIRECT TRAFFIC. THE CONTRACTOR SHALL PROVIDE SUFFICIENT NUMBER OF FLAGGERS TO SAFELY DIRECT TRAFFIC.
- THE TRAFFIC ENGINEER MAY REQUIRE ADDITIONAL TRAFFIC CONTROL PERSONNEL OR DEVICES AT THE CONTRACTOR'S EXPENSE.
- CONTRACTOR SHALL REMOVE ALL EXISTING PAVEMENT MARKINGS THAT CONFLICT WITH THE PROPOSED FINAL PAVEMENT MARKING DESIGN.
- PORTABLE MESSAGE SIGN PANEL SHALL BE FULL-MATRIX TYPE AND USED AS DIRECTED BY THE ENGINEER.
- ALL TRAFFIC CONTROL DEVICES, REFLECTORIZED DRUMS, SIGNS, PAVEMENT MARKINGS, AND CHANNELIZING DEVICES SHALL CONFORM TO THE LATEST CDOT, AND MUTCD, AND LOCAL AGENCY STANDARDS.
- TWENTY-FOUR HOUR EMERGENCY VEHICLE ACCESS WILL BE MAINTAINED FOR ALL STREETS AND PROPERTIES WITHIN THE PROJECT LIMITS.
- CONTRACTOR IS RESPONSIBLE FOR RESTORING TRAFFIC, PEDESTRIAN, AND BICYCLE ACCESS TO NORMAL CONDITIONS WHEN NOT WORKING IN THE AREA.
- THE CONTRACTOR WILL BE RESPONSIBLE FOR DEVELOPING AN ACCESS MAINTENANCE PLAN IN COORDINATION WITH, AND BASED ON THE REQUIREMENTS OF, THE AFFECTED PROPERTY OWNERS AND TENANTS, AND SUBMIT IT TO THE ENGINEER FOR APPROVAL PRIOR TO COMMENCEMENT OF WORK. THIS PLAN SHALL DETAIL ALL BARRICADES, SIGNS, AND TEMPORARY MEANS OF ACCESS TO A PROPERTY. THE ACCESS MAINTENANCE PLAN FOR THOSE PROPERTIES MUST BE SUBMITTED AND APPROVED BY THE PROJECT MANAGER.
- SIGNS SHALL NOT BE MOUNTED, FASTENED, OR ATTACHED TO ANY CHANNELIZING DRUMS OR CONES.
- PEDESTRIAN ACCESS TO ALL BUSINESSES AND RESIDENCES AND ALONG STREETS MUST BE MAINTAINED AT ALL TIMES.

TRAIL DETOUR NOTES

- THE CONTRACTOR SHALL PROVIDE A COMPLIANT PEDESTRIAN AND BICYCLE DETOUR AS REQUIRED TO MAINTAIN MULTIMODAL ACCESS THROUGH CONSTRUCTION. THE DETOUR ROUTES SHALL BE SUBJECT TO APPROVAL BY THE ENGINEER. SIGNS AND DEVICES TO MANAGE THE DETOUR HAVE BEEN ACCOUNTED FOR IN THE PLAN QUANTITIES.

SCHEDULE OF CONSTRUCTION TRAFFIC CONTROL DEVICES

| SIGN CODE | LEGEND | DIMENSION | PANEL SIZE | |
|--------------|--|-----------|------------|----------|
| | | | A | B |
| 48 | E5-2a Road Closed | 48 30 | EA | EA |
| 48 | G20-10 XYZ Construction Thanks You | 48 48 | 2 | 2 |
| 48 | G20-11 Construction Road Work Information | 48 48 | 2 | 2 |
| 36 | G20-2 End Road Work | 36 18 | 1 | 1 |
| 30 | M4-9a Bike/Pedestrian Detour | 30 24 | 15 | 15 |
| 24 | R2-1 (XX) Speed Limit (XX) | 24 30 | 2 | 2 |
| 24 | R2-1 (40) Speed Limit (40) | 24 30 | 2 | 2 |
| 24 | R2-10 Begin Double Fines Zone | 24 30 | 3 | 3 |
| 24 | R2-11 End Double Fines Zone | 24 30 | 2 | 2 |
| 36 | W20-1 Road Work Ahead | 36 36 | 3 | 3 |
| 36 | W20-4 One Lane Road XX FT | 36 36 | 3 | 3 |
| 36 | W20-7 Flagger | 36 36 | 3 | 3 |
| 36 | W21-1 Workers | 36 36 | 1 | 1 |
| 36 | W21-20 Highway Painting Ahead | 36 36 | 1 | 1 |
| 36 | W9-3R Right Lane Closed Ahead | 36 36 | 1 | 1 |
| Total | | | 37 | 4 |

TABULATION SUMMARY OF TRAFFIC CONTROL AND TEMPORARY ITEMS

| ITEM NUMBER | ITEM DESCRIPTION | UNIT | TOTALS |
|-------------|--|------|--------|
| 630-00000 | Flagging | HR | 20 |
| 630-00003 | Uniformed Traffic Control | HR | 40 |
| 630-00006 | Uniformed Traffic Control (Vehicle) | HR | 40 |
| 630-00007 | Traffic Control Inspection | DAY | 41 |
| 630-00012 | Traffic Control Management | DAY | 103 |
| 630-80001 | Flashing Beacon (Portable) | EA | 9 |
| 630-80336 | Barricade (Type 3M-B)(Temporary) | EA | 4 |
| 630-80341 | Construction Traffic Sign (Panel Size A) | EA | 37 |
| 630-80342 | Construction Traffic Sign (Panel Size B) | EA | 4 |
| 630-80355 | Portable Message Sign Panel | EA | 2 |
| 630-80358 | Advanced Warning Flashing or Sequencing Arrow Panel (C Type) | EA | 3 |
| 630-80380 | Traffic Cone | EA | 25 |
| 630-85040 | Impact Attenuator (Truck Mounted Attenuator) (Temporary) | EA | 1 |

Print Date: 1/21/2025

File Name: LITN0001_TC_BID-1-Plan.dwg

Horiz. Scale: N/A Vert. Scale: N/A



Sheet Revisions

| Date: | Comments | Init. |
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PUBLIC WORKS DEPT.
2255 W. Berry Avenue
Littleton, CO 80120
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As Constructed

No Revisions:

Revised:

Void:

