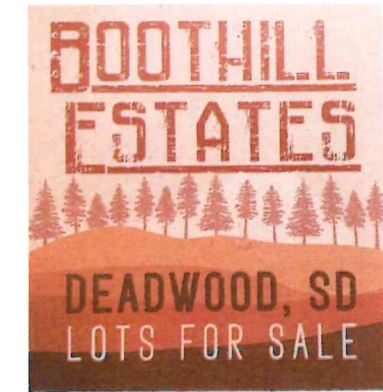
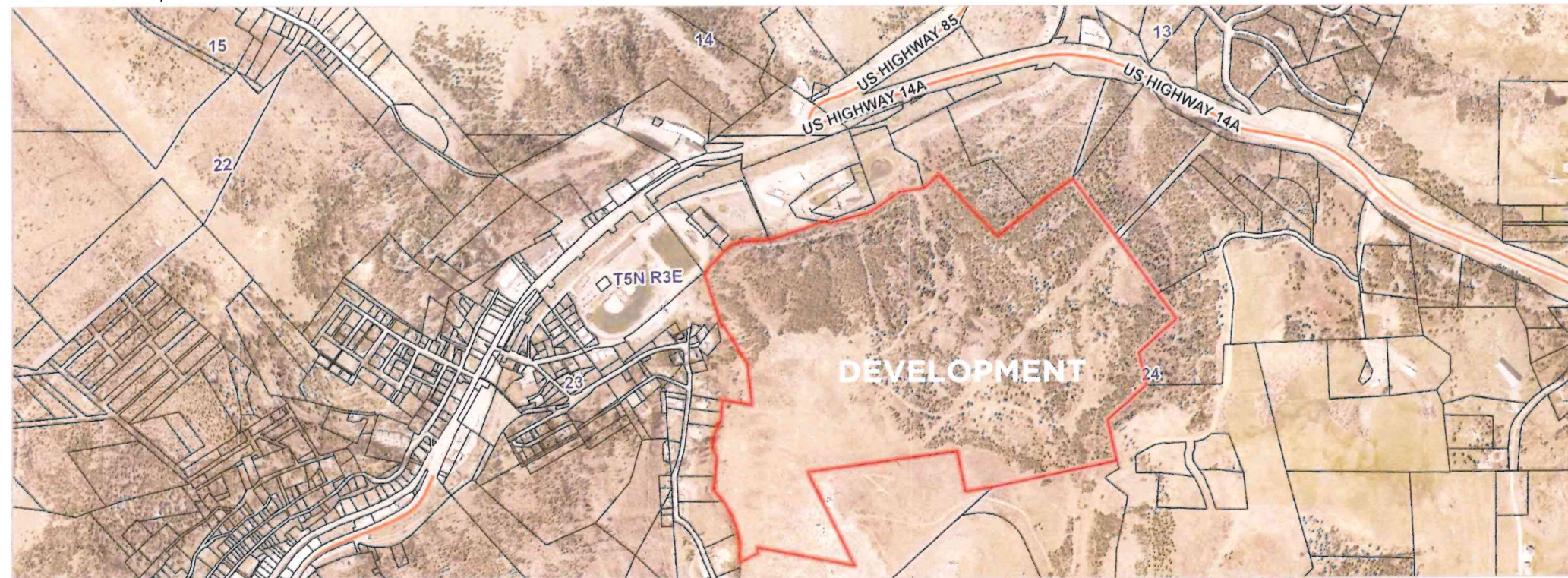


BOOT HILL DEVELOPMENT - PHASE 1

JUNE 18, 2024



DEADWOOD, SOUTH DAKOTA



VICINITY MAP

LEGAL DESCRIPTION: M.S. 840 BUENA VISTA TRACT
BEING A PORTION OF M.S. 343, 681, 685, 686, 788, 840,
920 & 1208 SECTIONS 23 & 24-005-03 PLAT 1993-05668
ALL IN TOWNSHIP 5 NORTH, RANGE 3 EAST, BHM,
LAWRENCE COUNTY, SD. 160.53 ACRES

NORTH
↑
NO SCALE



**Know what's below.
Call before you dig.**

The locations of all existing utilities are shown in an approximate location. The Contractor is responsible for coordination and location of all existing utilities. Contractor is fully responsible for any and all damages resulting from the Contractor's failure to exactly locate and preserve any and all existing utilities.

