HOUGHTON ROAD
AT BREKKE ROAD AND DAWN ROAD
INTERSECTION IMPROVEMENTS

PIMA COUNTY PROJECT NO. CTR.4SHRAI

GENERAL PROJECT DESCRIPTION

THE PROJECT CONSISTS OF ADDING NORTHBOUND LEFT TURN LANES ON HOUGHTON ROAD AT THE INTERSECTIONS OF BREKKE ROAD AND AT DAWN ROAD. INTERSECTION IMPROVEMENTS INCLUDE, GRADING, PAVED TRAVEL LANES AND PAVED SHOULDERS, HEADER CURB, STRIPING AND SIGNING AND EROSION CONTROL.

PIMA COUNTY BOARD OF SUPERVISORS
RICHARD ELIAS, CHAIRMAN, DISTRICT 5
ALLY MILLER, DISTRICT 1
SHARON BRONSON, DISTRICT 3
RAMON VALADEZ, DISTRICT 2
STEVE CHRISTY, DISTRICT 4

PROJECT IN SUPERVISOR DISTRICT 4

SHEET INDEX

<table>
<thead>
<tr>
<th>SHT NO.</th>
<th>SHT NAME</th>
<th>DESCRIPTION</th>
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</thead>
<tbody>
<tr>
<td>1</td>
<td>C1</td>
<td>TITLE SHEET</td>
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<tr>
<td>2-3</td>
<td>G1-G2</td>
<td>GENERAL NOTES &amp; STRUCTURAL SECTIONS</td>
</tr>
<tr>
<td>4</td>
<td>TS1</td>
<td>TYPICAL ROADWAY SECTIONS</td>
</tr>
<tr>
<td>5-8</td>
<td>R1-R4</td>
<td>ROADWAY PLANS</td>
</tr>
<tr>
<td>9</td>
<td>DTL1</td>
<td>DETAIL SHEETS</td>
</tr>
<tr>
<td>10-12</td>
<td>PM-PM3</td>
<td>PAVEMENT MARKING GENERAL NOTES &amp; PLANS</td>
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<tr>
<td>13-17</td>
<td>S1-S5</td>
<td>SIGNING PLANS GENERAL NOTES &amp; PLANS</td>
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<tr>
<td>18-19</td>
<td>U1-U2</td>
<td>UTILITY PLANS</td>
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<tr>
<td>20-26</td>
<td>EC01-EC07</td>
<td>EROSION AND POLLUTION CONTROL PLANS</td>
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PROJECT LOCATION

LOCATION MAP
Sections 11,14 & 23 of T-16-S, R-15-E
G & S R M
Pima County, Arizona

PIMA COUNTY BOARD OF SUPERVISORS
RICHARD ELIAS, CHAIRMAN, DISTRICT 5
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PROJECT IN SUPERVISOR DISTRICT 4

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</table>

PROJECT LOCATION

LOCATION MAP
Sections 11,14 & 23 of T-16-S, R-15-E
G & S R M
Pima County, Arizona
GENERAL CONSTRUCTION NOTES:

1. CONSTRUCTION SHALL BE IN CONFORMANCE WITH THE STANDARD SPECIFICATIONS FOR PUBLIC IMPROVEMENTS, VOL. 1, 2015 EDITION AND ANY CURRENT UPDATES. ALL CONSTRUCTION SHALL COMPLY WITH THE CURRENT PIMA COUNTY ASSOCIATION OF GOVERNMENTS (PCAG) STANDARD SPECIFICATIONS AND DETAILS FOR PUBLIC IMPROVEMENTS.

2. UTILITY LOCATIONS SHOWN ON PLANS WERE COPIED BASED ON THE BEST INFORMATION AVAILABLE TO THE DEPARTMENT. UTILITY INFORMATION IS NOT INTENDED TO BE EXACT OR COMPLETE. TO DETERMINE EXACT LOCATION, THE CONTRACTOR SHALL CONTACT THE APPROPRIATE ORGANIZATION. THE CONTRACTOR SHALL CONTACT "BLUE STAKE" AT 1-800-783-2222 THE (2) FULL WORKING DAYS PRIOR TO THE BEGINNING OF CONSTRUCTION (EXCAVATIONS AND SCAFFOLDS ARE NOT CONSIDERED WORKING DAYS).

