



Purchasing Division
Finance Department
Room 120
411 West First Street
Duluth, Minnesota 55802

218-730-5340
purchasing@duluthmn.gov

Addendum 1
Solicitation 20-99323
2020 Street Preservation Project

This addendum serves to notify all bidders of the following changes to the solicitation documents:

1. The bid deadline is extended to Wednesday, April 15, 2020 at 2:00 pm.
2. Attached is a Covid-19 Project Shutdown Plan outlining requirements should a shutdown of the project be required due to the Covid-19 pandemic.
3. During the City Hall closure due to COVID-19, bid bonds may be emailed to purchasing@duluthmn.gov or mailed to arrive at the Purchasing office at the address above prior to the bid deadline. Bid bonds may not be dropped off in person.
4. CHANGES TO PROJECT MANUAL
 - a. Changes have been made to Exhibit A – Item Listing.
5. CHANGES TO DRAWINGS
 - a. See attached Sheets 5-9 (Statement of Estimated Quantities) for additional pay items to be included in the work. Item 13, 2123.612 Compactor (Hour) has been added.
 - b. See attached Sheet 10 which has been updated for notes related to the addition of the compactor hours.
 - c. See attached Sheet 11 for changes in detail references in the notes on that sheet.
 - d. See attached Sheet 12 for changes in construction details, adding detail drawing (7/12) showing a typical section for ditch to be constructed under Item 2105.603 Construct Drainage Ditch (LF). Note 15 on Sheet 10 also describes what is included under this pay item.
6. CLARIFICATIONS/ADDITIONS

- a. Bituminous overlays and mill/overlay sections of the project shall use Type SP 9.5 Wearing Course Mixture (3,B). The note referencing mix type in the typical sections for overlays and mill/overlays should say “SPWEA340B”. The correct mix totals are shown in the Statement of Estimated Quantities. Revised typical section sheets with corrected mix nomenclature shall be issued prior to construction to the selected Contractor.
- b. Reclamation segments of the project shall use Type SP 9.5 Wearing Course Mixture (3,C).
- c. Bituminous Patching Mixture (Ton) will be used and paid for only when bituminous mixture is placed in the roadway for filling potholes and depressions (see Note 16, Sheet 10). Payment for bituminous mixture used for patching along sections of replaced curbs or pedestrian ramps shall be considered as incidental to the curb pay item.
- d. For clarification, specifications for Item 2231.509 Bituminous Patching Mixture (Ton) require the contractor to provide bituminous patching material matching the type of material used in the first layer of bituminous surfacing placed on the reconditions surface. Because the patching mixture will be used only on segments of the project with overlays or mill/overlays, the mixture shall be considered a mix design the same as the mixture being used for those portions of the project, or SPWEA340B.
- e. There are two (2) MnDOT seed mixtures used on this project—one (Mix 25-131) is a commercial turf mix for restoration of boulevard areas, and the second (Mix 33-361) is for ponds and wet areas in NW Minnesota.
- f. Item 16, 2215.504 Full Depth Reclamation (SY), shall follow MnDOT Standard Specifications for Construction 2215.1.B. This shall include up to a 2-foot shoulder per the typical sections shown in the plan and as directed by the Engineer. Payment for this item shall be inclusive of the items of work listed.
- g. Additional Motor Grader and Compactor hours are provided as a part of the work for the grading of gravel roadways before overlaying. Gravel road grading will be done under the supervision of City of Duluth Project Engineer with a 2-day notice. Additional Motor Grader and Compactor hours are also provided on reclaim sections for grading out areas where shoulders/parking areas need to be established beyond the standard 2-foot shoulder width.
- h. Special Provisions have been updated as follows:

SP-7 (1206) PREPARATION OF PROPOSAL

The provisions of MN/DOT 1206 are supplemented and/or modified with the following:

1206.1. "Preparation and Delivery", is modified as follows:

The **first paragraph** shall be deleted and replaced with the following:

Bidders must use the City of Duluth electronic bidding process through Bid Express®. For electronic bidding, the Bidder shall submit the electronic Proposal through the bidexpress.com website.

The **third paragraph** shall be deleted and replaced with the following:

The Bidder shall submit the Proposal Guaranty electronically or file a hard copy of the Proposal Guaranty with the City Purchasing Division by the bid opening date specified in the Invitation for Bids. Due to the COVID-19 pandemic and the closure of City buildings, a copy of the Proposal Guaranty in the form of a Bid Bond may be emailed to purchasing@duluthmn.gov. The emailed bid bond must be received prior to the bid opening and must be verifiable with the surety company.

SP-19 (2531) CONCRETE CURBING (ADA RAMP COMPLETION)

The provisions of 2531 of the City of Duluth 'Construction Standards' are supplemented with the following:

All work, including restoration, for pedestrian ADA ramp placement shall be completed within 2 weeks of pedestrian ADA ramp removal. All completed pedestrian ADA ramps shall be made safe for crossing, and maintained, at all times with a bituminous patch ramp placed between the concrete and bituminous surfaces until the roadway surfacing work has been completed. Additionally, all concrete curb replacement shall have the adjacent roadway patched with bituminous pavement from the time of replacement until the roadway surfacing work has been completed. Work for placement, maintenance and removal of the bituminous patching material will be considered incidental to the payment for concrete curb ramps or concrete curbing.

Please acknowledge receipt of this Addendum by checking the acknowledgment box within the www.bidexpress.com solicitation. Failure to acknowledge this addendum may disqualify your bid.

Posted: **April 6, 2020**

City of Duluth, MN

Covid-19 Project Shutdown Plan

In the event that employee illness or a governmental agency requires that the project cease due to the Covid-19 Virus, prior to suspension, the contractor shall provide a written plan to the architect/engineer on the project and the City for their prior approval and, upon such approval, shall be implemented by the contractor as part of this contract. The plan shall include the following requirements which shall apply to the status of the work at the time of interruption:

1. Time, if any, between the determination of the necessity of suspension and the actual suspension of work will be allocated in this order of priority; Life Safety Issues, Asset Integrity, Environmental Impacts, & Economic Impacts.
2. Excavations will be completed or temporarily filled.
3. Equipment will be removed from the site or secured by the contractor.
4. Physical barricades shall be installed as necessary to protect the work from damage or destruction and the public from injury in the event of trespass on the site.
5. Warning signs shall be installed where reasonably necessary to warn the public of any hazardous condition on the site.
6. Erosion control necessary to protect the site shall be in place and functioning and vegetation shall be in place and properly protected; all exposed and or erodible soil surfaces shall be fully stabilized per the SWPPP/NPDES permit requirements.
7. Onsite materials shall be removed from the site to safe storage or protected on site from damage or theft.

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4/2/2020

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STATEMENT OF ESTIMATED QUANTITIES

OVERLAYS

Table with columns: ITEM NO., NOTE ON SHEET 10, CHART LETTER, SPEC NO., ITEM, UNIT, TOTAL, and 15 overlay categories (Vermilion Rd - End of Pavement to Claymore, Elk St - Vermilion Rd to Lochaire, South Rd - Howard Gnesen to Kenwood Dr, Kenwood Dr - Catherine to South Road, Tyrol - Hutchinson to Cul-de-Sac, Hillcrest - Gearhart to Springvale, 131st Ave W - TH 23 to Mission Creek Parkway, Medina St - 6th St to 7th St & N Central Ave to 8th, N 46th Ave W - 8th St. to Medina St., Prescott St. - TH 23 to 96th Ave W). Rows 12-14 are circled in red.

REVISION DATE: 04/02/2020

I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.