City of Deadwood Public Works Department
108 Sherman Street Deadwood, SD 57732
Phone: (605) 578-3082

INDEX OF SHEETS

- C-1 COVER SHEET
- E-1 EXISTING CONDITIONS PLAN
- LA-1 ESTIMATE OF QUANTITIES & GENERAL NOTES
- LA-2 TYPICAL SECTIONS & DETAILS
- ER-1 EROSION CONTROL NARRATIVE
- ER-2 EROSION CONTROL NOTES
- ER-3 EROSION CONTROL PLAN
- C-1 LAYOUT PLAN
- C-2 GRADING PLAN

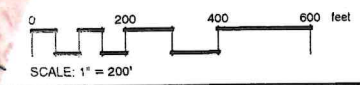
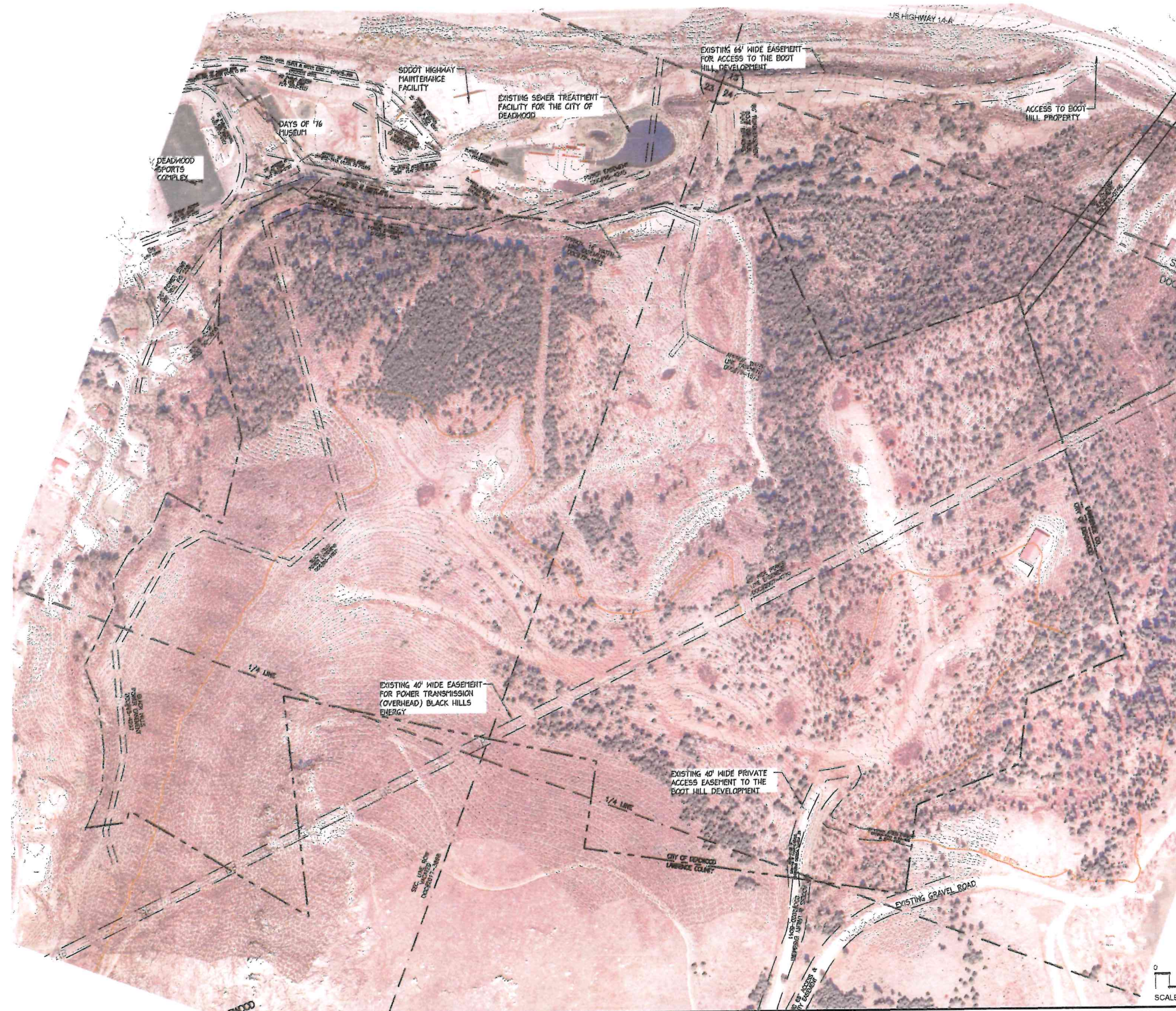
I, Christopher M. Wehrle, certify that I have read and understand the provisions contained in the City of Rapid City Standard Specifications for Public Works Construction, current edition and the City of Rapid City's adopted Design Criteria Manuals. The drawings and specifications contained here within, to the best of my knowledge, were prepared in accordance with these documents, or a properly executed Exception to the Design Standards has been obtained.