3. HEAT-OR-FICE ENHANCEMENTS SHALL BE REMOVED ONLY BY ORDER OF PIMA COUNTY, UNLESS OTHERWISE NOTED.


5. THE BASES OF ELEVATION FOR THIS PROJECT WAS ESTABLISHED USING THE ARIZONA COORDINATE SYSTEM, A.D. 1983 (1993 CENTRAL ZONE 2) COORDINATES. OBSERVATIONS FROM PIMA COUNTY GPS CONTROL POINT "SPOOL", 26 "S" SPACE GROM "STANDARD" 0828.00 was used at the entrance to the "Pima County Furnace". The heights used for this project are based on the geoidal surface of the Earth as defined by the geoid. The geoid is a mathematical surface that represents the shape of the Earth taking into account the variations in the Earth's gravitational field caused by the rotation of the Earth and the uneven distribution of mass within the Earth.

6. THE CONTRACTOR SHALL NOT REMOVE OR MODIFY ANY EXISTING UTILITY EASEMENTS OR HOOK-UPS, EXCEPT AS PERMITTED OR DIRECTED.

7. THE CONTRACTORS ARE DIRECTED TO CONFORM TO THE SECOND ELEVATION PLANS. THE COSTS OF ANY ADJUSTMENTS MADE TO THE SECOND ELEVATION PLANS ARE THE RESPONSIBILITY OF THE CONTRACTOR.

8. THE CONTRACTOR SHALL NOTIFY THE COUNTY OF ANY PROBLEMS OR QUESTIONS RELATED TO THE CONTRACT OR THE PLANS.

9. THE CONTRACTOR SHALL PAY FOR ALL SUPERVISION AND MATERIALS PROVIDED TO THE COUNTY AND SHALL BE RESPONSIBLE FOR ALL COSTS INCURRED.

10. THE CONTRACTOR SHALL PAY FOR ALL UTILITY EASEMENTS OR HOOK-UPS, EXCEPT AS PERMITTED OR DIRECTED.

11. THE CONTRACTOR SHALL PAY FOR ALL UTILITY EASEMENTS OR HOOK-UPS, EXCEPT AS PERMITTED OR DIRECTED.

12. THE CONTRACTOR SHALL PAY FOR ALL UTILITY EASEMENTS OR HOOK-UPS, EXCEPT AS PERMITTED OR DIRECTED.

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15. THE CONTRACTOR SHALL PAY FOR ALL UTILITY EASEMENTS OR HOOK-UPS, EXCEPT AS PERMITTED OR DIRECTED.

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19. THE CONTRACTOR SHALL PAY FOR ALL UTILITY EASEMENTS OR HOOK-UPS, EXCEPT AS PERMITTED OR DIRECTED.

20. THE CONTRACTOR SHALL PAY FOR ALL UTILITY EASEMENTS OR HOOK-UPS, EXCEPT AS PERMITTED OR DIRECTED.

MEASUREMENT NOTES:


The document contains details about the structural sections and safety edge details of the Houghton Road Intersection Improvements project. It includes sections such as Section NO. 1, Section NO. 2, Section NO. 3, and Section NO. 4 with specifications for various materials like asphalt, concrete, and chip seal. The project also includes design data such as ADT, design speed, and road classification. The document is part of the Pima County Department of Transportation's safety management records.
INTERSECTION IMPROVEMENTS
AT BREKKE RD AND DAWN RD
HOUGHTON ROAD
ROADWAY PLANS
CONCRETE HEADER DETAIL

Structural Section
8" x 12" Concrete Header
(Class B Concrete)

6 1/4" AB

Edge of Paved Shoulder

Edge of Unpaved Shoulder

4'

6:1 or Flatter

5'-0" Sawcut AC (Typ.)