DATE: 03/13/2020

SIGNATURE: [Signature]

Jeffrey S. Goetzman
TYPE NAME

LIC. NO: 26422



CITY OF DULUTH
ENGINEERING DIVISION
411 W. 1ST ST. STE. 211
DULUTH, MN 55802

Duluth 2020 Street Preservation

CITY PROJECT NO.: 1692

STATE AID PROJECT NO.: N/A

DRAWN BY: CJL
STATEMENT OF ESTIMATED QUANTITIES-1 OF 5
SHEET NO. 5 OF 247

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4/2/2020

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STATEMENT OF ESTIMATED QUANTITIES

| ITEM NO. | NOTE ON SHEET 10 | CHART LETTER | SPEC NO. | ITEM | UNIT | TOTAL | OVERLAYS | | | | | | | | |
|----------|------------------|--------------|----------|--|----------|-------|--|---|---------------------------------------|---------------------------------------|---------------------------------------|---------------------------------|------------------------------------|---|-----------------------------------|
| | | | | | | | 96th Ave W - Heard St. to Prescott St. | W Skyline Pkwy - Mountain Dr to 100th Ave W | W 9th St - 128th Ave W to 131st Ave W | 97th Ave W - Prescott St to McCuen St | Norwood St - 47th Ave E to 48th Ave E | E Heard St. - TH 23 to Dead End | E Carterett - Commonwealth to Gate | W 6th St - 466 ft E of 8th Ave W to 932 ft E of 8th Ave W | N 56th Ave W - Highland to Medina |
| 1 | | | 2021.501 | MOBILIZATION | LUMP SUM | 1 | 0.024 | 0.024 | 0.024 | 0.024 | 0.024 | 0.024 | 0.024 | 0.024 | |
| 2 | | A | 2104.502 | REMOVE CATCH BASIN | EACH | 10 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 3 | | A | 2104.502 | SALVAGE SIGN TYPE C | EACH | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 4 | | A | 2104.503 | REMOVE PIPE CULVERTS | LIN FT | 190 | 45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 5 | 3 | A | 2104.503 | REMOVE CURB AND GUTTER | LIN FT | 5793 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 173 | |
| 6 | 3 | A | 2104.518 | REMOVE CONCRETE WALK | SQ FT | 17384 | 0 | 0 | 0 | 0 | 1337 | 0 | 0 | 0 | |
| 7 | 3 | A | 2104.518 | REMOVE CONCRETE DRIVEWAY PAVEMENT | SQ YD | 244 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 8 | 3 | A | 2104.518 | REMOVE BITUMINOUS DRIVEWAY PAVEMENT | SQ YD | 2100 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 30 | |
| 9 | | C | 2105.507 | COMMON EXCAVATION | CU YD | 425 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 10 | 15 | C | 2105.603 | CONSTRUCT DRAINAGE DITCH | LIN FT | 376 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 11 | 13 | C, D | 2118.509 | AGGREGATE SURFACING CLASS 5 | CU YD | 370 | 18 | 34 | 16 | 75 | 0 | 44 | 0 | 0 | |
| 12 | 10 | B | 2123.510 | MOTOR GRADER | HOUR | 111 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 13 | 10 | B | 2123.612 | COMPACTOR | HOUR | 111 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 14 | 10 | B | 2130.523 | WATER | M GALLON | 77 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 15 | 7 | B | 2131.506 | CALCIUM CHLORIDE SOLUTION | GALLON | 13615 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 16 | 1 | B | 2215.504 | FULL DEPTH RECLAMATION | SQ YD | 54445 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 17 | 19 | C | 2215.507 | HAUL FULL DEPTH RECLAMATION (LV) | CU YD | 30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 18 | 16, 17 | D | 2231.509 | BITUMINOUS PATCHING MIXTURE | TON | 3221 | 25 | 308 | 31 | 13 | 23 | 61 | 11 | 140 | 20 |
| 19 | 1, 18 | B | 2232.504 | MILL BITUMINOUS SURFACE (1.5") | SQ YD | 55933 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 20 | 1, 18 | B | 2232.504 | MILL BITUMINOUS SURFACE (2.0") | SQ YD | 47630 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 21 | 1, 18 | B | 2232.504 | MILL BITUMINOUS SURFACE (3.0") | SQ YD | 3174 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 22 | 6, 8, 9, 17 | D | 2360.509 | TYPE SP 9.5 WEARING COURSE MIXTURE (3,B) | TON | 24207 | 245 | 3083 | 310 | 132 | 233 | 605 | 113 | 1403 | 195 |
| 23 | 6, 9, 17 | D | 2360.509 | TYPE SP 9.5 WEARING COURSE MIXTURE (3,C) | TON | 12433 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 24 | 20 | F | 2501.502 | 12" CS PIPE APRON | EACH | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 25 | 20 | F | 2501.502 | 15" CS PIPE APRON | EACH | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 26 | 20 | F | 2501.502 | 18" CS PIPE APRON | EACH | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 27 | 20 | F | 2501.502 | 12" RC PIPE APRON | EACH | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 28 | 20 | F | 2501.502 | 18" RC PIPE APRON | EACH | 2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 29 | 20 | F | 2501.503 | 12" CS PIPE CULVERT | LIN FT | 22 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 30 | 20 | F | 2501.503 | 15" CS PIPE CULVERT | LIN FT | 40 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 31 | 20 | F | 2501.503 | 18" CS PIPE CULVERT | LIN FT | 38 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 32 | 20 | F | 2501.503 | 12" RC PIPE CULVERT DESIGN 3006 CLASS V | LIN FT | 114 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 33 | 20 | F | 2501.503 | 18" RCP PIPE CULVERT DESIGN 3006 CLASS V | EACH | 40 | 40 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 34 | | F | 2503.602 | CONNECT TO EXISTING STORM SEWER | EACH | 9 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 35 | 5 | F | 2504.602 | ADJUST VALVE BOX | EACH | 35 | 2 | 0 | 0 | 1 | 2 | 1 | 0 | 0 | 1 |
| 36 | | F | 2504.602 | CONCRETE ENCASED VALVE BOX COLLAR | EACH | 16 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 37 | 20 | F | 2506.502 | CONSTRUCT DRAINAGE STRUCTURE DESIGN G | EACH | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 38 | | F | 2506.502 | CASTING ASSEMBLY | EACH | 10 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 39 | | F | 2506.602 | CONCRETE ENCASED CASTING COLLAR | EACH | 33 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 |
| 40 | 12 | F | 2506.602 | ADJUST FRAME AND RING CASTING | EACH | 85 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 41 | | F | 2506.602 | CONNECT INTO EXISTING MH OR CB | EACH | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 42 | 11 | F | 2506.602 | ADJUST FRAME AND RING CASTING (SPECIAL) | EACH | 50 | 1 | 0 | 1 | 1 | 1 | 8 | 0 | 0 | 1 |
| 43 | 2, 4, 14 | E | 2521.518 | 4" CONCRETE WALK | SQ FT | 10234 | 0 | 0 | 0 | 0 | 0 | 129 | 0 | 0 | 0 |
| 44 | 2, 4, 14 | E | 2521.518 | 6" CONCRETE WALK | SQ FT | 7150 | 0 | 0 | 0 | 0 | 0 | 1208 | 0 | 0 | 0 |
| 45 | 4 | E | 2531.503 | CONCRETE CURB AND GUTTER DESIGN B624 | LIN FT | 5793 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 173 |
| 46 | 2 | E | 2531.504 | 7" CONCRETE DRIVEWAY PAVEMENT | SQ YD | 224 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 30 |
| 47 | 4 | E | 2531.603 | CONCRETE CURB DESIGN V | LIN FT | 38 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 48 | 4, 14 | E | 2531.618 | TRUNCATED DOMES | SQ FT | 1799 | 0 | 0 | 0 | 0 | 0 | 171 | 0 | 0 | 0 |
| 49 | | F | 2540.602 | CONSTRUCT SURVEY MONUMENT | EACH | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 50 | | A | 2540.602 | RELOCATE MAIL BOX SUPPORT | EACH | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 51 | | | 2563.601 | TRAFFIC CONTROL | LUMP SUM | 1 | 0.024 | 0.024 | 0.024 | 0.024 | 0.024 | 0.024 | 0.024 | 0.024 | 0.024 |
| 52 | | G | 2564.502 | INSTALL SIGN PANEL TYPE C | EACH | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 53 | | | 2575.601 | EROSION CONTROL | LUMP SUM | 1 | 0.024 | 0.024 | 0.024 | 0.024 | 0.024 | 0.024 | 0.024 | 0.024 | 0.024 |
| 54 | 2 | C | 2575.602 | SITE RESTORATION | EACH | 105 | 2 | 0 | 0 | 0 | 0 | 12 | 0 | 0 | 0 |
| 55 | | G | 2582.503 | 4" SOLID LINE PAINT | LIN FT | 34892 | 0 | 11970 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 56 | | G | 2582.503 | 12" SOLID LINE PAINT | LIN FT | 48 | 0 | 48 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 57 | | G | 2582.503 | 24" SOLID LINE PAINT | LIN FT | 36 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 58 | | G | 2582.503 | 4" DOUBLE SOLID LINE PAINT | LIN FT | 22628 | 0 | 5965 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 59 | | G | 2582.518 | PAVEMENT MESSAGE PAINT | SQ FT | 186 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

REVISION DATE: 04/02/2020

I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.