Christopher Wehrle, Landscape Architect Date

 **Wyss Associates, Inc.**

Landscape Architecture Land Planning
Golf Course Architecture Historic Preservation
Parks & Recreation Design Corridor and Streetscape

728 Sixth Street - Rapid City, South Dakota 57701-3670
Ph. 605.348.2268 www.wyssassociates.com



Sub Sheet E-1 Sheet _____ OF _____	DESIGNED BY: CMW	NO. REVISION DATE 	Sheet Title	Project Name Boot Hill Estates Phase 1 Deadwood, SD	Wyss Associates, Inc. Landscape Architecture Land Planning Streetscape Design 728 Sixth Street - Rapid City, South Dakota 57701-3670 Ph. 605.348.2268 admin@wyssassociates.com www.wyssassociates.com Est. 1981 - Celebrating Over 40 Years of Award Winning Landscape Design
	DRAWN BY: CAD		Existing Conditions Plan		
	APPROVED BY: CMW				
	PROJECT NO. 231201				
	DATE: JUNE 18, 2024				

Ownership of Instruments of Service: All reports, plans, specifications, computer files, field data, notes and instruments prepared by the design professional as instruments of service shall remain the property of the design professional. All common law, statutory and other reserved rights including the copyright thereto.

ESTIMATE OF QUANTITIES

Item No.	DESCRIPTION OF ITEM	Unit	Quantity (EST)
1	MOBILIZATION	LS	1.0
2	INCIDENTALS	LS	1.0
3	CLEAR AND GRUB	LS	1.0
4	SURVEYING, STAKING & ASBULTS	LS	1.0
5	EROSION CONTROL	EA	1.0
6	UNCLASSIFIED EXCAVATION	CY	67,040.0
7	18" HDPE PIPE	LF	336.0
8	18" METAL END SECTIONS	EA	4.0
9	36" HDPE PIPE	LF	580.0
10	36" METAL END SECTIONS	EA	4.0
11	36"x18" TEE	EA	2.0
12	CLASS B RIP-RAP	CY	10.0
13	PLACING TOPSOIL (4" MIN)	CY	1,000.0
14	2" RECYCLED ASPHALT SURFACING (OPTIONAL, PER OWNER)	TON	136.0
15	5" COMPACTED BASE COURSE	TON	7,700.0
16	SEEDING & MULCHING	LS	1.0