5'-0"

CATTLE GUARD DETAIL

Section Taken Along Houghton Road

Remove & Salvage Cattle Guard

Existing AC

1'-0" (Typ)

3'-0"

Structural Section No. 1

7'-1/2"

AB
# PAVEMENT MARKING QUANTITIES-SHEET PM1 TO PM4

<table>
<thead>
<tr>
<th>BID ITEM</th>
<th>ITEM</th>
<th>UNIT</th>
<th>QUANTITY</th>
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</thead>
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<tr>
<td>7040035</td>
<td>Pavement Marking (White Enamel Thermoplastic) (90'000) (LH)</td>
<td>LF</td>
<td>14220</td>
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<tr>
<td>7040036</td>
<td>Pavement Marking (White Enamel Thermoplastic) (147'000) (LH)</td>
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<tr>
<td>7040100</td>
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<td>88</td>
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<tr>
<td>7060030</td>
<td>Painted Pavement Mark (Type I)</td>
<td>Each</td>
<td>36</td>
</tr>
<tr>
<td>7060050</td>
<td>Painted Pavement Mark (Type II)</td>
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<td>7060051</td>
<td>Painted Pavement Mark (Type III)</td>
<td>Each</td>
<td>20524</td>
</tr>
<tr>
<td>7060100</td>
<td>Painted Pavement Mark (Legend)</td>
<td>Each</td>
<td>8</td>
</tr>
</tbody>
</table>

**PAVEMENT MARKING GENERAL NOTES**

The following notes shall appear on all pavement marking plans and are included here for the user's reference:

1. All equipment/materials and construction shall meet or exceed the requirements contained in the current Pima County standards. The standard specifications and the special provisions and the approved plans shall be used for all paving and construction work. The plans shall be considered as an annex to the PC/OT pavement marking design manual and applicable amendments.

2. The DR contractor shall contact the Pima County pavement marking supervisor at least 3 working days in advance of any pavement marking work to schedule inspection and approval of pavement markings during normal business hours Monday through Friday, state holidays excluded.

3. Upon approval, the pavement marking layout shall be shown in the Pima County pavement marking supervisor will issue written authorization to the contractor to proceed with installing all pavement markings and associated reflective painted pavement markings.

4. The pavement marking plans may be modified as directed and approved by the traffic engineer or their designee.

5. The design speed for the road is 55 mph. The design vehicle is W-82. The posted speed limit is 50 mph.

6. All lane dimensions are measured from the center line of lane, center of double lane, or edge of pavement unless otherwise noted.

7. The pavement marking standards and specifications shall be used for all dimensions, applicable marking details, and specified Pima County standards when installing pavement marking, striping, and markings.

8. Painted layout striping shall be 15 mL (0.02") thick, water-based paint placed on the final pavement surface with 8 pounds of paint to gallon of water. All traffic lanes shall be painted with coarser texture buts or standard for the location. Painted layout striping shall be installed within five (5) working days of the final pavement surface being completed.

9. Painted symbols and legends shall be applied at the same time as the painted striping with the exception of bike lane symbols and signs (such as stop, yield, and others).

10. The final longitudinal striping shall be at least 12 mL (0.02") thick, filled with thermoplastic, reflectorized striping placed over the painted layout striping with a single coat of 18 to 30 pounds per 100 square feet of asphalt. The final longitudinal striping shall be placed within 21 to 30 calendar days of the final pavement surface being completed. All previous painted longitudinal markings shall be applied during the final longitudinal striping.

11. All cross-painting striping, including symbols and legends, shall be 90 mL (0.06") thick, water-based paint that with coarser texture buts or standard for the location.

12. The contractor shall be responsible for the layout and installation of pavement markings on the final surface course following the control line for direction of travel. This will consist of control points that are located no more than 50 feet apart on curves and 100 feet in straight sections. The pavement marking pattern does not change.

13. It is the contractor's responsibility to ensure that the final surface course is placed so that the construction joint is no more than one foot offset from the final striping.