MINERAL MOBILITY IMPROVEMENTS – BID 1
TRAFFIC CONTROL NOTES & DEVICES

Designer: AMSC
Detailer: AMSC

Structure Numbers
Subset Sheets: 1 of 2

Project No./Code

C M810-019

24364

Sheet 115



TRAIL DETOUR ROUTES

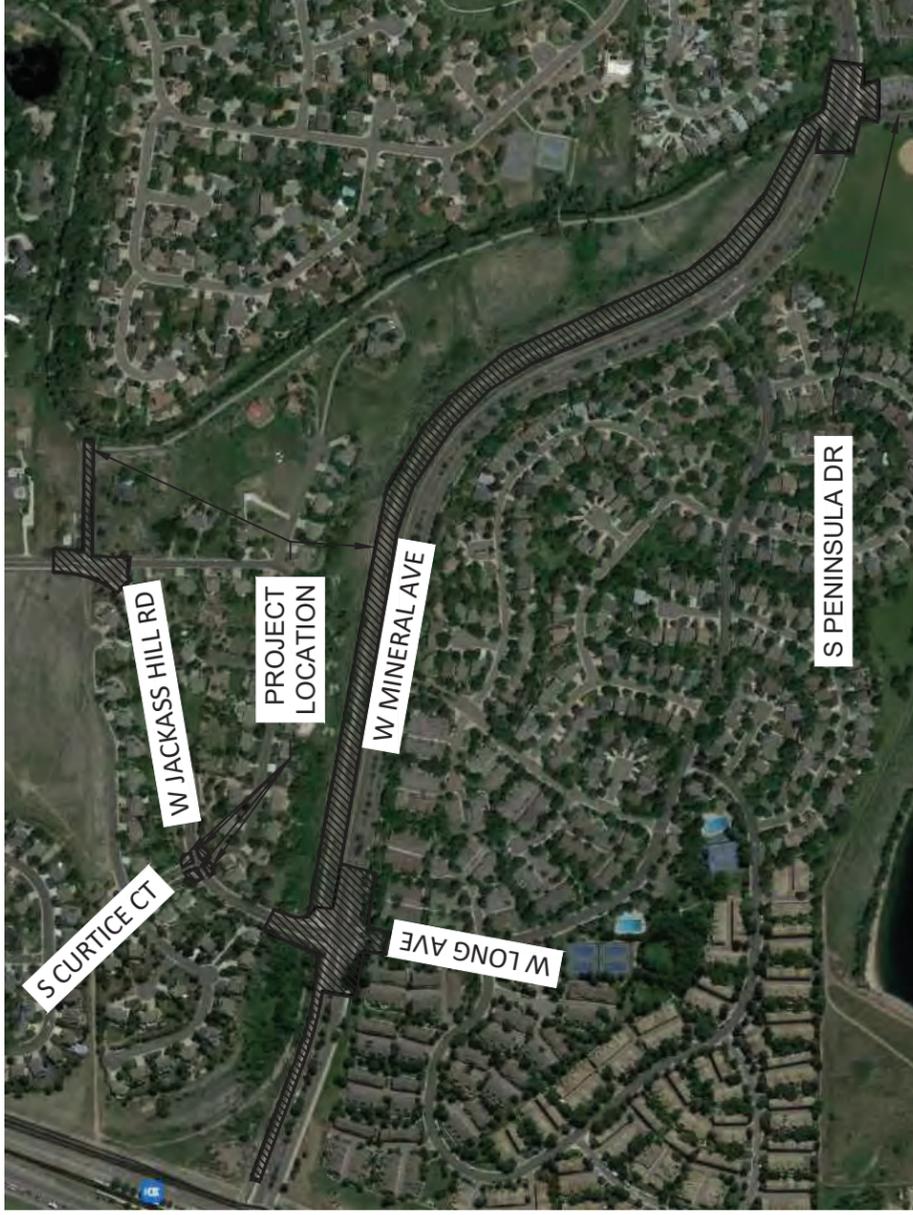
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| Print Date: 8/22/2024 | | Sheet Revisions | | Project No./Code | |
| File Name: LITN0001_TC_BID-1-Plan.dwg | | Date: | Comments | MINERAL MOBILITY IMPROVEMENTS – BID 1 | |
| Horiz. Scale: N/A | | | | TRAFFIC CONTROL NOTES & DEVICES | |
| Vert. Scale: N/A | | | | Designer: AMSC | Structure Numbers |
| 1800 Broadway Street Suite 800 Denver Colorado 80202 Phone: 720.946.0969 | | | | Detailer: AMSC | Sheet Numbers |
| | | | | Sheet Subset: TCP | Subset Sheets: 2 of 2 |
| | | | | | Sheet 116 |

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MINERAL STATION EAST MOBILITY SHED IMPROVEMENTS

LITTLETON, COLORADO
SUBSURFACE UTILITY ENGINEERING PLAN

PROJECT SITE MAP



NOT TO SCALE



CLIENT

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AND ASSOCIATES, INC.

PROJECT MANAGER: SARA K. CIASTO, PE
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DENVER, CO, 80202
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SUE CONSULTANT



GOODBEE
& ASSOCIATES, INC.

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| SHEET INDEX | |
|-------------|---------------------------|
| SHEET NO. | TITLE |
| 1 | COVER SHEET |
| 2-4 | GENERAL NOTES AND KEY MAP |
| 5-14 | SUE PLAN SHEETS |

GENERAL NOTES

- UTILITIES ARE DEPICTED IN THESE PLANS IN ACCORDANCE WITH THEIR ACHIEVED QUALITY LEVELS AS DEFINED IN THE CONSTRUCTION INSTITUTE/AMERICAN SOCIETY OF CIVIL ENGINEER'S C/ASCE 38-22, "STANDARD GUIDELINE FOR INVESTIGATING AND DOCUMENTING EXISTING UTILITIES". BASED ON TYPICAL TASKS LEADING TO UTILITY DEPICTION, ASCE DEFINES THE QUALITY LEVELS AS FOLLOWS:
 - QUALITY LEVEL D (QLD): A VALUE ASSIGNED TO A UTILITY SEGMENT OR UTILITY FEATURE NOT VISIBLE AT THE GROUND SURFACE WHOSE ESTIMATED POSITION IS JUDGED THROUGH UTILITY RECORDS, INFORMATION FROM OTHERS, FROM VISUAL CLUES SUCH AS PAVEMENT CUTS, OBVIOUS TRENCHES, OR EXISTENCE OF SERVICE. A QLD DATA ATTRIBUTE IS ASSIGNED TO A UTILITY SEGMENT OR UTILITY FEATURE AFTER REVIEW AND COMPILATION OF EXISTING RECORDS; ORAL RECOLLECTIONS; ONE-CALL OR "PRIVATE-LOCATE" MARKINGS, MANAGED DATA REPOSITORIES, CONTEXT WITH OTHER ACHIEVED UTILITY QUALITY LEVELS, AND/OR OTHER EVIDENCE OF EXISTENCE. QLD DATA IS MORE UNCERTAIN THAN QLC, QLB, AND QLA. QLD DATA IS LESS UNCERTAIN THAN UTILITIES DOCUMENTED WITHOUT ANY UTILITY QUALITY LEVEL BARRING A PROFESSIONAL'S STATEMENT OF FACT TO THE CONTRARY. QUALITY LEVEL C (QLC): "INFORMATION OBTAINED BY SURVEYING AND PLOTTING VISIBLE ABOVE-GROUND UTILITY FEATURES AND BY USING PROFESSIONAL JUDGEMENT IN CORRELATING THIS INFORMATION TO QUALITY LEVEL D INFORMATION."
 - QUALITY LEVEL C (QLC): A VALUE ASSIGNED TO A UTILITY SEGMENT NOT VISIBLE AT THE GROUND SURFACE WHOSE ESTIMATED POSITION IS JUDGED THROUGH CORRELATING UTILITY RECORDS OR SIMILAR EVIDENCE TO UTILITY FEATURES, VISIBLE ABOVEGROUND AND/OR UNDERGROUND. THE UTILITY ANCHOR POINT ON THE UTILITY FEATURES SHALL BE TIED TO THE PROJECT SURVEY DATUM WITH AN ACCURACY OF 0.2 FT (60 MM) HORIZONTAL. A QLC VALUE JUDGMENT IS ASSIGNED TO A UTILITY SEGMENT BY USING VISIBLE UTILITY FEATURES TO APPROXIMATE THE POSITION OF A UTILITY SEGMENT BETWEEN OR IN PROXIMITY TO THE VISIBLE UTILITY FEATURES AND IN CONTEXT WITH OTHER ACHIEVED UTILITY QUALITY LEVELS. QLC ONLY PERTAINS TO THE UNDERGROUND UTILITY SEGMENT(S), NOT THE UTILITY FEATURE(S). QLC DATA IS MORE CERTAIN THAN QLD AND IS MORE UNCERTAIN THAN QLB AND QLA.
 - QUALITY LEVEL B (QLB): A VALUE ASSIGNED TO A UTILITY SEGMENT OR SUBSURFACE UTILITY FEATURE WHOSE EXISTENCE AND HORIZONTAL POSITION IS BASED ON GEOPHYSICAL METHODS COMBINED WITH PROFESSIONAL JUDGEMENT AND WHOSE LOCATION IS TIED TO THE PROJECT SURVEY DATUM. A QLB VALUE IS ASSIGNED TO A UTILITY SEGMENT WHEN THE FOLLOWING CONDITIONS ARE MET: (1) THE UTILITY SEGMENT WAS DETECTED THROUGH THE APPLICATION OF APPROPRIATE GEOPHYSICAL METHODS; (2) THE GEOPHYSICAL SIGNAL WAS JUDGED TO BE RELIABLE; (3) THE INTERPRETED POSITION WAS JUDGED BASED ON KNOWLEDGE AND USE OF GEOPHYSICAL SCIENCE, UTILITY DESIGN AND INSTALLATION PRACTICES, AVAILABLE RECORDS, VISUAL FEATURES, AND INFLUENCE OF SITE CONDITIONS; AND (4) THE SOURCE DESIGNATION HAS BEEN TIED TO THE PROJECT SURVEY DATUM WITH AN ACCURACY OF 0.2 FT (60 MM) HORIZONTALLY. QLB IS MORE UNCERTAIN THAN QLA AND MORE CERTAIN THAN QLC OR QLD.
 - QUALITY LEVEL A (QLA): A VALUE ASSIGNED TO THAT PORTION (X-, Y-, AND Z-GEOMETRY) OF A UTILITY SEGMENT OR SUBSURFACE UTILITY FEATURE THAT IS DIRECTLY EXPOSED AND MEASURED AND WHOSE LOCATION AND DIMENSIONS ARE TIED TO THE PROJECT SURVEY DATUM. THE UTILITY SEGMENT OR SUBSURFACE UTILITY FEATURE SHALL BE TIED TO THE PROJECT SURVEY DATUM WITH AN ACCURACY OF 0.1 FT (30 MM) VERTICAL AND TO 0.2 FT (60 MM) HORIZONTAL FOR THE MEASUREMENTS OF THE OUTSIDE LIMITS OF THE UTILITY FEATURE OR UTILITY SEGMENT THAT IS EXPOSED. OTHER MEASURABLE, OBSERVABLE, AND JUDGED UTILITY ATTRIBUTES ARE ALSO RECORDED. IF OBTAINED BY MEANS OF A TEST HOLE OBSERVATION, A VERIFICATION EFFORT IS MADE, AND PROFESSIONAL JUDGMENT IS USED TO ASSERT THAT THE EXPOSED INFRASTRUCTURE IS INDEED THE SOUGHT TARGET. THE ASSIGNMENT OF QLA CONVEYS THE LOWEST LEVEL OF RELATIVE (NONQUANTIFIABLE) UNCERTAINTY OF MEASURABLE AND JUDGED ATTRIBUTES AND LOCATION. QLA IS MORE CERTAIN THAN QLB, QLC, OR QLD.
- RELIANCE UPON THESE DATA FOR RISK MANAGEMENT PURPOSES DURING BIDDING DOES NOT RELIEVE THE EXCAVATOR OR UTILITY OWNER FROM FOLLOWING ALL APPLICABLE UTILITY DAMAGE PREVENTION STATUTES, POLICIES, AND/OR PROCEDURES DURING EXCAVATION. IT IS IMPORTANT THAT THE CONTRACTOR INVESTIGATES AND UNDERSTANDS THE SCOPE OF WORK BETWEEN THE PROJECT OWNER(S) AND THEIR ENGINEER REGARDING THE SCOPE AND LIMITS OF THE UTILITY INVESTIGATIONS LEADING TO THESE UTILITY DEPICTIONS.