GRADING CALCULATION

Boot Hill Development - Lower Staging Area Grading Calc

Net Cut	51762	CY
Net Fill	18030	CY
Waste Material (on-site)	33732	CY

notes:

- no shrink factor has been applied to these quantities
- material needed to establish subgrade will be from on-site soils best determined onsite by General Contractor
- earthwork calculations are approximate. Contractor is responsible for calculating their own earthwork quantities.
- all disturbed grades are to be re-seeded with specified seed mix
- borrow areas shall not have any grades that exceed 2:1 slopes
- fill quantity includes 4" of topsoil for all disturbed un paved areas

GENERAL NOTES:

ALL WORK REQUIREMENTS SHOWN ON THESE DRAWINGS AND NOT OTHERWISE DETAILED SHALL BE ACCOMPLISHED AS SPECIFIED IN THE LATEST SPECIFICATIONS FROM THE CITY OF RAPID CITY. CONTRACTOR WILL CONDUCT HIS WORK IN ACCORDANCE WITH THE REQUIREMENTS OF THE OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION, DEPT OF LABOR PART 1926.

- IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO LOCATE ALL UTILITIES AND PROTECT THEM FROM DAMAGE. THE LOCATION OF ALL AERIAL AND UNDERGROUND UTILITIES SHOWN ARE APPROXIMATE AND SOME ITEMS MAY NOT BE INDICATED IN THE PLANS. UNDERGROUND UTILITIES, WHETHER INDICATED OR NOT, WILL BE LOCATED AND FLAGGED BY THE UTILITIES AT THE REQUEST OF THE CONTRACTOR. THE CONTRACTOR SHALL NOT BEGIN EXCAVATION IN THE AREA OF UNDERGROUND UTILITIES UNTIL ALL SUCH UTILITIES HAVE BEEN LOCATED AND IDENTIFIED AND THEN ONLY WITH EXTREME CARE TO AVOID ANY POSSIBILITY OF DAMAGE TO THE UTILITY FACILITY. THE CONTRACTOR SHALL BEAR THE TOTAL EXPENSE OF REPAIR OR REPLACEMENT OF SAID UTILITIES DAMAGED BY OPERATION IN CONNECTION WITH EXECUTION OF THE WORK. THE CONTRACTOR SHALL COORDINATE CONSTRUCTION EFFORTS WITH ALL LOCAL UTILITY COMPANIES PERTINENT TO PROSECUTION OF THE WORK.
- THE INFORMATION ON THESE DRAWINGS CONCERNING THE TYPE, SIZE AND LOCATION OF UTILITIES HAS BEEN BASED UPON THE INFORMATION AVAILABLE DURING TOPOGRAPHIC SURVEYS. SIZE AND TYPE OF UTILITIES WAS PROVIDED BY THE UTILITY OWNER. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTING ALL EXISTING UTILITIES IN PLACE UNLESS THEY ARE SCHEDULED FOR RELOCATION. THE CONTRACTOR SHALL COORDINATE ALL WORK WITH THE UTILITY COMPANIES. NO ADDITIONAL PAYMENT WILL BE MADE FOR THIS WORK.
- THE CONTRACTOR SHALL UTILIZE THE SOUTH DAKOTA ONE CALL NOTIFICATION PROCESS TO PROVIDE ADVANCE NOTICE OF AT LEAST 48 HRS, EXCLUDING WEEKENDS & HOLIDAYS, TO INFORM ALL SOUTH DAKOTA UNDERGROUND FACILITY OPERATORS OF INTENDED EXCAVATION. THE CONTRACTOR SHALL CONTACT ALL UTILITY COMPANIES BEFORE WORK IS COMMENCED.
- THE CONTRACTOR IS REQUIRED TO OBTAIN COVERAGE UNDER THE DEPARTMENT OF ENVIRONMENT AND NATURAL RESOURCES GENERAL STORM WATER CONSTRUCTION PERMIT. CONTACT SD DENR AT 1.800.438.3367. COST OF SWPPP SHALL BE INCIDENTAL TO THE PROJECT. CONTRACTOR SHALL MAINTAIN THE SWPPP THROUGHOUT THE PROJECT UNTIL THE SITE OBTAINS 70% VEGETATION GROWTH.
- AREAS DISTURBED BY THE CONTRACTOR'S OPERATIONS SHALL BE RESTORED BY & AT THE EXPENSE OF THE CONTRACTOR TO A CONDITION EQUAL OR BETTER THAN EXISTING, AS APPROVED BY THE LANDSCAPE ARCHITECT.
- THE CONTRACTOR SHALL SUBMIT TO LANDSCAPE ARCHITECT A PLAN FOR STORAGE, PARKING AND SERVICE AREA(S) FOR REVIEW AND APPROVAL. THE PLAN MUST BE SUBMITTED AND APPROVED ONE WEEK PRIOR TO COMMENCING WORK.
- THE CONTRACTOR SHALL APPLY FOR AND OBTAIN ALL NECESSARY PERMITS AND LICENSES AND SHALL COMPLY WITH ANY AND ALL FEDERAL, STATE AND LOCAL ORDINANCES, LAWS OR REGULATIONS APPLICABLE TO PERFORM THE WORK.
- ALL MATERIAL TO BE REMOVED FOR DISPOSAL SHALL BECOME THE PROPERTY OF THE CONTRACTOR, UNLESS NOTED OTHERWISE, AND SHALL BE DISPOSED OF IN ACCORDANCE WITH LOCAL & STATE REGULATIONS.
- ALL BARRICADES, WARNING SIGNS, LIGHTS, DEVICES, ETC. FOR THE GUIDANCE AND PROTECTION OF TRAFFIC AND PEDESTRIANS MUST CONFORM TO THE LATEST MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.
- ALL SAW CUTTING IS INCIDENTAL TO THE PROJECT.
- THE CONTRACTOR WILL PROVIDE CONSTRUCTION STAKING & MATERIAL TESTING.
- ALL ASPHALT BINDERS SHALL BE CONSIDERED INCIDENTAL.