14. All retroreflective raised pavement markers (RRPM's or RP) shall be installed so that the reflective face of each marker is facing the direction of traffic and is perpendicular to the direction of traffic. All painted markers shall be installed so that the face of each marker is facing approaching traffic and perpendicular to the direction of traffic flow to which it applies.

15. All retroreflective raised pavement markers (RRPM's or RP) shall be installed per the current edition of the PC/OT pavement marking manual and applicable amendments.

16. All absence of existing pavement markings shall be accomplished in accordance with section 201 of the PC/OT pavement marking specifications. Painting over existing striping does not constitute approved painting or enhancement.

17. For private development projects, the design consultant/project manager shall be required to provide as-built striping plans within 30 days of striping completion.

18. Unless otherwise noted, all pavement markings shall be installed by the contractor.

19. Upon final inspection, a written acceptance or denial of marking or unpainted pavement markings shall be submitted to the contractor and Pima County's traffic engineer or designee for review and approval.

20. The contractor shall be responsible for maintaining all striping until project is approved for construction acceptance by Pima County. All striping or pavement markings are completed, and the one-year warranty period is complete if the pavement marking material manufacturer offers a limited warranty, the contractor shall transfer that warranty to Pima County.

21. The PC/OT pavement marking manual is available online.
SIGNING GENERAL NOTES


2. ALL SIGNS SHALL BE IN COMPLIANCE WITH THE LATEST EDITION OF THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, THE LATEST EDITION OF THE PC/UT TRAFFIC SIGNING DESIGN MANUAL, THESE PLANS, AND THE SPECIAL PROVISIONS.

3. SIGNS MAY BE MODIFIED AND LOCATIONS ADJUSTED TO FIT CONDITIONS IN THE FIELD AT THE DISCRETION OF THE TRAFFIC ENGINEER.

4. THE DESIGN SPEED FOR ADJACENT ROAD IS 35 MPH, BREKKE ROAD AND DAWN ROAD DESIGN SPEEDS ARE 40 MPH. THE POSTED SPEED LIMIT FOR ADJACENT ROAD IS 35 MPH, BREKKE ROAD AND DAWN ROAD HAVE A POSTED SPEED LIMIT OF 40 MPH, THIS LIMITATION SHALL BE BASED ON THE POSTED SPEED LIMIT.

5. POSTING OF SIGNS ON SIGN SUMMARY SHEETS ARE APPROXIMATE. THE CONTRACTOR SHALL VERIFY ACTUAL POST LIMITS.

6. ALL REALIZED POSTS SHALL BE INSTALLED IN A CONCRETE FOUNDATION UNLESS OTHERWISE DIRECTED BY THE TRAFFIC ENGINEER.

7. ALL SIGN EMBED LOCATION ARE APPROXIMATE. THE CONTRACTOR SHALL VERIFY ACTUAL SIGN LOCATION WITH THE TRAFFIC ENGINEER PRIOR TO THE INSTALLATION OF ANY SIGNS.

8. THE CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING ALL WORK WITH THE STATE FOR INSTALLING ALL SIGNS IN THE FIELD AND FOR MAINTAINING ALL SIGNS UNTIL PROJECT IS APPROVED FOR "CONSTRUCTION ACCEPTANCE" BY PIMA COUNTY (FULLY OPEN TO TRAFFIC). ALL PUNCH LIST ITEMS ARE COMPLETED AND ONE YEAR WARRANTIES BEGIN.

9. ALL OVERHEAD MOUNTED SIGNS SHALL BE DIAMOND CAVE SHEETING, TYPE 2. ALL SLOPE SIGNS SHALL BE UNIVERSAL FACING DIAMOND CAVE SHEETING, TYPE 2. ALL OTHER SIGNS SHALL BE HIGH INTENSITY PRismatic SHEETING, TYPE 2. ALL GROUND MOUNTED SIGNS SHALL HAVE AN ANTI QUATTRO CORDING APPLIED TO SIGNS FACE. S. #1160 PLY OR EQUIVALENT.