PROJECT NOTES

PERIOD OF DATA COLLECTION

- UTILITY INVESTIGATION AND SURVEY FIELD WORK WAS PERFORMED BETWEEN 04/14/2023 AND 05/24/2023.
- GOODBEE & ASSOCIATES WILL NOT BE HELD LIABLE FOR THE DEPICTION OF ANY CHANGES IN FIELD CONDITIONS BEYOND 05/24/2023, INCLUDING UTILITIES AND FEATURES THAT WERE INSTALLED, REMOVED, OR ADJUSTED AFTER THE FIELD WORK WAS COMPLETE.

GEOPHYSICAL INVESTIGATION

- GOODBEE & ASSOCIATES PERFORMED THE GEOPHYSICAL INVESTIGATION FOR THIS PROJECT IN ACCORDANCE WITH ITS STANDARD OF PRACTICE, WHICH GENERALLY CONFORMS TO THE C/ASCE 38-22 AND ALIGNS WITH GENERALLY ACCEPTABLE INDUSTRY STANDARDS. THIS INVOLVED THE TRACING OF DISTINCT, KNOWN, AND DETECTABLE UTILITY ALIGNMENTS WITHIN THE LIMITS OF INVESTIGATION. THIS EFFORT IS NOT A TOTAL GEOPHYSICAL SWEEP OF THE LIMITS OF INVESTIGATION.
- ACCESSIBLE NON-METALLIC STORM AND SANITARY SEWER LINES WERE DESIGNATED BY INTRODUCING A CONDUCTIVE MATERIAL INTO THE LINES. TO INTRODUCE CONDUCTIVE MATERIAL INTO THE UTILITY LINES AND ALLOW FOR DESIGNATION, A FLEXIBLE, TRACEABLE ROD WAS INSERTED INTO ACCESSIBLE NON-METALLIC STORM AND SANITARY SEWER LINES.
- ACCESSIBLE MAINTENANCE HOLES WERE UNCOVERED TO ALLOW VISUAL VERIFICATION OF UTILITIES AND DIRECT MEASUREMENT OF PIPE INVERT ELEVATIONS.
- GOODBEE & ASSOCIATES SCANNED THE LIMITS OF INVESTIGATION FOR UNKNOWN UTILITIES. HOWEVER, GOODBEE & ASSOCIATES IS NOT RESPONSIBLE FOR DEPICTING UNKNOWN UTILITIES.

DATA LIMITATIONS

- GOODBEE & ASSOCIATES PERFORMED THIS SUE PROJECT IN ACCORDANCE WITH THE C/ASCE 38-22 GUIDELINES AND CURRENT GENERALLY ACCEPTED INDUSTRY STANDARDS. HOWEVER, THE POSSIBILITY STILL EXISTS THAT SOME UTILITIES WERE NOT FOUND OR DEPICTED.
- BURIED UTILITIES WITH VISIBLE SURFACE FEATURES ARE DEPICTED BASED ON THE HORIZONTAL LIMITS THEY OCCUPY ON OR ABOVE GROUND. THE DEPICTED HORIZONTAL LIMITS ARE NOT NECESSARILY INDICATIVE OF THE UNDERGROUND HORIZONTAL LIMITS WHICH CAN SIGNIFICANTLY EXTEND BEYOND WHAT IS SHOWN IN THE SUE PLANS.
- SOME UTILITIES MAY BE DEPICTED OUTSIDE THE LIMITS OF INVESTIGATION. HOWEVER, THIS IS NOT AN INDICATION THAT ALL EXISTING UTILITIES ARE DEPICTED BEYOND THE LIMITS OF INVESTIGATION.
- UTILITY ATTRIBUTE INFORMATION SUCH AS UTILITY OWNER NAME, PIPE SIZE, AND MATERIAL ARE BASED ON INFORMATION GATHERED FROM AVAILABLE RECORDS OR AS DIRECTLY OBSERVED DURING SUBSURFACE UTILITY INVESTIGATION. IN SOME CASES, RECORD INFORMATION MAY BE OBSOLETE OR INACCURATE. THE PROJECT ENGINEER MUST VERIFY UTILITY ATTRIBUTE INFORMATION BY CONTACTING UTILITY OWNERS DURING THE UTILITY COORDINATION PROCESS OR BY PERFORMING QLA TEST HOLES.

DESIGNATING EQUIPMENT

- GEOPHYSICAL UTILITY DESIGNATION WAS PERFORMED USING THE RD 8100 PDL RECEIVER AND TX-10 TRANSMITTER.
- GROUND PENETRATING RADAR (GPR) WAS NOT USED ON THIS PROJECT.
- ADDITIONAL UTILITY INFORMATION WAS COLLECTED USING STANDARD FIELD EQUIPMENT SUCH AS MEASURING TAPE AND METAL DETECTORS.