SIGNATURE:

Jeffrey S. Goetzman
TYPE NAME

DATE: 03/13/2020

LIC. NO: 26422



CITY OF DULUTH
ENGINEERING DIVISION
411 W. 1ST ST. STE. 211
DULUTH, MN 55802

Duluth 2020 Street Preservation

CITY PROJECT NO.: 1692

STATE AID PROJECT NO.: N/A

DRAWN BY: CJL
STATEMENT OF ESTIMATED QUANTITIES-2 OF 5
SHEET NO. 6 OF 247

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4/2/2020

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STATEMENT OF ESTIMATED QUANTITIES

MILL & OVERLAYS

Table with columns: ITEM NO., NOTE ON SHEET 10, CHART LETTER, SPEC NO., ITEM, UNIT, TOTAL, and 12 street location columns (Oakley St - 43rd Ave E to 47th Ave E, Norwood St - 43rd Ave E to 47th Ave E, Crosley Ave - Glenwood to Avondale St, 47th Ave E - Glenwood to Norwood St, Vermilion Rd - Oxford Ave to End of Pavement, Stuart Court - Brookline to W St. Marie St, Melrose Ave - Arrowhead to Brookline, Basswood Ave - Orange St. to Quince St, Adirondack St - Hutchinson Rd to Allegheny St, Wellington - Pacific to Grand Forks). Rows 12-14 are circled in red.

REVISION DATE: 04/02/2020

I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.

DATE: 03/13/2020

SIGNATURE: [Signature]

Jeffrey S. Goetzman
TYPE NAME

LIC. NO: 26422



CITY OF DULUTH
ENGINEERING DIVISION
411 W. 1ST ST. STE. 211
DULUTH, MN 55802

Duluth 2020 Street Preservation

CITY PROJECT NO.: 1692

STATE AID PROJECT NO.: N/A

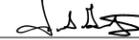
DRAWN BY: CJL
STATEMENT OF ESTIMATED QUANTITIES-3 OF 5
SHEET NO. 7 OF 247

STATEMENT OF ESTIMATED QUANTITIES

| ITEM NO. | NOTE ON SHEET 10 | CHART LETTER | SPEC NO. | ITEM | UNIT | TOTAL | MILL & OVERLAYS | | | | | |
|----------|------------------|--------------|----------|--|-----------|-------|---------------------------------|---|--------------|-------------------------------------|--|--------------------------------|
| | | | | | | | Exeter - Pacific to Grand Forks | W Michigan - 17 1/2 Ave W to 21 1/2 Ave W | Restormel St | Pacific Ave - Third St to Exeter St | S 63rd Ave W - Heard St. to Prescott St. | 78th Ave W - TH23 to RR Tracks |
| 1 | | | 2021.501 | MOBILIZATION | LUMP SUM | 1 | 0.024 | 0.024 | 0.024 | 0.024 | 0.024 | 0.024 |
| 2 | | A | 2104.502 | REMOVE CATCH BASIN | EACH | 10 | 0 | 2 | 0 | 0 | 0 | 0 |
| 3 | | A | 2104.502 | SALVAGE SIGN TYPE C | EACH | 9 | 0 | 8 | 0 | 1 | 0 | 0 |
| 4 | | A | 2104.503 | REMOVE PIPE CULVERTS | LIN FT | 190 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5 | 3 | A | 2104.503 | REMOVE CURB AND GUTTER | LIN FT | 5793 | 372 | 638 | 430 | 283 | 357 | 12 |
| 6 | 3 | A | 2104.518 | REMOVE CONCRETE WALK | SQ FT | 17384 | 1793 | 3877 | 2051 | 1755 | 1317 | 0 |
| 7 | 3 | A | 2104.518 | REMOVE CONCRETE DRIVEWAY PAVEMENT | SQ YD | 244 | 10 | 0 | 0 | 0 | 14 | 0 |
| 8 | 3 | A | 2104.518 | REMOVE BITUMINOUS DRIVEWAY PAVEMENT | SQ YD | 2100 | 16 | 0 | 0 | 0 | 0 | 0 |
| 9 | | C | 2105.507 | COMMON EXCAVATION | CU YD | 425 | 0 | 0 | 0 | 0 | 0 | 0 |
| 10 | 15 | C | 2105.603 | CONSTRUCT DRAINAGE DITCH | LIN FT | 376 | 0 | 0 | 0 | 0 | 0 | 0 |
| 11 | 13 | C, D | 2118.509 | AGGREGATE SURFACING CLASS 5 | CU YD | 370 | 0 | 0 | 0 | 0 | 2 | 0 |
| 12 | 10 | B | 2123.510 | MOTOR GRADER | HOUR | 111 | 0 | 0 | 0 | 0 | 0 | 0 |
| 13 | 10 | B | 2123.612 | COMPACTOR | HOUR | 111 | 0 | 0 | 0 | 0 | 0 | 0 |
| 14 | | B | 2130.523 | WATER | MG GALLON | 77 | 0 | 0 | 0 | 0 | 0 | 0 |
| 15 | 7 | B | 2131.506 | CALCIUM CHLORIDE SOLUTION | GALLON | 13615 | 0 | 0 | 0 | 0 | 0 | 0 |
| 16 | 1 | B | 2215.504 | FULL DEPTH RECLAMATION | SQ YD | 54445 | 0 | 0 | 0 | 0 | 0 | 0 |
| 17 | 19 | C | 2215.507 | HAUL FULL DEPTH RECLAMATION (LV) | CU YD | 30 | 0 | 0 | 0 | 0 | 0 | 0 |
| 18 | 16, 17 | D | 2231.509 | BITUMINOUS PATCHING MIXTURE | TON | 3221 | 72 | 202 | 95 | 77 | 114 | 70 |
| 19 | 1, 18 | B | 2232.504 | MILL BITUMINOUS SURFACE (1.5") | SQ YD | 55933 | 2992 | 8413 | 3939 | 3195 | 3720 | 2926 |
| 20 | 1, 18 | B | 2232.504 | MILL BITUMINOUS SURFACE (2.0") | SQ YD | 47630 | 0 | 0 | 0 | 0 | 0 | 0 |
| 21 | 1, 18 | B | 2232.504 | MILL BITUMINOUS SURFACE (3.0") | SQ YD | 3174 | 0 | 0 | 0 | 0 | 0 | 0 |
| 22 | 6, 8, 9, 17 | D | 2360.509 | TYPE SP 9.5 WEARING COURSE MIXTURE (3,B) | TON | 24207 | 360 | 1011 | 473 | 384 | 571 | 352 |
| 23 | 6, 9, 17 | D | 2360.509 | TYPE SP 9.5 WEARING COURSE MIXTURE (3,C) | TON | 12433 | 0 | 0 | 0 | 0 | 0 | 0 |
| 24 | 20 | F | 2501.502 | 12" CS PIPE APRON | EACH | 2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 25 | 20 | F | 2501.502 | 15" CS PIPE APRON | EACH | 2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 26 | 20 | F | 2501.502 | 18" CS PIPE APRON | EACH | 2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 27 | 20 | F | 2501.502 | 12" RC PIPE APRON | EACH | 1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 28 | 20 | F | 2501.502 | 18" RC PIPE APRON | EACH | 2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 29 | 20 | F | 2501.503 | 12" CS PIPE CULVERT | LIN FT | 22 | 0 | 0 | 0 | 0 | 0 | 0 |
| 30 | 20 | F | 2501.503 | 15" CS PIPE CULVERT | LIN FT | 40 | 0 | 0 | 0 | 0 | 0 | 0 |
| 31 | 20 | F | 2501.503 | 18" CS PIPE CULVERT | LIN FT | 38 | 0 | 0 | 0 | 0 | 0 | 0 |
| 32 | 20 | F | 2501.503 | 12" RC PIPE CULVERT DESIGN 3006 CLASS V | LIN FT | 114 | 0 | 0 | 0 | 0 | 0 | 0 |
| 33 | 20 | F | 2501.503 | 18" RCP PIPE CULVERT DESIGN 3006 CLASS V | EACH | 40 | 0 | 0 | 0 | 0 | 0 | 0 |
| 34 | | F | 2503.602 | CONNECT TO EXISTING STORM SEWER | EACH | 9 | 0 | 2 | 0 | 0 | 0 | 0 |
| 35 | 5 | F | 2504.602 | ADJUST VALVE BOX | EACH | 35 | 0 | 0 | 0 | 0 | 0 | 0 |
| 36 | | F | 2504.602 | CONCRETE ENCASED VALVE BOX COLLAR | EACH | 16 | 0 | 0 | 0 | 0 | 0 | 0 |
| 37 | 20 | F | 2506.502 | CONSTRUCT DRAINAGE STRUCTURE DESIGN G | EACH | 9 | 0 | 2 | 0 | 0 | 0 | 0 |
| 38 | | F | 2506.502 | CASTING ASSEMBLY | EACH | 10 | 0 | 2 | 0 | 0 | 0 | 0 |
| 39 | | F | 2506.602 | CONCRETE ENCASED CASTING COLLAR | EACH | 33 | 0 | 0 | 0 | 0 | 0 | 0 |
| 40 | 12 | F | 2506.602 | ADJUST FRAME AND RING CASTING | EACH | 85 | 6 | 7 | 7 | 4 | 7 | 0 |
| 41 | | F | 2506.602 | CONNECT INTO EXISTING MH OR CB | EACH | 1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 42 | 11 | F | 2506.602 | ADJUST FRAME AND RING CASTING (SPECIAL) | EACH | 50 | 0 | 0 | 0 | 0 | 0 | 0 |
| 43 | 2, 4, 14 | E | 2521.518 | 4" CONCRETE WALK | SQ FT | 10234 | 1159 | 2374 | 1368 | 1224 | 893 | 0 |
| 44 | 2, 4, 14 | E | 2521.518 | 6" CONCRETE WALK | SQ FT | 7150 | 634 | 1503 | 683 | 531 | 424 | 0 |
| 45 | 4 | E | 2531.503 | CONCRETE CURB AND GUTTER DESIGN B624 | LIN FT | 5793 | 372 | 638 | 430 | 283 | 357 | 12 |
| 46 | 2 | E | 2531.504 | 7" CONCRETE DRIVEWAY PAVEMENT | SQ YD | 224 | 26 | 0 | 0 | 0 | 14 | 0 |
| 47 | 4 | E | 2531.603 | CONCRETE CURB DESIGN V | LIN FT | 38 | 0 | 0 | 0 | 38 | 0 | 0 |
| 48 | 4, 14 | E | 2531.618 | TRUNCATED DOMES | SQ FT | 1799 | 208 | 314 | 236 | 188 | 128 | 0 |
| 49 | | F | 2540.602 | CONSTRUCT SURVEY MONUMENT | EACH | 4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 50 | | A | 2540.602 | RELOCATE MAIL BOX SUPPORT | EACH | 4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 51 | | | 2563.601 | TRAFFIC CONTROL | LUMP SUM | 1 | 0.024 | 0.024 | 0.024 | 0.024 | 0.024 | 0.024 |
| 52 | | G | 2564.502 | INSTALL SIGN PANEL TYPE C | EACH | 9 | 0 | 8 | 0 | 1 | 0 | 0 |
| 53 | | | 2575.601 | EROSION CONTROL | LUMP SUM | 1 | 0.024 | 0.024 | 0.024 | 0.024 | 0.024 | 0.024 |
| 54 | 2 | C | 2575.602 | SITE RESTORATION | EACH | 105 | 10 | 18 | 12 | 8 | 8 | 0 |
| 55 | | G | 2582.503 | 4" SOLID LINE PAINT | LIN FT | 34892 | 0 | 0 | 0 | 0 | 0 | 0 |
| 56 | | G | 2582.503 | 12" SOLID LINE PAINT | LIN FT | 48 | 0 | 0 | 0 | 0 | 0 | 0 |
| 57 | | G | 2582.503 | 24" SOLID LINE PAINT | LIN FT | 36 | 0 | 0 | 0 | 0 | 36 | 0 |
| 58 | | G | 2582.503 | 4" DOUBLE SOLID LINE PAINT | LIN FT | 22628 | 0 | 1641 | 0 | 0 | 0 | 0 |
| 59 | | G | 2582.518 | PAVEMENT MESSAGE PAINT | SQ FT | 186 | 0 | 0 | 0 | 0 | 186 | 0 |