10. ALL NEW SIGNS SHALL HAVE 0.030 GAUGE, RADIUS CORNER, ALUMINUM BACKING UNLESS OTHERWISE NOTED.

11. PRIOR TO DETERMINING ANY TRAFFIC SIGNS, A SIGN CONDITION INVENTORY OF ALL EXISTING SIGNING SHALL BE CONDUCTED BY THE CONTRACTOR AND PROVIDED TO THE PIMA COUNTY SIGN SHOP SUPERVISOR (520)791-7463. INVENTORY SHALL INCLUDE CURRENT SIGN LOCATION AND CONDITION, INCLUDING ANY EXISTING DAMAGE OR DEFICIENCIES.

12. ANY SIGNS AND POSTS BEING RE-CORDED ON THIS PROJECT SHALL BE STORED IN A WAY TO AVOID DAMAGE AND MAINTAIN THE INTEGRITY OF THE SIGNS. SAFE STORAGE OF STOCKPILED AND PAINTED FOR DAMAGE TO STORED SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.

13. ALL SIGNS AND POSTS NOT SPECIFICALLY RE-USED ON THIS PROJECT SHALL BE DECONSTRUCTED, STORED AND DELIVERED TO THE OWNER CITY OF COUNTY BY THE CONTRACTOR. THE CONTRACTOR IS RESPONSIBLE FOR THE SAFE STORAGE AT THE CONSTRUCTION SITE UNTIL DELIVERY AND THE SAFE TRANSPORT OF THE SALVAGED MATERIAL. NOTIFICATION OF DELIVERY SHALL BE MADE AT LEAST 1 WORKING DAY PRIOR TO DELIVERY. PIMA COUNTY SIGN SHOP 1713 S. MISSION ROAD (520)791-0600, NO FRIDAYS.

SIGNING QUANTITIES

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<thead>
<tr>
<th>Item No.</th>
<th>Description</th>
<th>UNIT</th>
<th>QUANTITY</th>
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<tr>
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<td>Manual of Signs and Sidewalks</td>
<td>EA</td>
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<td>8007030</td>
<td>Welcome Signs</td>
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<td>8007010</td>
<td>Sign Post (Preferred Type)</td>
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</tr>
<tr>
<td>8007110</td>
<td>Foundation for Sign Post (Preferred)</td>
<td>EA</td>
<td>13</td>
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<tr>
<td>8008114</td>
<td>Sign Panel (Traffic Control, Permanent, Type XE)</td>
<td>S/P</td>
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CROSSING TRUCK BREKKE RD SHOULDER NARROWS

PIMA COUNTY FAIRGROUNDS

INTERSECTION IMPROVEMENTS AT BREKKE RD AND DAWN RD HOUGHTON ROAD SIGNING PLANS
INTERSECTION IMPROVEMENTS
AT BREKKE RD AND DAWN RD
HOUGHTON ROAD
SIGNING PLANS
GENERAL NOTES:

1. Areas outside of the Project Disturbance Limits or Right of Way shall remain undisturbed. Should additional area require disturbance, the Engineer, Owner and appropriate parties must be notified. Any project-related activities or disturbance beyond the Project Disturbance Limits or Right of Way will require historic and cultural resources compliance to have been included before any disturbance can occur. The Plans and NOI must be updated accordingly and reflect additional BMPs.

2. All disturbed soils shall be stabilized. Apply seed mix to disturbed soils.

3. Seeding limits shown on plans are estimated on anticipated limits of soil disturbance. Seeding shall be field adjusted to match limits of soil disturbance.

4. All Erosion Control Measures shall be installed within 14 days of establishing rough grade. Disturbed areas where construction is delayed for more than 14 days require Temporary Erosion Control Measures.

5. Erosion Control Measures shall be installed at perimeter of Limits of Disturbance, as shown on plans.

6. Sediment Control Measures shall be installed on all side slope boundaries. Sediment controls shall be placed on side slope boundaries when adjacent side slope is at lower elevation than project area with potential to receive stormwater runoff. Adjacent slopes at higher elevation than project area do not require perimeter control.