FIELD CONDITIONS

- AT THE TIME OF UTILITY INVESTIGATION, SITE CONDITIONS WERE UNREMARKABLE

SURVEY NOTES

- DESIGNATING MARKS (QLB) WERE SURVEYED TO 0.2' ACCURACY.
- THE PROJECT SURVEY INFORMATION, INCLUDING COORDINATE SYSTEM, CONTROL POINTS, AND BASE FILE WERE PROVIDED BY DAVID EVANS AND ASSOCIATES, INC. THE PROJECT TOPOGRAPHIC SURVEY WAS PERFORMED BY DAVID EVANS AND ASSOCIATES, INC.
- VERTICAL ELEVATIONS WERE BASED ON NGS BENCHMARK Q23 1929, PID:KK0556, A STANDARD BENCHMARK DISK SET ON TOP OF A CONCRETE MONUMENT, WITH A NAVD ELEVATION OF 5,395.24 FT.
- COORDINATES ARE BASED UPON NAD83(2011) DATUM AND CONTROL POINTS AS SHOWN BELOW IN THE TABLE OF SURVEY CONTROL POINTS.
- COORDINATES ARE ON MODIFIED COLORADO STATE PLANE 0502
- PROJECT NORTHINGS AND EASTINGS ARE CALCULATED USING THE FOLLOWING FORMULAE.
PROJECT NORTHING = (STATE PLANE NORTHING * 1.0002855330) - 1,000,000
PROJECT EASTING = (STATE PLANE EASTING * 1.0002855330) - 3,000,000

TABLE OF SURVEY CONTROL POINTS

| POINT NO. | PROJECT COORDINATES | | ELEV. | DESCRIPTION |
|-----------|---------------------|------------|----------|--|
| | NORTHING | EASTING | | |
| 24Q | 636,727.31 | 134,590.65 | 5,378.38 | FND 1IN. COPPER PLUG IN CONCRETE 105 WEST |
| 25Q | 636,472.47 | 134,982.19 | 5,393.32 | FND 1IN. COPPER PLUG IN CONCRETE 105 WEST |
| 26Q | 636,372.40 | 135,692.59 | 5,434.45 | FND 1IN. COPPER PLUG IN CONCRETE 105 WEST |
| 63A | 635,443.55 | 138,434.46 | 5,517.03 | FND #5 REBAR 2.5IN ALUM. CAP "AZTEC CP 63" |
| 65A | 636,015.24 | 138,253.56 | 5,518.87 | FND #5 REBAR NO CAP 0.1FT ABOVE GRADE |
| 66A | 635,316.43 | 138,005.99 | 5,514.57 | FND CHISELED "X" ON CONCRETE INLET |
| 67A | 635,043.93 | 138,131.55 | 5,518.97 | FND CHISELED "X" ON CONCRETE INLET |
| Q.23 | 635,788.04 | 134,277.28 | 5,395.24 | FND 3.5IN. BRASS CAP Q23 1929; NGS |

| REVISIONS | |
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MINERAL STATION EAST MOBILITYSHED IMPROVEMENTS

GENERAL NOTES

| | | |
|------------|----------------------------------|-------------|
| DRAWN BY | CLIENT | SHEET NO. |
| RCM | DAVID EVANS AND ASSOCIATES, INC. | 2 of 14 |
| CHECKED BY | DATE | PROJECT NO. |
| RH | 05/31/2023 | 1627MRL |
| | | C 1810-019 |

PROJECT NOTES

- RECORDS RESEARCH & SITE RECONNAISSANCE
- FOR THIS PROJECT, RECORDS RESEARCH WAS PERFORMED AND PROVIDED BY GOODBEE & ASSOCIATES.
 - THE COLORADO 811 TICKET NUMBERS WERE A303301767 AND A303301796.
 - UTILITIES DOCUMENTED IN RECORDS BUT NOT FOUND DURING FIELD INVESTIGATIONS, IF AVAILABLE TO GOODBEE & ASSOCIATES, ARE DEPICTED AS QLD.

RECOMMENDATIONS FOR FURTHER INVESTIGATION

- TO MINIMIZE POTENTIAL CONFLICTS DURING CONSTRUCTION, QLA SUE IS RECOMMENDED PRIOR TO FINAL DESIGN AT LOCATIONS WHERE EXCAVATION OR BORING IS PLANNED OR ANTICIPATED TO CROSS OR ENCRANCH UPON THE EXISTING UNDERGROUND UTILITIES, FEATURES, AND STRUCTURES DEPICTED IN THE SUE PLANS.
- FOR UTILITIES DOCUMENTED IN RECORDS BUT NOT DETECTED DURING FIELD WORK, IT IS RECOMMENDED THAT THE EXCAVATOR PROCEEDS WITH AN ABUNDANCE OF CAUTION AND TAKES PROPER MEASURES TO NOTIFY UTILITY OWNERS THROUGH THE COLORADO 811 DIG SAFE SYSTEM PRIOR TO THE COMMENCEMENT OF WORK.

UTILITY RECORD RESPONSE TABLE

| UTILITY OWNER | 811 TICKET RESPONSE | NOTES |
|---|---------------------|---|
| COMCAST | CLEARED | UTILITIES FOUND WITHIN WORK SCOPE |
| CDOT REGION 1 | CLEARED | |
| CDOT ITS | CLEARED | |
| DENVER WATER DEPARTMENT | RECORDS RECEIVED | |
| CITY OF LITTLETON | RECORDS RECEIVED | |
| LUMEN NATIONAL | RECORDS RECEIVED | |
| MCI-VERIZON FIBER | EMAIL RECEIVED | |
| XCEL ENERGY GAS | RECORDS RECEIVED | |
| LUMEN | RECORDS RECEIVED | RECORDS WERE BLANK PDF DOCS, CLEARED IN 811; UTILITIES FOUND WITHIN SCOPE OF WORK |
| RTD FAST TRACKS | CLEARED | OUT OF RTD ROW |
| SPRINT FIBER | EMAIL RECEIVED | CLEARED |
| SOUTH SUBURBAN PARK AND RECREATION DISTRICT | CLEARED | |
| SOUTHWEST METRO WATER AND SAN | CLEARED | |
| XCEL ENERGY ELECTRIC | RECORDS RECEIVED | |
| ZAYO BANDWIDTH | CLEARED | |

LEGEND OF UTILITY TYPES

| | | |
|------------------------|-----------------|-------------------|
| QUALITY LEVEL B | TV(B) --- TV(B) | TV(D) --- TV(D) |
| CABLE TV | E(B) --- E(B) | E(D) --- E(D) |
| ELECTRIC | FO(B) --- FO(B) | FO(D) --- FO(D) |
| FIBER OPTIC | C(B) --- C(B) | G(D) --- G(D) |
| GAS | T(B) --- T(B) | SS(D) --- SS(D) |
| TELEPHONE | W(B) --- W(B) | STM(D) --- STM(D) |
| WATER | | W(D) --- W(D) |
| QUALITY LEVEL D | | |
| CABLE TV | | |
| ELECTRIC | | |
| FIBER OPTIC | | |
| GAS | | |
| SANITARY SEWER | | |
| STORM | | |
| WATER | | |
| OVERHEAD ELECTRIC | OH --- OH | E --- E |
| FIBER | | FO --- FO |