REVISION DATE: 04/02/2020

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SIGNATURE: 

Jeffrey S. Goetzman
TYPE NAME

DATE: 03/13/2020

LIC. NO: 26422



CITY OF DULUTH
ENGINEERING DIVISION
411 W. 1ST ST. STE. 211
DULUTH, MN 55802

Duluth 2020 Street Preservation

CITY PROJECT NO.: 1692

STATE AID PROJECT NO.: N/A

DRAWN BY: CJL
STATEMENT OF ESTIMATED QUANTITIES-4 OF 5
SHEET NO. 8 OF 247

3:17 PM

4/2/2020

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4/2/2020

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STATEMENT OF ESTIMATED QUANTITIES

Table with columns: ITEM NO., NOTE ON SHEET 10, CHART LETTER, SPEC NO., ITEM, UNIT, TOTAL, and RECLAIMS (Norton Rd, W 5th Ave - 4th St to 6th St, Basswood Ave - Central Entrance to Ideal St, Mulberry - Basswood to Arlington, Stanford - Swan Lake Rd to Terrace St, Medina St. - Central Ave to Dead End West, Ideal - Joshua to Eklund). Rows 12-14 are circled in red.

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CITY OF DULUTH ENGINEERING DIVISION 411 W. 1ST ST. STE. 211 DULUTH, MN 55802

Duluth 2020 Street Preservation

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STATE AID PROJECT NO.: N/A

DRAWN BY: CJL STATEMENT OF ESTIMATED QUANTITIES-5 OF 5 SHEET NO. 9 OF 247

3:57 PM

4/2/2020

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PLAN LEGEND

| | |
|----------------------|----------------------------|
| RIGHT OF WAY LINE | ----- |
| DITCH CENTERLINE | ----- |
| FENCE LINE | -x-x-x-x-x-x-x-x-x- |
| RETAINING WALL | ~~~~~ |
| GRAVEL LINE | ----- |
| GUARD RAIL | —○—○—○—○— |
| RAILROAD TRACK | +++++ |
| TREE LINE | ~~~~~ |
| STREAM FLOW LINE | ----- |
| WETLAND LIMIT | WET WET WET WET |
| LAKESHORE | ----- |
| EX SANITARY SEWER | —>—>—>—>— |
| PR SANITARY SEWER | —>—>—>—>— |
| AB SANITARY SEWER | -----AB-SSWR-----AB-SSWR |
| EX FORCE MAIN | —FM—FM—FM—FM— |
| PR FORCE MAIN | —FM—FM—FM—FM— |
| AB FORCE MAIN | -----AB-SSWR-----AB-SSWR |
| EX STORM SEWER | —>—>—>—>— |
| PR STORM SEWER | —>—>—>—>— |
| AB STORM SEWER | -----AB-STRM-----AB-STRM |
| EX WATER MAIN | — — — — — — — |
| PR WATER MAIN | — — — — — — — |
| AB WATER MAIN | -----AB-WTR-----AB-WTR |
| EX GAS MAIN | —GAS—GAS—GAS— |
| PR GAS MAIN | —GAS—GAS—GAS— |
| AB GAS MAIN | -----AB-GAS-----AB-GAS |
| EX STEAM LINE | —STEAM—STEAM— |
| PR STEAM LINE | —STEAM—STEAM— |
| AB STEAM LINE | -----AB-STEAM-----AB-STEAM |
| UG TV CABLE | —TV-BUR—TV-BUR— |
| OH TV CABLE | —TEL-OH—TEL-OH— |
| AB TV CABLE | -----AB-CATV-----AB-CATV |
| UG ELECTRIC LINE | —E-BUR—E-BUR— |
| OH ELECTRIC LINE | —E-OH—E-OH—E-OH— |
| AB ELECTRIC | -----AB-ELEC-----AB-ELEC |
| UG FIBER OPTIC CABLE | —FO-BUR—FO-BUR— |
| OH FIBER OPTIC CABLE | —F/O-OH—F/O-OH— |
| AB FIBER OPTIC CABLE | -----AB-F/O-----AB-F/O |
| UG TELEPHONE | —T-BUR—T-BUR— |
| OH TELEPHONE | —TEL-OH—TEL-OH— |
| AB TELEPHONE | -----AB-TEL-----AB-TEL |

ABBREVIATIONS USED IN THIS PLAN

| | |
|---------------------------|---------------|
| AB = ABANDONED | OH = OVERHEAD |
| EX = EXISTING OR IN-PLACE | PL = PLACE |
| PR = PROPOSED | REM = REMOVE |
| UG = UNDERGROUND | |

SURVEYS AND RIGHT OF WAY

THE CONTRACTOR SHALL PRESERVE ALL LAND AND PROPERTY CORNERS, VERTICAL & HORIZONTAL CONTROLS, SURVEY AND RIGHT OF WAY MONUMENTS. THE RIGHT OF WAY SHOWN IN THIS PLAN GIVES A GRAPHICAL LOCATION WITH RESPECT TO THE PLAN ALIGNMENTS. FOR EXACT RIGHT OF WAY LIMITS, SEE MAP ON FILE WITH THE CITY OF DULUTH.