7. Sediment Wattles shall be installed on slopes, per Erosion & Pollution Control plans, and per Detail E1. Ends of Wattles shall be turned upslope at a 45 degree angle, 3' min., Typ.

8. Contractor shall determine final location of Stabilized Construction Entrance/Exit Gravel Pad according to site conditions and/or construction sequencing, with approval from the Engineer. Use of other access points must be approved by the Engineer.

9. Sweeping and/or vacuuming may be required as a secondary measure if trackout is visible.

10. Containment Areas shall be identified on Contractor’s Stormwater Pollution Prevention Plan.

11. Spill response equipment shall be accessible in case of a spill, and located within/near the Containment Area.

12. Quantities shown in Summary of Quantities are for Contractor convenience. Contractor to verify all quantities.

13. All work and materials relating to the BMPs detailed within these Plans (including all materials used for BMPs, all ground preparation, furnishing, installing, maintenance, final removal, and disposal of temporary BMPs, as well as returning the area to an acceptable condition as approved by the Engineer) shall be paid for under the Erosion and Pollution Control bid items.

14. The work covered by this section shall also include the preparation of soil within areas to be seeded, the hydroseeding of disturbed area with native plants (Class I), and the installation of a temporary, degradable erosion control blanket in areas designated on the project plans.

15. Seed mix species and the Pure Live Seed (PLS) will be as shown on the Sheet EC02.

16. The seed is to be obtained from seed suppliers through harvesting of wildland collections, or field-grown seeds grown prior to or during the contract period.

17. Weed content of the contract-specified seed mix is not exceed 0.5 percent.

18. Seed is to be stored under dry conditions, at temperatures of between 35°F and 120°F, and out of direct sunlight. Seed that has become moldy, wet, or otherwise damaged, will not be acceptable. Seed shall be called for in pounds of pure live seed (PLS), where PLS is defined as the product of seed germination (G) and seed purity (P) all divided by 100.

19. Upon completion of the hydroseeding operations, erosion control blankets shall only be installed over those seeded areas that are indicated on the landscape plans to receive erosion control blanket. The blanket shall be installed as detailed on the project plans and per the manufacturer’s written instructions and recommendations. The blanket shall be installed as soon as possible after seeding. The Contractor shall be responsible for reseeding any seeded areas disturbed by the installation of the blanket or that area eroded prior to the installation of the blanket.

20. The initial application for Seeding (Class II) will be measured either by the square yard of ground surface, to the nearest 100 square yards seeded, or by the acre to the nearest 0.1 acre, complete-in-place. The second application for Seeding (Class II) will be measured either by the square yard of ground surface, to the nearest 100 square yards seeded, or by the acre to the nearest 0.1 acre, complete-in-place.

21. Accepted quantities for seeding, measured as provided for above, will be paid for at the contract unit price indicated in the Bidding Schedule and will be considered as compensation, in full, for the item complete in place, including all labor, equipment, materials, tools, supplies and incidental necessary for the work in conformance with the requirements herein, the project plans or as may be directed by the Engineer. Price adjustments for variations in total bid quantity per Subsections 109-3 and 109-4 of the Standard Specifications do not apply to work under this item.

22. No direct measurement or payment will be made for the preparation or the preservation of seeding areas, the cost being considered as included in the cost of the contract item.

23. When multiple mobilizations are required to accomplish seeding as specified herein, the cost will be included in the price bid for the seeding. No adjustments will be made to the contract for the number of seeding mobilization activities. Should the contractor fail to provide seeding as specified herein, the Engineer will immediately notify the contractor of such non-compliance. Should the contractor fail to immediately remedy the undersupply of work before such seeding stabilization has been completed, or proceed to provide the necessary seeding stabilization. The entire cost of such work will be deducted from the monies due to become due to the contractor. In addition, no adjustment to the contract time will be made for suspensions resulting from the contractor’s failure to provide seeding for a sub-area within the time periods specified herein.
## Erosion and Pollutant Control BMP Summary of Quantities

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<th>SYMBOL</th>
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<th>UNIT</th>
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<td>Stabilized Construction Entrance/Exit Gravel Pad</td>
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<td>Seeding (Class II)</td>
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### Seed Mix I - Class II (Type A): Low Grow Seed-Mix