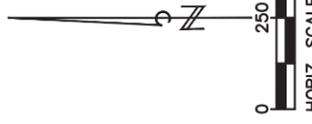
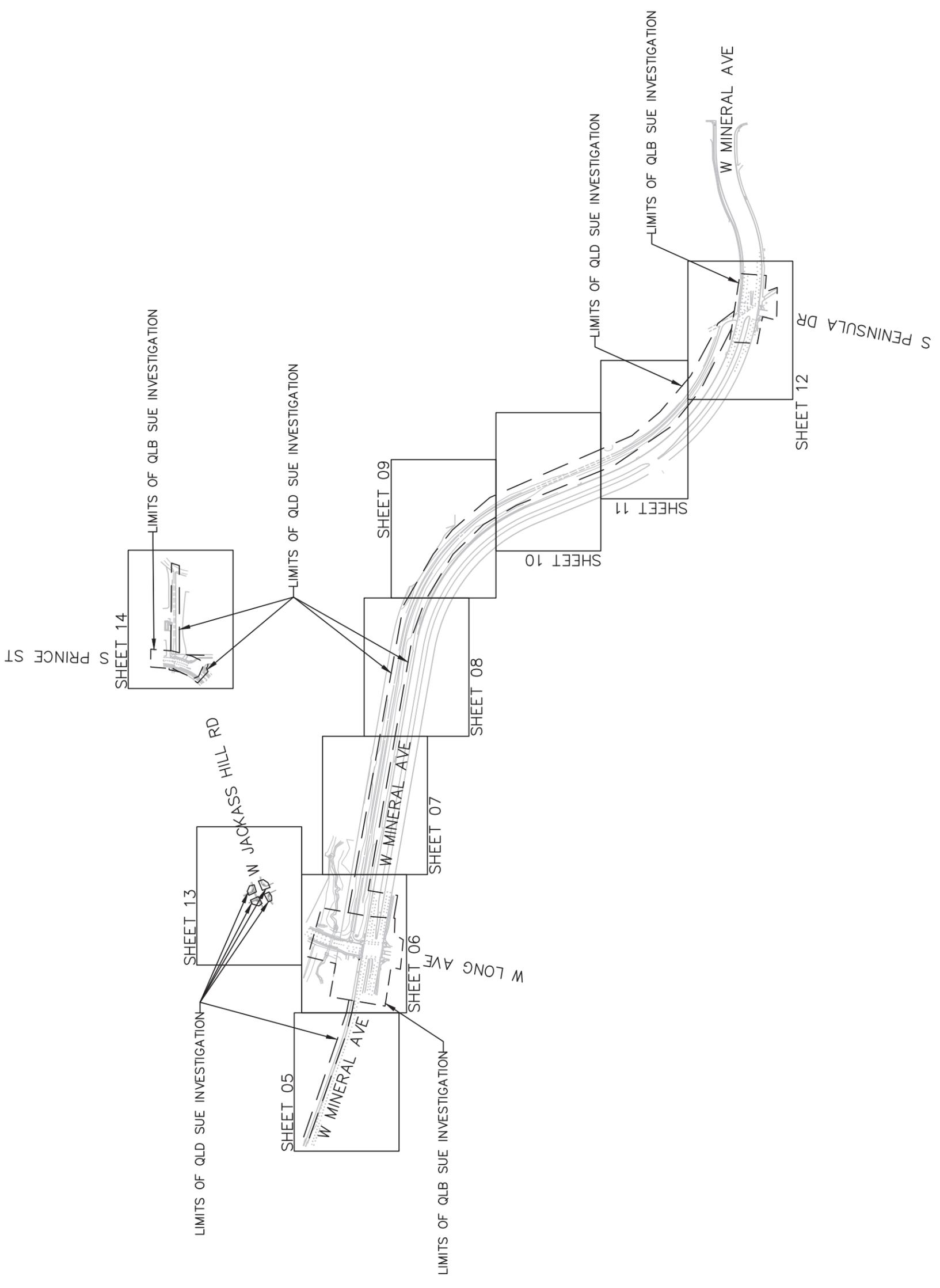
LEGEND OF UTILITY SYMBOLS

| | | | |
|--|---------------------------|--|------------------------|
| | ELECTRIC CABINET | | STORM INLET |
| | ELECTRIC GUY WIRE | | STORM MAINTENANCE HOLE |
| | ELECTRIC HANDHOLE | | TELEPHONE PEDESTAL |
| | ELECTRIC MISCELLANEOUS | | TELEVISION PEDESTAL |
| | ELECTRIC POWER POLE | | TRAFFIC HAND HOLE |
| | ELECTRIC TRANSFORMER | | TRAFFIC SIGNAL POLE |
| | FIBER HANDHOLE | | WATER MAINTENANCE HOLE |
| | FIBER MAINTENANCE HOLE | | WATER MISCELLANEOUS |
| | FIRE HYDRANT | | WATER METER |
| | IRRIGATION VALVE | | WATER TEST POINT |
| | LUMINAIRE | | WATER VALVE |
| | SANITARY MAINTENANCE HOLE | | WATER VENT |

ABBREVIATIONS

| | |
|-------|--------------------------|
| BOX | CONCRETE BOX CULVERT |
| CI | CAST IRON |
| CMP | CORRUGATED METAL PIPE |
| COL | CITY OF LITTLETON |
| CONC | CONCRETE ENCASED |
| DWD | DENVER WATER DEPARTMENT |
| INV | INVERT |
| MAT | MATERIAL |
| PE | POLYETHYLENE |
| PVC | POLYVINYL CHLORIDE |
| RCP | REINFORCED CONCRETE PIPE |
| S FBE | STEEL FUSED BONDED EPOXY |
| STL | STEEL |
| SVC | SERVICE |
| UNK | UNKNOWN |

| | | | | | | | |
|--|----------------------------------|-------------|------------------|-----------|--|-------------|--|
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| MINERAL STATION EAST MOBILITYSHED IMPROVEMENTS | | | | | | | |
| GENERAL NOTES | | | | | | | |
| DRAWN BY | CLIENT | | | SHEET NO. | | | |
| NCM | DAVID EVANS AND ASSOCIATES, INC. | | | 3 of 14 | | | |
| CHECKED BY | DATE | PROJECT NO. | CLIENT PROJ. NO. | | | | |
| RH | 05/31/2023 | 1827MRL | C 1810019 | | | | |