SHOP DRAWINGS

THE CONTRACTOR SHALL SUBMIT ELECTRONIC PDF COPIES OF ALL SUBMITTALS FOR REVIEW TO:
 Chris Wehrle (chrisw@wyssassociates.com)
 Wyss Associates, Inc - 728 6th Street - Rapid City, SD 57701
 AFTER REVIEW, COPIES WILL BE RETURNED TO THE CONTRACTOR WITH ANY REVISIONS NOTED.

GRADING OPERATIONS

PRIOR TO ANY WORK, THE CONTRACTOR (OWNER) SHALL ENGAGE A GEOTECHNICAL ENGINEER FOR PROJECT SITE ANAYSIS. SEE SHEET LA-2 FOR GEOTEHCNICAL ENGINEER REQUIREMENTS AND FURTHER COORDINATION REQUIRED BY CONTRACTOR.

WATER FOR GRADING OPERATIONS (INCLUDING EMBANKMENT CONSTRUCTION & SUBGRADE PREPARATION) SHALL BE INCIDENTAL TO THE PROJECT. CONTRACTOR IS RESPONSIBLE FOR LOADING, HAULING, & APPLICATION OF THE WATER.

CERTIFICATION AND TESTING

SUBMITTALS & CERTIFICATION DOCUMENTS SHALL BE PROVIDED TO THE LANDSCAPE ARCHITECT FOR ALL MATERIALS DELIVERED TO THE SITE. APPROPRIATE SAMPLING & TESTING IN COMPLIANCE WITH THE CITY OF RAPID CITY STANDARD SPECIFICATIONS SHALL APPLY. ADDITIONAL RANDOM DENSITIES, AGGREGATE TESTING, DEPTH MEASUREMENTS, ETC. MAY BE REQUESTED AND SHALL BE PROVIDED AT THE OWNER'S EXPENSE. ANY RETESTING DUE TO FAILED INITIAL TESTS WILL BE PROVIDED AT THE CONTRACTOR'S EXPENSE.