**SCHEDULE FOR ROADSIDE AREAS - CLEAR ZONE**

<table>
<thead>
<tr>
<th>BOTANICAL NAME</th>
<th>COMMON NAME</th>
<th>PLS LBS./ ACRE</th>
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<tbody>
<tr>
<td>Arilis purpurea</td>
<td>Purple Three-Awn</td>
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<td>Balboa maritima</td>
<td>Desert Marigold</td>
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<td>Bouteloua aristidolia</td>
<td>Needle Grama</td>
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<td>Arizona Poppy</td>
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</tr>
<tr>
<td>Lesquerella gordonia</td>
<td>Bladderpod</td>
<td>0.5</td>
</tr>
<tr>
<td>Parthenium incanum</td>
<td>Marigold</td>
<td>0.5</td>
</tr>
<tr>
<td>Pentstemon perrvii</td>
<td>Perry's Pentemon</td>
<td>1.0</td>
</tr>
<tr>
<td>Physaria crenulata</td>
<td>Desert Bluebells</td>
<td>1.0</td>
</tr>
<tr>
<td>Paliostrophe cooperi</td>
<td>Paperflower</td>
<td>0.5</td>
</tr>
<tr>
<td>Senecio cavill</td>
<td>Desert Senna</td>
<td>2.0</td>
</tr>
<tr>
<td>Sphaeralcea ambigua</td>
<td>Desert Globemallow</td>
<td>1.5</td>
</tr>
<tr>
<td>Zinnia acerosa</td>
<td>Desert Zinnia</td>
<td>0.5</td>
</tr>
</tbody>
</table>
INTERSECTION IMPROVEMENTS
AT BREKKE RD AND DAWN RD
HOUGHTON ROAD

WATTLE SPACING INTERVALS

<table>
<thead>
<tr>
<th>Slope Ratio (H:V)</th>
<th>Maximum Spacing Interval</th>
</tr>
</thead>
<tbody>
<tr>
<td>2:1</td>
<td>10'</td>
</tr>
<tr>
<td>4:1</td>
<td>20'</td>
</tr>
<tr>
<td>5:1</td>
<td>30'</td>
</tr>
<tr>
<td>6:1</td>
<td>40'</td>
</tr>
</tbody>
</table>

*Notes:
1) No row shall not be placed within 6'-0" of edge of pavement and 9'-0" from outside surface.
2) For erodible soils, place rows of wattles closer together.
3) For soils with low erosion potential, place rows of wattles further apart.

SECTION (NTS)

Stake Length: 24" for 3" dia. Wattle, 33" for 4" dia. Wattle

SEDIMENT WATTLE STAKING DETAIL (NTS)

SEDIMENT WATTLE LAYOUT (NTS)

SEDIMENT WATTLE OVERLAP (NTS)

NOTES:
1. Install Sediment Wattle as slopes are constructed to grade or as directed by the Engineer. Select, install and maintain in conformance with manufacturer's specifications to meet all conditions for slope protection and in accordance with good engineering practices.
2. Sediment Wattles shall be in continuous contact with trench bottom and sides. Do not overlap wattle ends on top of each other. A 20" dia. wattle may be made from 2'-3 rolled excelsior or straw blankets.
3. Butt adjacently wattles tightly against each other. Drive the first end stake of the second wattle at an angle toward the first wattle to help abut them tightly.
4. Repair any flaws or gullies promptly. Make field adjustments and corrections of wattle BMP immediately if it is causing flooding, erosion, and/or affecting roadway safety.
5. For seeded areas, tillage shall be performed to minor ridges and furrows parallel to new slope contours and as specified in Section 800 of the Project Specifications.
6. Divert and direct run-on water from outside of the slopes to the swales and/or rock riprap/rock mulch. Diversion dikes and/or ditches are necessary on natural undisturbed slopes beyond the top limits of new slopes to divert run-on water.
7. Installation and maintenance of Sediment Wattle BMPs shall not negatively impact traffic safety, nor the design function of roadway or bridge drainage facilities.
8. Install and maintain Sediment Wattle BMPs to carry the stormwater of at least 2-year, 24-hour events.
9. Refer to Project Specification Section 810 for Sediment Wattle material specifications.
10. Make field adjustments and corrections to ensure no sensitive biological resources (native species / habitats) will be adversely impacted.
ECO7