CONSTRUCTION NOTES:

- IN-PLACE BITUMINOUS PAVEMENT AND AGGREGATE BASE THICKNESSES SHOWN IN THIS PLAN ARE APPROXIMATE. VALUES INDICATED IN THE TYPICAL SECTIONS MAY NOT REFLECT ACTUAL FIELD CONDITIONS. DISCREPANCIES FOUND IN THE FIELD SHALL BE DISCUSSED WITH THE ENGINEER PRIOR TO COMMENCEMENT OF MILLING AND RECLAIMING OPERATIONS.
- REINFORCING BARS, COMMON EXCAVATION, AGGREGATE BASE, CLASS 5 AND TURF ESTABLISHMENT ARE INCIDENTAL TO THE INSTALLATION OF WALKS. DRIVEWAY APRONS, AND CURB & GUTTER. ALL WALKS WILL INCLUDE A 6" AGGREGATE CLASS 5 BASE. TURF ESTABLISHMENT INCLUDES: SOIL PREPARATION, 4" MIN. COMMON TOPSOIL BORROW, SEED MIXTURE 25-131 (120 LBS/ACRE), AND WATER. A SEPARATE BID ITEM HAS BEEN CREATED FOR THE GRADING OF PEDESTRIAN RAMP AREAS OUTSIDE OF THE CONCRETE WALKS.
- SAWING PAVEMENT (BITUMINOUS OR CONCRETE) FULL DEPTH IS INCIDENTAL TO REMOVALS.
- TEMPORARY PEDESTRIAN ACCESS ROUTES MUST BE MAINTAINED ALL TIMES WHILE WORKING ON ADA IMPROVEMENTS.
- ALL VALVE BOX ADJUSTMENTS WILL BE PAID FOR UNDER ADJUST VALVE BOX REGARDLESS OF TYPE OF UTILITY (WATER, GAS, OR SANITARY).
- CALCULATIONS FOR BITUMINOUS PAVING ARE COMPUTED USING 120-LBS/SY/IN,
- CALCIUM CHLORIDE QUANTITIES ARE COMPUTED USING AN APPLICATION RATE OF 0.25 GAL/SY. AREAS COMPUTATION IS STREET WIDTH BY STREET LENGTH.
- DRIVEWAY APRONS ON OVERLAYS SHALL BE TIED BACK INTO EXISTING UTILIZING A TAPER MILLING PROCESS TO ALLOW FOR A SMOOTH AND FLUSH TRANSITION SEE DETAIL 5 ON SHEET 12. TAPER MILLING DRIVEWAY APRONS AND SAWING OF JOINTS SHALL BE INCIDENTAL.
- ALL SIDE STREETS AND BEGINNING AND ENDING TIE-INS TO EXISTING ON RECLAIMS AND OVERLAYS SHALL BE TAPER MILLED AT A DISTANCE REQUIRED TO MAKE A SMOOTH TRANSITION AT A DESIGN SPEED OF 30 MPH SEE DETAILS 1 AND 2 ON SHEET 12. ALL ROADWAY TAPER MILLS AND SAWING OF JOINTS SHALL BE INCIDENTAL.
- MOTOR GRADER AND COMPACTOR HOURS ARE TO BE PAID TO GRADE AND COMPACT EXISTING GRAVEL ROADS PRIOR TO PAVING AND TO GRADE OUT PARKING AREAS AS CALLED OUT ON THE PLANS. GRADING AND COMPACTION FOR 2 FT SHOULDERS IS INCIDENTAL TO FULL DEPTH RECLAMATION.
- ADJUST FRAME AND RING CASTINGS (SPECIAL) SHALL INCLUDE A CAST IRON ADJUSTMENT RING (NENAH R-1979 OR ESS BROTHERS) PLACED ON TOP OF THE EXISTING CASTING TO RAISE THE GRADE OF THE COVER TO 3/8" BELOW THE FINISHED PAVEMENT ELEVATION.
- ADJUST FRAME AND RING CASTING INCLUDES ADJUSTING THE ELEVATION OF THE EXISTING STRUCTURE AS DIRECTED BY THE ENGINEER AND IN ACCORDANCE WITH CITY REQUIREMENTS.
- GRAVEL DRIVEWAYS AND GRAVEL ROADWAYS SHALL RECEIVE CLASS 5 TAPERED APRON TO TIE-IN EXISTING DRIVEWAYS AND ROADWAYS TO THE EDGE OF BITUMINOUS PAVEMENT. QUANTITY INCLUDED WITH AGGREGATE SURFACING CLASS 5 BID ITEM.
- ALL PED RAMPS SHALL BE DESIGNED BY THE CONTRACTOR AND CONSTRUCTED TO MEET ADA REGULATIONS. PED RAMP LAYOUTS SHOWN ON PLAN SHEETS ARE SCHEMATIC REPRESENTATIONS OF THE PROPOSED WORK. LAYOUTS SHALL BE MODIFIED WHERE NECESSARY TO MEET ADA GRADES IN THE FIELD.
- CONSTRUCTION OF DRAINAGE DITCHES SHALL INCLUDE COMMON EXCAVATION, GRADING, SHAPING, REMOVAL OF VEGETATION AND TOPSOIL, SEEDING (SEED MIXTURE 33-361 AT 35 LBS/ACRE) AND EROSION CONTROL BLANKETS CATEGORY 3N.
- A BITUMINOUS PATCHING QUANTITY IS PROVIDED ON MILL & OVERLAYS AND OVERLAYS TO ALLOW FOR PATCHING OF POTHOLES AND MAJOR DEPRESSIONS. PATCHING AREAS WILL BE DETERMINED BY THE ENGINEER IN THE FIELD. PATCHING MIXTURE SHALL BE SPWEA340B (3,B).
- ALL SURFACES RECEIVING OR ABUTTING NEW BITUMINOUS PAVEMENT MUST RECEIVE TACK COAT IN ACCORDANCE WITH MnDOT SPECIFICATIONS AND APPLICATION RATES. TACK COAT IS INCLUSIVE.
- MILLING DEPTHS SPECIFIED ARE APPROXIMATE. ENGINEER RESERVES RIGHT TO MAKE MINOR ADJUSTMENTS TO MILLING DEPTHS WITHOUT RECLASSIFYING PAY ITEM FOR CHANGES IN MILLING DEPTH.
- HAULING FULL DEPTH RECLAMATION IS FOR WHEN EXCESS FULL DEPTH RECLAMATION CANNOT BE REUSED ON THE SAME STREET BY GRADING AND NEEDS TO BE MOVED BY TRUCK OFFSITE OR TO ANOTHER LOCATION.
- BEDDING, BACKFILL, GRADING, AND TURF ESTABLISHMENT IS INCLUSIVE TO STORM SEWER WORK. STORM SEWER BEDDING AND BACKFILL TO FOLLOW CITY DETAIL EX-3 FOR CONCRETE AND CORRUGATED STEEL.

GENERAL REQUIREMENTS

| TABULATION CHART INDEX | |
|------------------------|------------------------|
| CHART | DESCRIPTION |
| A | REMOVALS & SAWING |
| B | MILLING OPERATIONS |
| C | BITUMINOUS PAVEMENT |
| D | PROPOSED CONCRETE WORK |
| E | ENCASEMENT AND REPAIR |
| F | PAVEMENT MARKINGS |

| MnDOT STANDARD PLATES | |
|---|--|
| THE FOLLOWING STANDARD PLATES SHALL APPLY ON THIS PROJECT | |
| PLATE NO. | DESCRIPTION |
| 4006L | MANHOLE OR CATCHBASIN - PRECAST DESIGNS G & H |
| 7038A | DETECTABLE WARNING SURFACE |
| 7100H | CONCRETE CURB AND GUTTER - DESIGN B AND DESIGN V |
| 7111J | INSTALLATION OF CATCH BASIN CASTINGS |
| 8000J | CHANNELIZERS |

| CITY OF DULUTH STANDARD DETAILS | |
|--|--|
| THE FOLLOWING STANDARD DETAILS SHALL APPLY ON THIS PROJECT | |
| DETAIL NO. | DESCRIPTION |
| EX-1 | PVC AND CORRUGATED POLYETHYLENE SEWER PIPE BEDDING |
| EX-3 | CONCRETE STORM SEWER BEDDING |
| STRM-2B | CATCH BASIN/CURB BOX CASTINGS |
| STRM-3B | CATCH BASIN CASTINGS |
| STRM-4 | FABRIC WRAPPED CATCH BASIN |
| STRM-5 | STORM MANHOLE NON-PAVED AREAS |
| STRM-5A | CONCRETE ENCASED CASTING COLLAR FOR STORM MH |
| STRM-6 | GUTTER SWALE |
| STRM-7 | GUTTER STAMP |
| T-2 | SIGN & BREAKAWAY MOUNT INSTALLATION |
| W-19 | CONCRETE ENCASED VALVE BOX COLLAR |