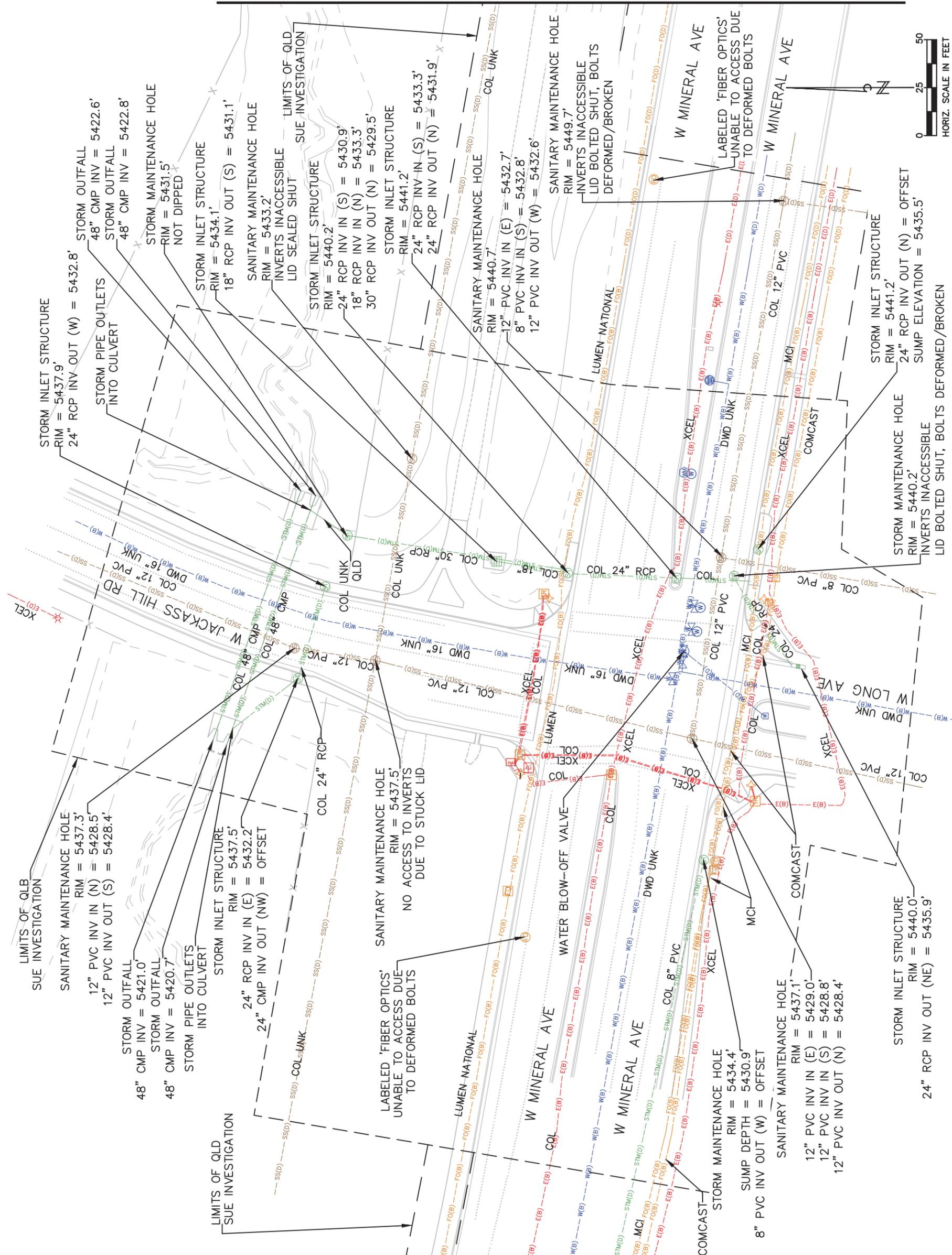


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MINERAL STATION EAST MOBILITYSHED IMPROVEMENTS

| KEY MAP | | | |
|------------|----------------------------------|-------------|------------------|
| DRAWN BY | CLIENT | SHEET NO. | |
| NCM | DAVID EVANS AND ASSOCIATES, INC. | | |
| CHECKED BY | DATE | PROJECT NO. | CLIENT PROJ. NO. |
| RH | 05/31/2023 | 1827MNR | C MB100019 |



LIMITS OF QLB SUE INVESTIGATION

SANITARY MAINTENANCE HOLE
RIM = 5437.3'
12" PVC INV IN (N) = 5428.5'
12" PVC INV OUT (S) = 5428.4'

STORM OUTFALL
48" CMP INV = 5421.0'
STORM OUTFALL
48" CMP INV = 5420.7'

STORM PIPE OUTLETS INTO CULVERT

STORM INLET STRUCTURE
RIM = 5437.5'
24" RCP INV IN (E) = 5432.2'
24" CMP INV OUT (NW) = OFFSET

COL 24" RCP

SANITARY MAINTENANCE HOLE
RIM = 5437.5'
NO ACCESS TO INVERTS DUE TO STUCK LID

LABELLED 'FIBER OPTICS' UNABLE TO ACCESS DUE TO DEFORMED BOLTS

LUMEN NATIONAL

W MINERAL AVE

WATER BLOW-OFF VALVE

W MINERAL AVE

COMCAST

STORM MAINTENANCE HOLE
RIM = 5434.4'
SUMP DEPTH = 5430.9'
8" PVC INV OUT (W) = OFFSET

SANITARY MAINTENANCE HOLE
RIM = 5437.1'
12" PVC INV IN (E) = 5429.0'
12" PVC INV IN (S) = 5428.8'
12" PVC INV OUT (N) = 5428.4'

STORM INLET STRUCTURE
RIM = 5440.0'
24" RCP INV OUT (NE) = 5435.9'

STORM INLET STRUCTURE
RIM = 5437.9'
24" RCP INV OUT (W) = 5432.8'

STORM PIPE OUTLETS INTO CULVERT

STORM OUTFALL
48" CMP INV = 5422.6'
STORM OUTFALL
48" CMP INV = 5422.8'

STORM MAINTENANCE HOLE
RIM = 5431.5'
NOT DIPPED

STORM INLET STRUCTURE
RIM = 5434.1'
18" RCP INV OUT (S) = 5431.1'

SANITARY MAINTENANCE HOLE
RIM = 5433.2'
INVERTS INACCESSIBLE LID SEALED SHUT

LIMITS OF QLD SUE INVESTIGATION

STORM INLET STRUCTURE
RIM = 5440.2'
24" RCP INV IN (S) = 5430.9'
18" RCP INV IN (N) = 5433.3'
30" RCP INV OUT (N) = 5429.5'

STORM INLET STRUCTURE
RIM = 5441.2'
24" RCP INV IN (S) = 5433.3'
24" RCP INV OUT (N) = 5431.9'

SANITARY MAINTENANCE HOLE
RIM = 5440.7'
12" PVC INV IN (E) = 5432.7'
8" PVC INV IN (S) = 5432.8'
12" PVC INV OUT (W) = 5432.6'

SANITARY MAINTENANCE HOLE
RIM = 5449.7'
INVERTS INACCESSIBLE LID BOLTED SHUT, BOLTS DEFORMED/BROKEN

W MINERAL AVE

LABELLED 'FIBER OPTICS' UNABLE TO ACCESS DUE TO DEFORMED BOLTS

W MINERAL AVE

STORM INLET STRUCTURE
RIM = 5441.2'
24" RCP INV OUT (N) = OFFSET
SUMP ELEVATION = 5435.5'

STORM MAINTENANCE HOLE
RIM = 5440.2'
INVERTS INACCESSIBLE LID BOLTED SHUT, BOLTS DEFORMED/BROKEN



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| GOODBEE & ASSOCIATES, INC. | | MINERAL STATION EAST MOBILITYSHED IMPROVEMENTS | |
| SUBSURFACE UTILITY ENGINEERING PLAN | | | |
| DRAWN BY | CLIENT | SHEET NO. | |
| MCN | DAVID EVANS AND ASSOCIATES, INC. | PROJECT NO. | |
| CHECKED BY | DATE | CLIENT PROJ. NO. | |
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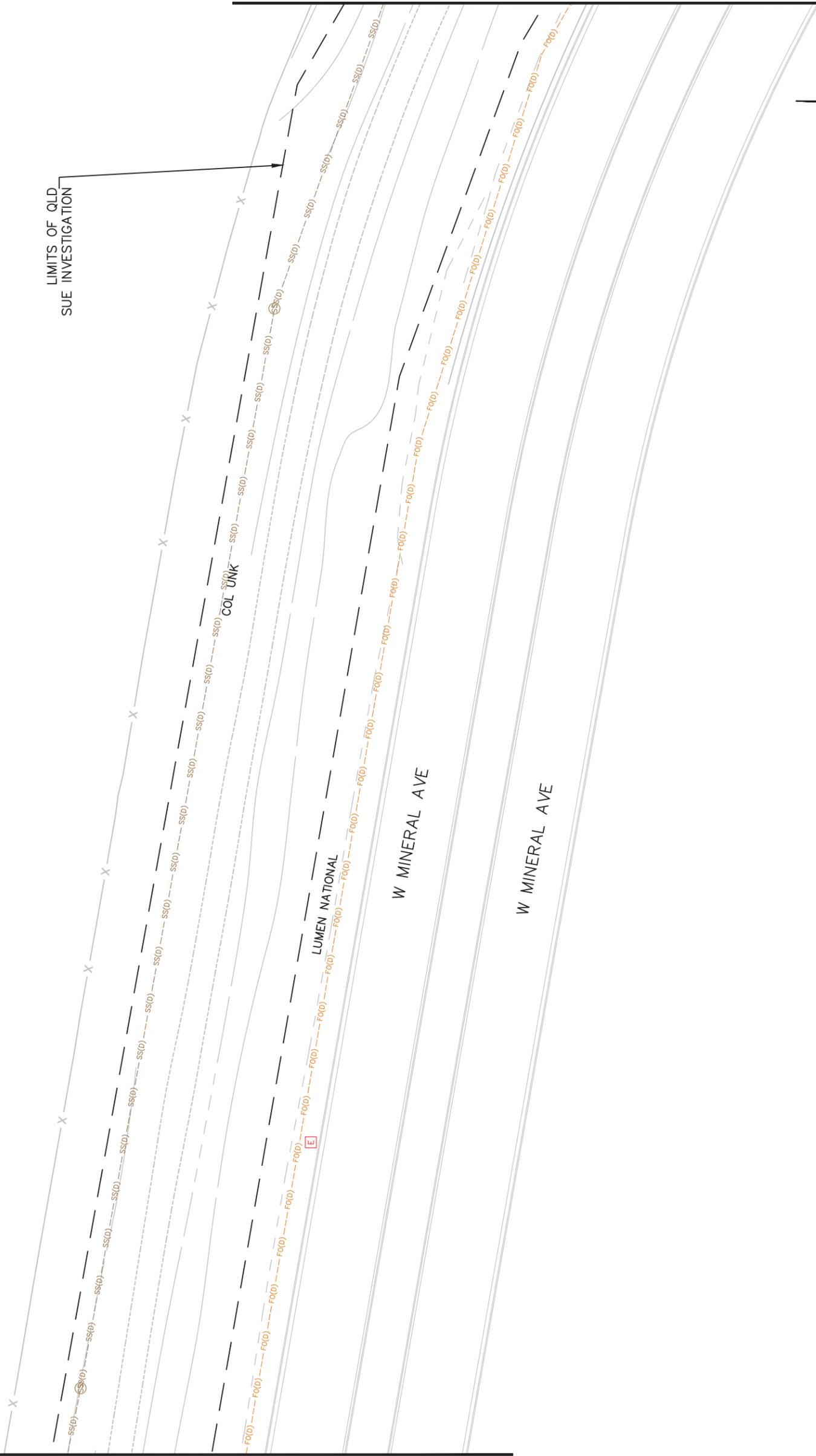