INTERSECTION IMPROVEMENTS
AT BREKKE RD AND DAWN RD
HOUGHTON ROAD

VERT X:

S. WILSON
12/2017
J. BOLEY
12/2017
S. WILSON
12/2017
S. WILSON
12/2017

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NOTES:
1. Locate Sediment Logs as indicated in plans, SWPPPs or as directed by the Engineer.
2. Select, install and maintain Logs per manufacturers' specifications and good engineering practices.
3. Lay Sediment Log across prepared roadside ditch or channel. Trenching or burial of Sediment Logs is not required. The close, continuous contact between the bottom of the Log and the ground is mandatory. The Logs shall be installed in the roadside ditch, swale or channel bottom perpendicular to the flow of water as shown on detail this sheet.
4. Stake Log as shown. Stakes shall be placed through downstream side only as shown.
5. DO NOT drive stakes through center of the Log. Stakes must be driven into the ground as shown.
6. Ensure that no gaps exist between soil and bottom of Sediment Log. Repair any rills or undercuts promptly.
7. Placement of Sediment Logs shall be evaluated by the Engineer in rocky soil conditions.
8. Remove Sediment Log BMP's within the ditches/channels as per the direction of the Engineer or as soon as practicable upon stabilization of the construction disturbed area.
9. Dispose of Sediment Logs and trapped sediment material and fill trench created by Sediment Log.
10. The installation and maintenance of Sediment Log BMP's shall not negatively impact traffic safety, nor the designed function of roadway or bridge drainage facilities. Sediment Logs shall be installed and maintained for the stormwater at least 2-year, 24-hour events.
11. Make field adjustments and corrections of Sediment Log BMP immediately if it is causing flooding, erosion, and/or affecting roadway safety.
12. Rock mulch/riprap may be required for channel/ditch lining or rock check dams for longitudinal ditch slopes that exceed 5% and/or for soil conditions not suitable for Log installation.
13. The Sediment Log BMP's pay/bid item shall include all materials used for this BMP, all ground preparation, furnishing, installing, maintenance, final removal, and disposal, as well as returning the area to an acceptable condition as approved by the Engineer.
15. Make field adjustments and corrections to ensure NO sensitive biological resources (native species / habitats) will be adversely impacted.
16. Construct Rock Wedges with angular-shaped Gradation C Rock Mulch as defined in Section 810–2.03 of the Standard Specifications and those special provisions. Natural river-run materials such as rounded river rocks/cobblestones and pebbles are NOT acceptable.
NOTES:
1. Install Stabilized Construction Entrance/Exit Gravel Pad BMP for traffic entering or exiting a construction site where sedimentation, clay, silt or other pollutants can be tracked onto public roads and/or adjacent water bodies, as approved by the Engineer. It may also be applied for construction entrance/exit wind erosion/dust control, as approved by the Engineer.
2. Locate new Construction Entrance(s)/Exit(s) at appropriate project entrance/exit points as determined in field with the approval of the Engineer. Relocate Stabilized Construction Entrance/Exit Gravel Pad BMP as needed as project progresses. Replace Rip Rap materials in drive paths when dirt or mud accumulates.
3. Rip Rap materials shall be fractured/crushed rocks in angular shape as defined in Section 810 of the Project Specifications. Natural river-run materials, especially rounded natural river rocks, are not acceptable.
4. Field adjust and correct Construction Entrance/Exit Rip Rap Pad BMP immediately if it is causing flooding and/or affecting roadway safety.
NOTES:
1. Refer to EC01 for Quantities and General Notes.
2. Refer to Roadway Plans for Additional Information.
3. No Drywells in Vicinity.
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