PLAN SYMBOLS

| | |
|---------------------------|--|
| EX SANITARY MANHOLE | |
| EX SANITARY CLEANOUT | |
| EX STORM MANHOLE | |
| EX STORM CATCHBASIN | |
| EX WATER MANHOLE | |
| EX WATER VALVE | |
| EX WATER HYDRANT | |
| EX. WATER SHUTOFF | |
| EX. WATER & GAS MH | |
| EX. GAS MANHOLE | |
| EX. GAS VALVE | |
| EX. GAS SHUTOFF | |
| EX. STEAM MANHOLE | |
| EX. TELEPHONE MANHOLE | |
| EX. ELECTRIC MANHOLE | |
| EX. UTILITY POLE | |
| EX. LIGHT POLE | |
| EX. ELECTRIC VAULT | |
| EX. GUY ANCHOR | |
| EX. ELECTRIC TRANSFORMER | |
| EX. STREET LIGHT | |
| EX. SIGNAL W/STREET LIGHT | |
| EX. HAND HOLE | |
| EX. TELEPHONE PEDESTAL | |
| EX. WELL | |
| EX. SIGN | |
| EX. DECIDUOUS TREE | |
| EX. CONIFEROUS TREE | |
| EX. PARKING METER | |
| BENCHMARK | |
| CONTROL POINT | |
| FOUND CI MONUMENT | |
| SOIL BORING | |

REVISION DATE: 04/02/2020

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DATE: 03/13/2020

SIGNATURE: Jeffrey S. Goetzman TYPE NAME

LIC. NO: 26422



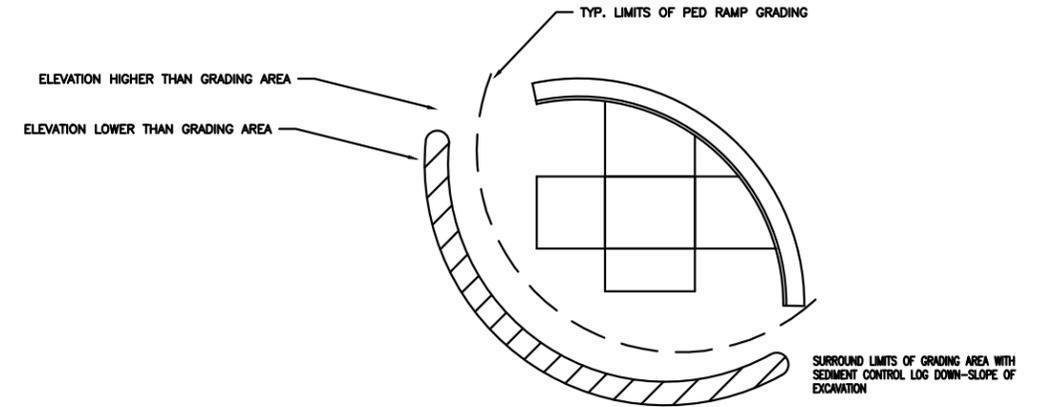
CITY OF DULUTH ENGINEERING DIVISION 411 W. 1ST ST. STE. 211 DULUTH, MN 55802

| | |
|---------------------------------|------|
| Duluth 2020 Street Preservation | |
| CITY PROJECT NO.: | 1692 |
| STATE AID PROJECT NO.: | N/A |

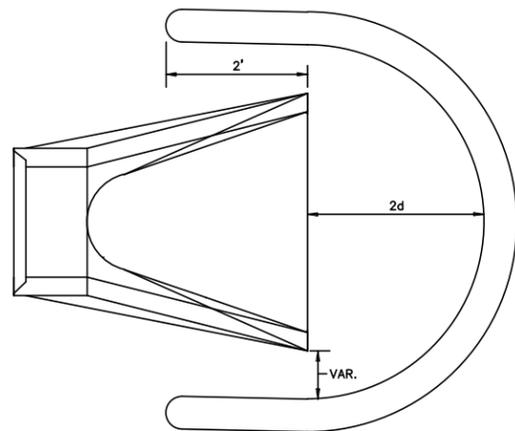
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|---------------------|-----|
| DRAWN BY: | CJL |
| LEGEND-NOTES-INDEX | |
| SHEET NO. 10 OF 247 | |

EROSION CONTROL NOTES (ALL WORK INCLUSIVE TO EROSION CONTROL LUMP SUM BID ITEM):

1. PROTECT STORM INLETS IMMEDIATELY DOWN-SLOPE OF ANY EXCAVATION WORK UTILIZING DETAIL 5 ON THIS SHEET UNTIL TURF ESTABLISHMENT IS COMPLETED AND ESTABLISHED TO THE POINT ACCEPTABLE TO THE ENGINEER.
2. PROTECT CULVERT INLETS IMMEDIATELY DOWN-SLOPE OF ANY EXCAVATION WORK UTILIZING DETAIL 2 ON THIS SHEET UNTIL TURF ESTABLISHMENT IS COMPLETED AND ESTABLISHED TO THE POINT ACCEPTABLE TO THE ENGINEER.
3. PROTECT PERIMETER OF EXCAVATIONS UTILIZING DETAIL 1 ON THIS SHEET UNTIL TURF ESTABLISHMENT IS COMPLETED AND ESTABLISHED TO THE POINT ACCEPTABLE TO THE ENGINEER.
4. ENGINEER RESERVES THE RIGHT TO DIRECT CONTRACTOR TO MODIFY AND/OR ADD EROSION CONTROL MEASURES IN THE FIELD AS NEEDED TO PREVENT SILT FROM LEAVING THE PROJECT SITE.

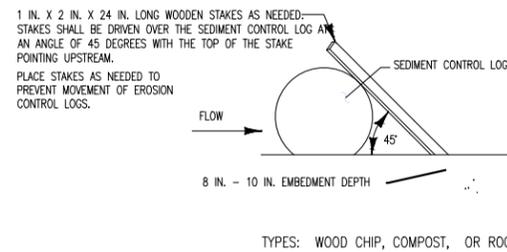


1 TYPICAL PED RAMP GRADING EROSION CONTROL
11 NO SCALE



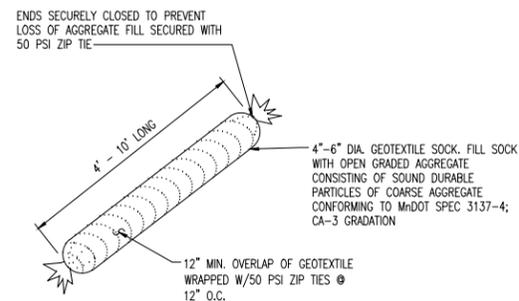
SEDIMENT CONTROL LOG WEIR
(COMPOST, WOOD CHIP, OR ROCK)
d = CULVERT SIZE: 12"-36"

2 CULVERT END PROTECTION
11 NO SCALE



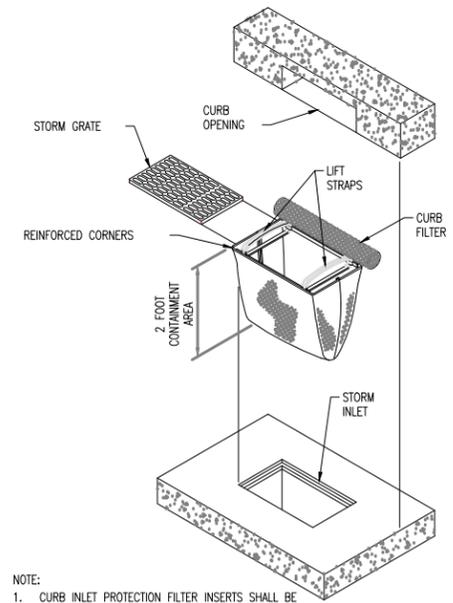
1 IN. X 2 IN. X 24 IN. LONG WOODEN STAKES AS NEEDED:
STAKES SHALL BE DRIVEN OVER THE SEDIMENT CONTROL LOG AT AN ANGLE OF 45 DEGREES WITH THE TOP OF THE STAKE POINTING UPSTREAM.
PLACE STAKES AS NEEDED TO PREVENT MOVEMENT OF EROSION CONTROL LOGS.
TYPES: WOOD CHIP, COMPOST, OR ROCK

3 SEDIMENT CONTROL LOG STAKING
11 NO SCALE



ENDS SECURELY CLOSED TO PREVENT LOSS OF AGGREGATE FILL SECURED WITH 50 PSI ZIP TIE.
4" - 10" LONG
4"-6" DIA. GEOTEXTILE SOCK. FILL SOCK WITH OPEN GRADED AGGREGATE CONSISTING OF SOUND DURABLE PARTICLES OF COARSE AGGREGATE CONFORMING TO MHDOT SPEC 3137-4; CA-3 GRADATION
12" MIN. OVERLAP OF GEOTEXTILE WRAPPED W/50 PSI ZIP TIES @ 12" O.C.