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| CHECKED BY | PROJECT NO. |
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LIMITS OF QLD.
SUE INVESTIGATION



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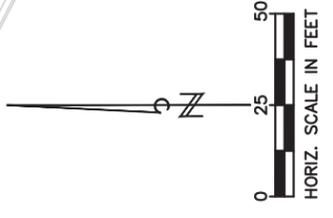
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MINERAL STATION EAST MOBILITYSHED
IMPROVEMENTS

SUBSURFACE UTILITY ENGINEERING PLAN

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| MCM | DAVID EVANS AND ASSOCIATES, INC. | 8 of 14 |
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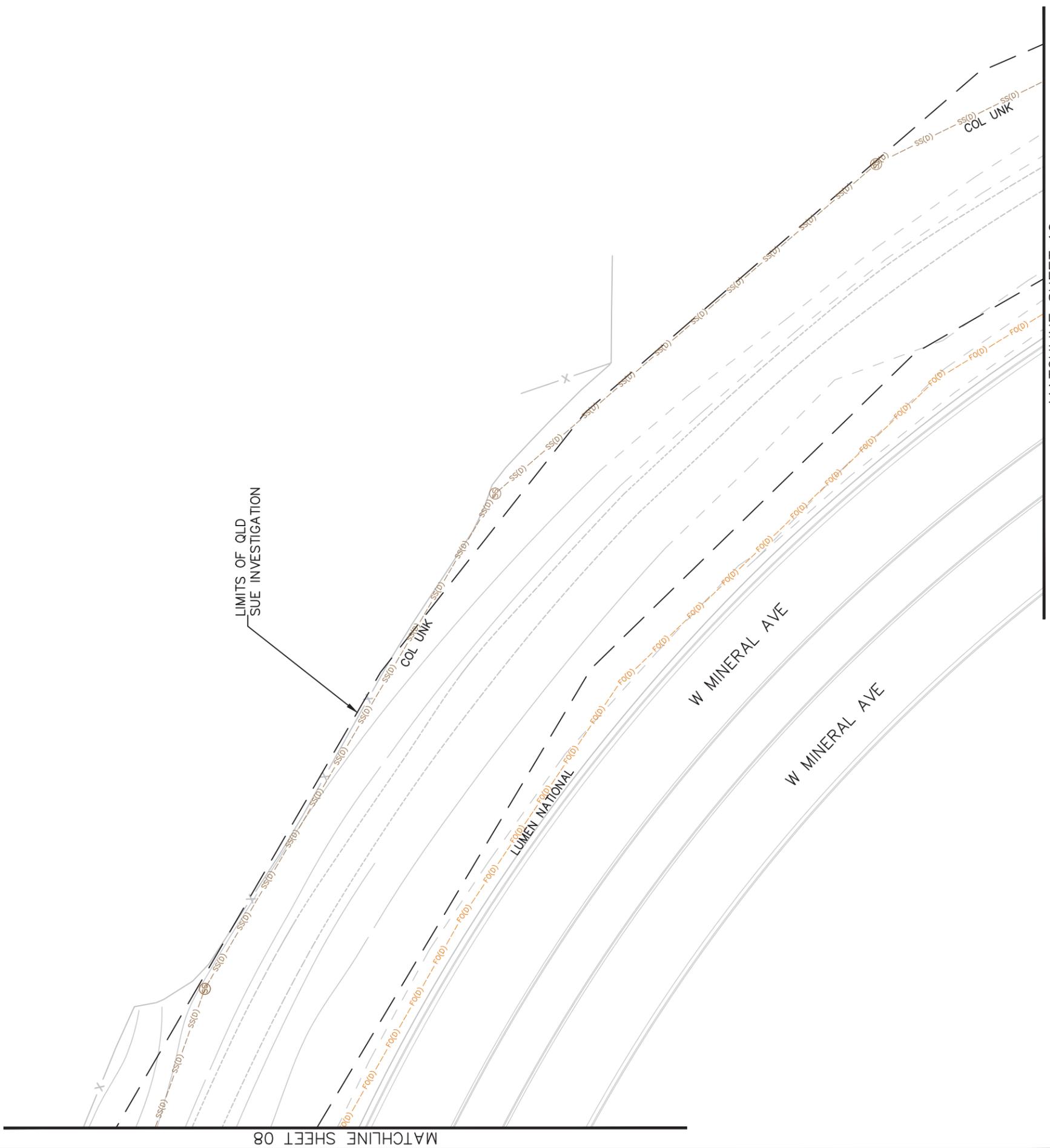
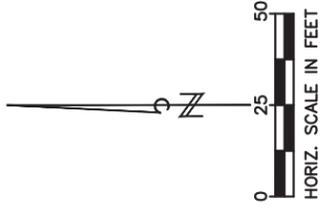




Know what's below.
Call before you dig.