4 ROCK FILTER LOG TYPE COMPOST DETAIL
11 NO SCALE



NOTE:
1. CURB INLET PROTECTION FILTER INSERTS SHALL BE DANDY CURB SACK, DANDY PRODUCTS INC. OR APPROVED EQUAL.

5 STORM INLET PROTECTION DETAIL
11 NO SCALE

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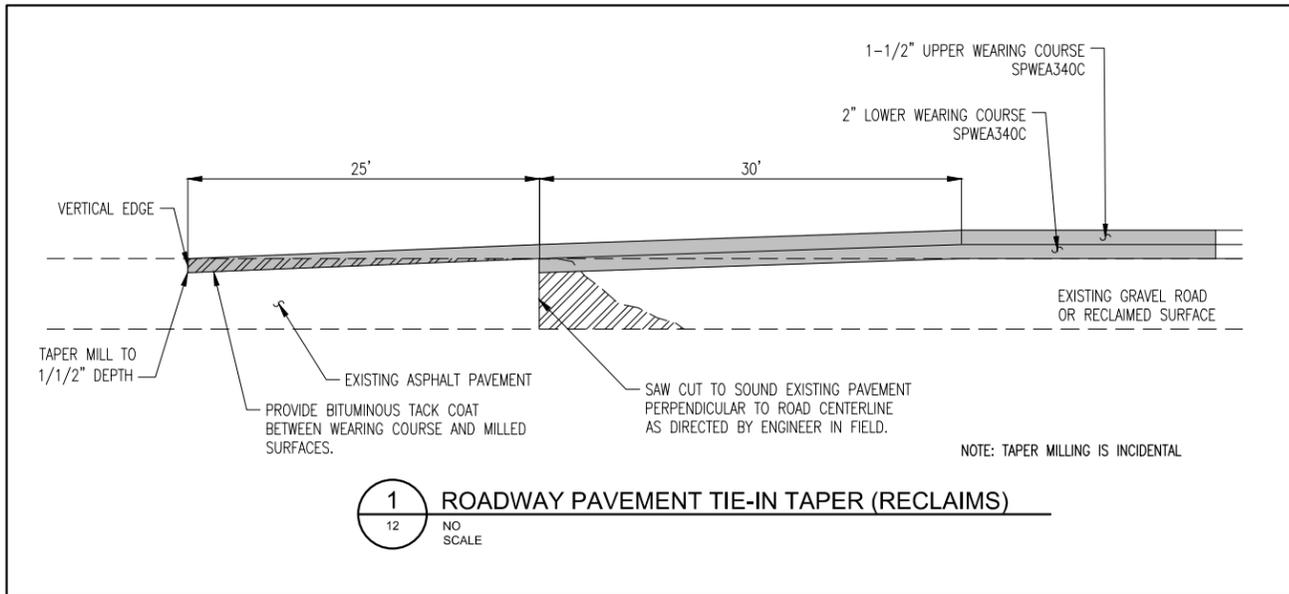
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STATE AID PROJECT NO.: N/A

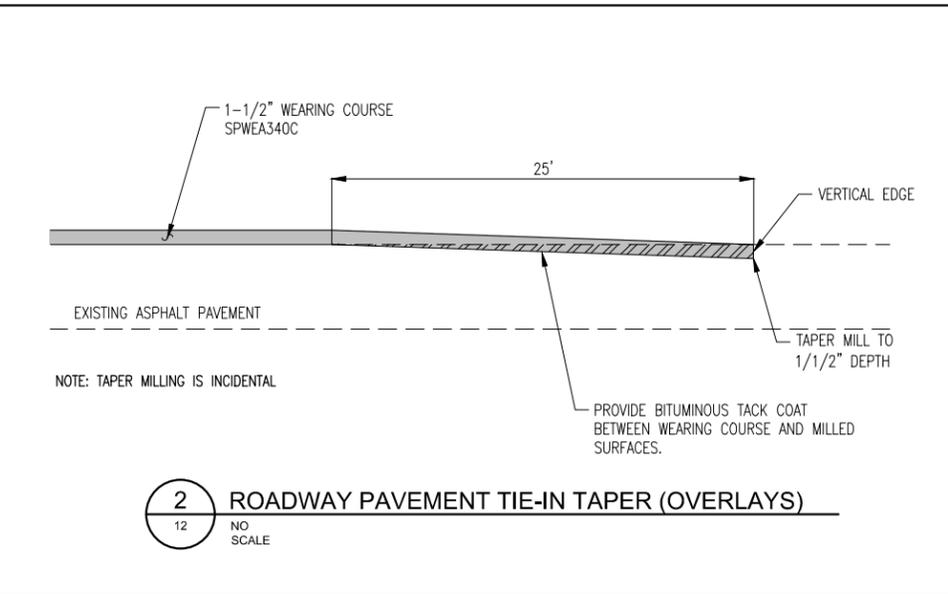
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EROSION CONTROL

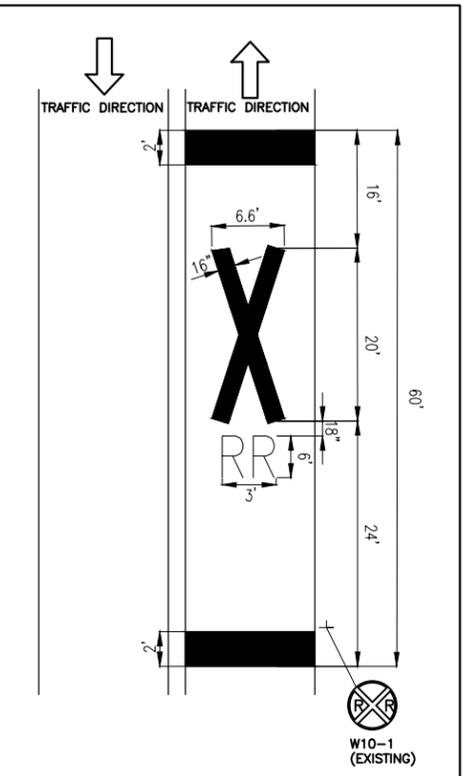
SHEET NO. 11 OF 247



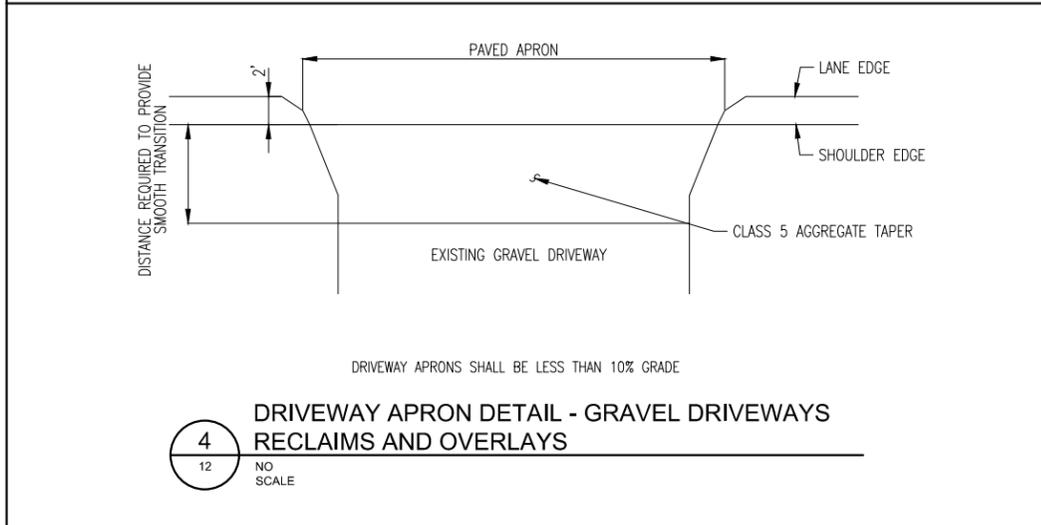
1 ROADWAY PAVEMENT TIE-IN TAPER (RECLAIMS)
12 NO SCALE



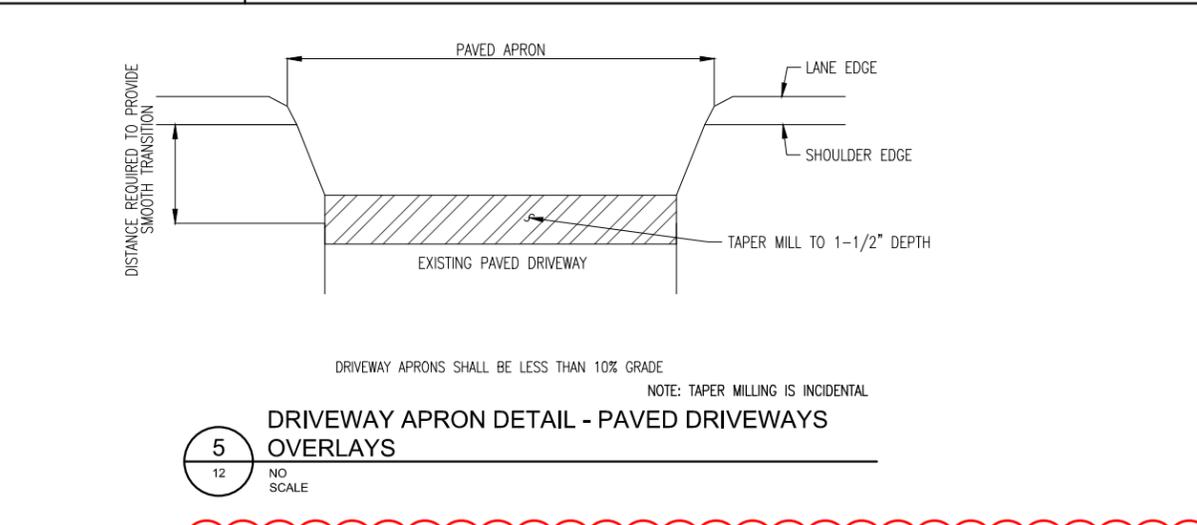
2 ROADWAY PAVEMENT TIE-IN TAPER (OVERLAYS)
12 NO SCALE



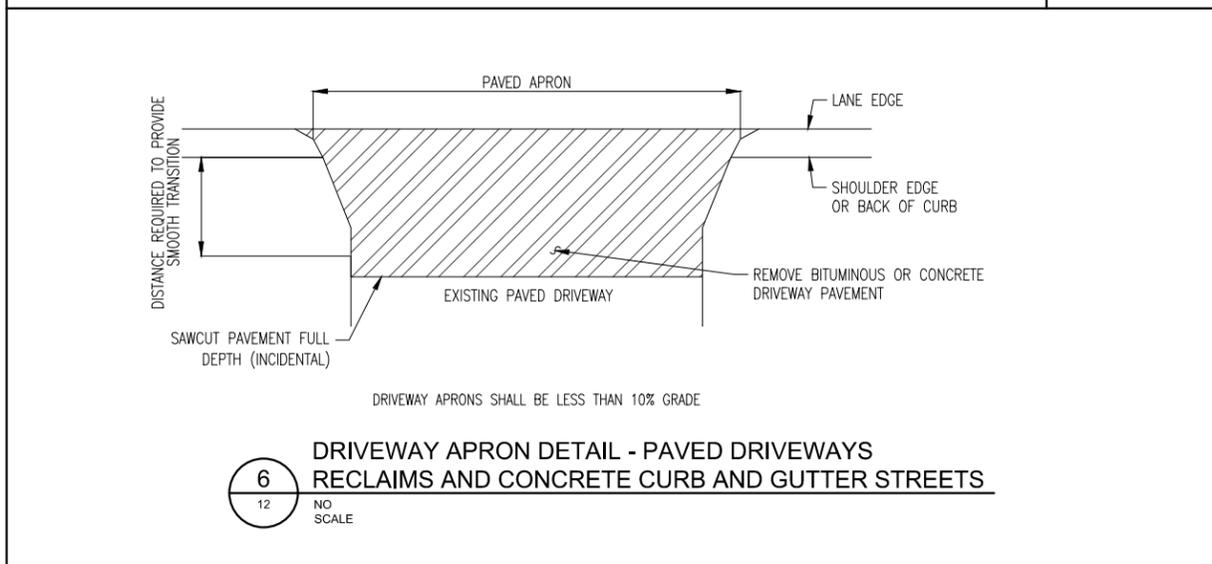
3 RAILROAD XING PAVEMENT MESSAGE
12 NO SCALE



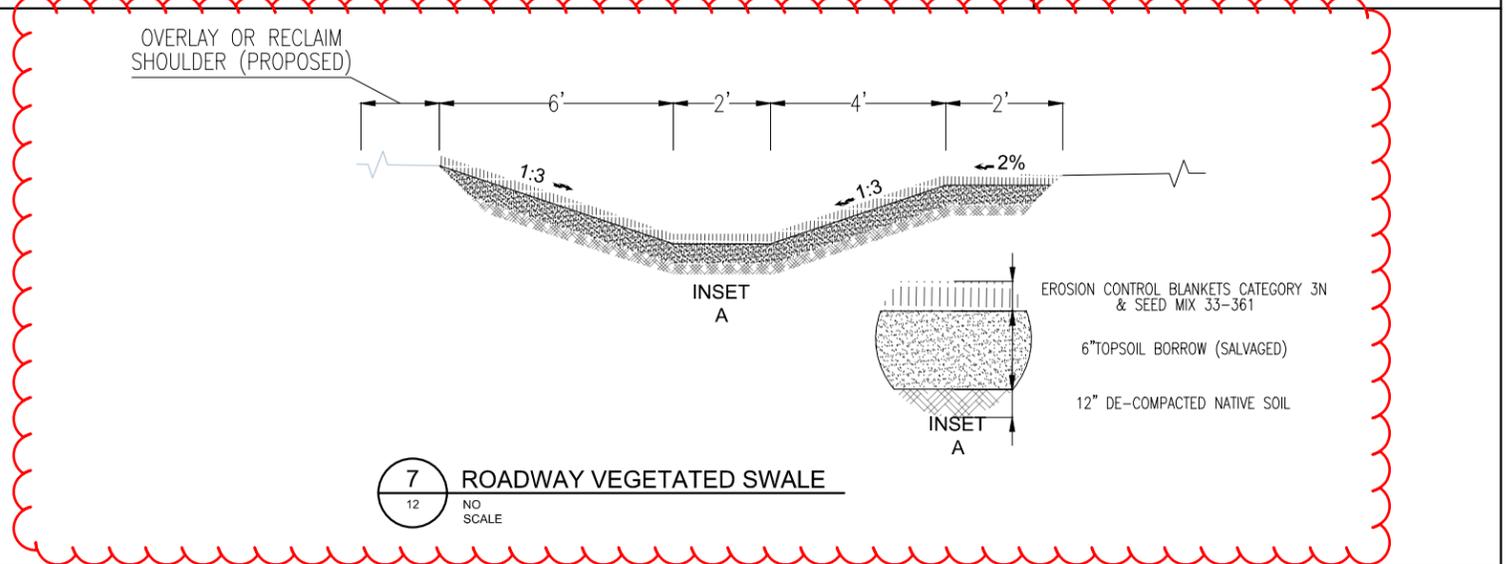
4 DRIVEWAY APRON DETAIL - GRAVEL DRIVEWAYS RECLAIMS AND OVERLAYS
12 NO SCALE



5 DRIVEWAY APRON DETAIL - PAVED DRIVEWAYS OVERLAYS
12 NO SCALE



6 DRIVEWAY APRON DETAIL - PAVED DRIVEWAYS RECLAIMS AND CONCRETE CURB AND GUTTER STREETS
12 NO SCALE



7 ROADWAY VEGETATED SWALE
12 NO SCALE

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Duluth 2020 Street Preservation
CITY PROJECT NO.: 1692
STATE AID PROJECT NO.: N/A

DRAWN BY: CJL
PAVING, DITCHING AND MARKINGS DETAILS
SHEET NO. 12 OF 247