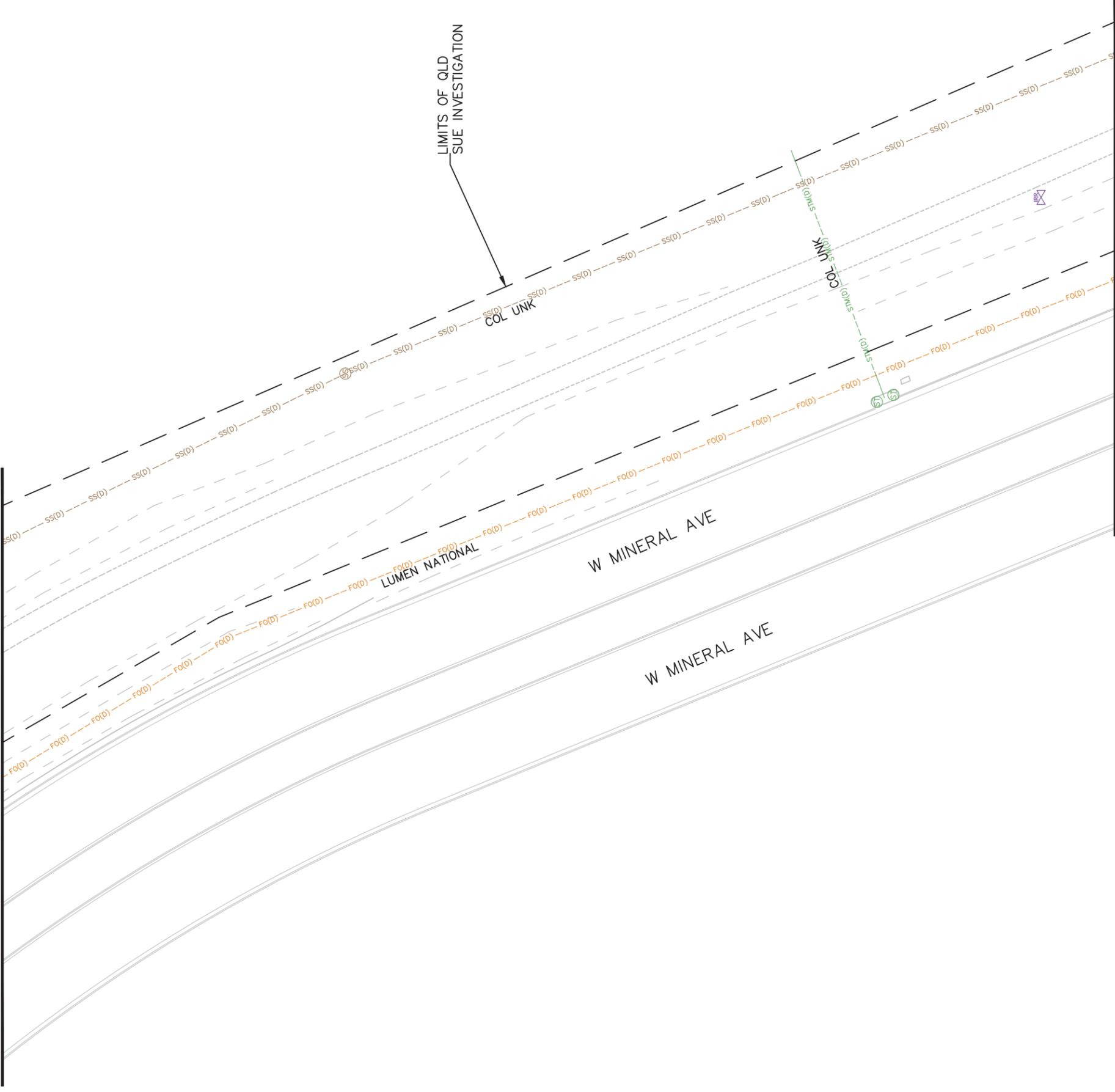
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| GOODBEE & ASSOCIATES, INC. | | | |
| MINERAL STATION EAST MOBILITYSHED IMPROVEMENTS | | | |
| SUBSURFACE UTILITY ENGINEERING PLAN | | | |
| DRAWN BY | CLIENT | SHEET NO. | |
| MCB | DAVID EVANS AND ASSOCIATES, INC. | 9 of 14 | |
| CHECKED BY | DATE | PROJECT NO. | CLIENT PROJ. NO. |
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| SUBSURFACE UTILITY ENGINEERING PLAN | | | |
| DRAWN BY | CLIENT | PROJECT NO. | SHEET NO. |
| MCN | DAVID EVANS AND ASSOCIATES, INC. | 1627MINEL | 10 of 14 |
| CHECKED BY | DATE | CLIENT PROJ. NO. | |
| | 05/31/2023 | 1627MINEL | |
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STORM MAINTENANCE HOLE
RIM = 5527.4'
LID BOLTED SHUT, BOLTS DEFORMED/BROKEN
INVERTS INACCESSIBLE

COL UNK

LIMITS OF QLD
SUE INVESTIGATION

W MINERAL AVE

STORM MAINTENANCE HOLE
RIM = 5527.0'
60" RCP INV IN (SE) = 5511.6'
60" RCP INV OUT (NW) = 5511.4'

COL UNK

WATER BLOW-OFF VALVE

HIGHLINE CANAL TRAIL

STORM INLET STRUCTURE
RIM = 5529.3'
NO ACCESS TO INVERT
DUE TO PIPE OFFSET

"FIBER OPTICS" MAINTENANCE HOLE

NO SIGNAL
NOT LOCATABLE IN FIELD

TV LINE IS ATTACHED
TO SIDE OF BRIDGE
APPROXIMATE LOCATION
OF TV PEDESTAL

LIMITS OF QLB
SUE INVESTIGATION

STORM MAINTENANCE HOLE
RIM = 5532.8'
12" CI INV IN (S) = 5526.5'
24" RCP INV OUT (N) = 5524.5'

POOR SIGNAL ON GAS
LINE



HORIZ. SCALE IN FEET

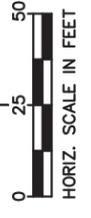
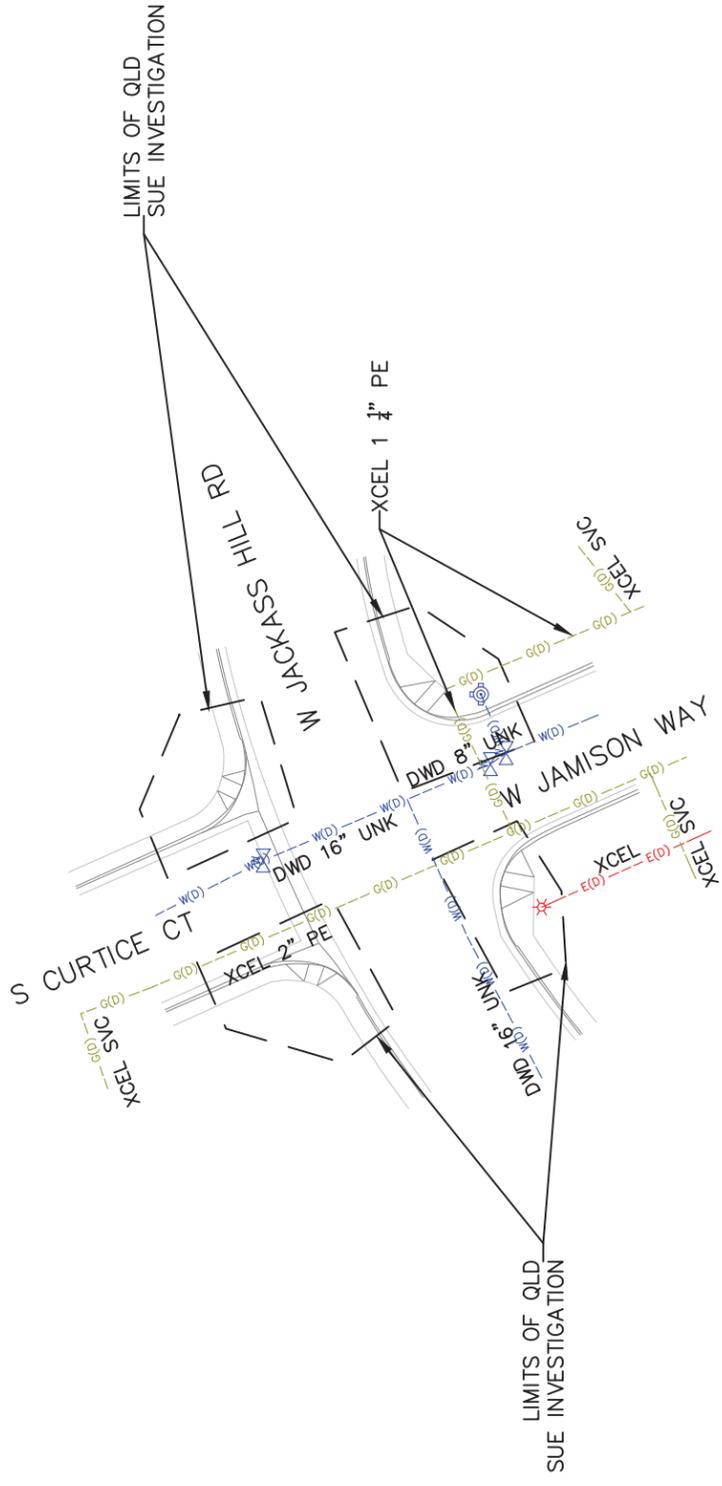
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GOODBEE & ASSOCIATES, INC.

MINERAL STATION EAST MOBILITYSHED IMPROVEMENTS

SUBSURFACE UTILITY ENGINEERING PLAN

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| DRAWN BY | CLIENT | SHEET NO. |
| MCM | DAVID EVANS AND ASSOCIATES, INC. | 12 OF 14 |
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| MCB | DAVID EVANS AND ASSOCIATES, INC. | 13 OF 14 | |
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