STORM WATER

THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS FOR THIS PROJECT. CONSTRUCTION ACTIVITIES CONSTITUTE ARE MORE THAN 1 ACRE OF DISTURBANCE.

ACTION TAKEN/REQUIRED:

AT A MINIMUM AND REGARDLESS OF PROJECT SIZE, APPROPRIATE EROSION AND SEDIMENT CONTROL MEASURES MUST BE INSTALLED TO CONTROL THE DISCHARGE OF POLLUTANTS FROM THE CONSTRUCTION SITE.

BASE COURSE

AGGREGATES FOR BASE COURSE SHALL BE 3/4" LIMESTONE LEDGE ROCK AND SHALL CONFORM TO THE REQUIREMENTS OF THE SPECIFICATIONS. ESTIMATED QUANTITIES WERE BASED UPON AN ASSUMED IN PLACE DENSITY OF 1.9 TON/CY. CONTRACTOR SHALL NOT FURNISH BASE COURSE PRIOR TO ENGINEER'S SUBGRADE APPROVAL.

UNCLASSIFIED EXCAVATION, DIGOUTS

CONTRACTOR SHALL OVER EXCAVATE AREAS DEEMED TO BE UNACCEPTABLE FOR PAVING BY THE LANDSCAPE ARCHITECT

WASTE DISPOSAL SITE

CONSTRUCTION AND/OR DEMOLITION DEBRIS MAY NOT BE DISPOSED OF WITHIN THE ROW. THE WASTE DISPOSAL SITE(S) SHALL NOT BE LOCATED IN A WETLAND, WITHIN 200 FEET OF SURFACE WATER, OR IN AN AREA THAT ADVERSELY AFFECTS WLDLIFE, RECREATION, AESTHETIC VALUE OF AN AREA, OR ANY THREATENED OR ENDANGERED SPECIES, AS APPROVED BY THE LANDSCAPE ARCHITECT.

IF THE WASTE DISPOSAL SITE(S) IS LOCATED SUCH THAT IT IS WITHIN VIEW OF ANY ROW, THE FOLLOWING ADDITIONAL REQUIREMENTS SHALL APPLY:

THE ABOVE REQUIREMENTS WILL NOT APPLY TO WASTE DISPOSAL SITES THAT ARE COVERED BY AN INDIVIDUAL SOLID WASTE PERMIT AS SPECIFIED IN SDCL 34A-6-58, SDCL 34A-6-1.13, AND ARSD 74:27:10-06.

FAILURE TO COMPLY WITH THE REQUIREMENTS STATED ABOVE MAY RESULT IN CIVIL PENALTIES IN ACCORDANCE WITH SOUTH DAKOTA SOLID WASTE LAW, SDCL 34A-6-1.31.

ALL COSTS ASSOCIATED WITH DISPOSING OF WASTE, MAINTAINING CONTROL OF ACCESS (FENCE, GATES, AND SIGNS), AND RECLAMATION OF THE WASTE DISPOSAL SITE(S) SHALL BE INCIDENTAL TO THE VARIOUS CONTRACT ITEMS.

TRENCH EXCAVATION AND BACKFILL

THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING A SAFE EXCAVATION COMPLYING WITH APPLICABLE STATE AND FEDERAL REGULATIONS. IT IS POSSIBLE THAT IN SOME AREAS SPECIAL FOUNDATIONS MAY BE REQUIRED TO PROVIDE ADEQUATE SUPPORT FOR THE PIPE. SUCH FOUNDATIONS WILL CONSIST OF SUB-EXCAVATION TO A DEPTH AS REQUIRED BY THE ENGINEER AND PLACEMENT OF FOUNDATION MATERIAL.

COMPACTION

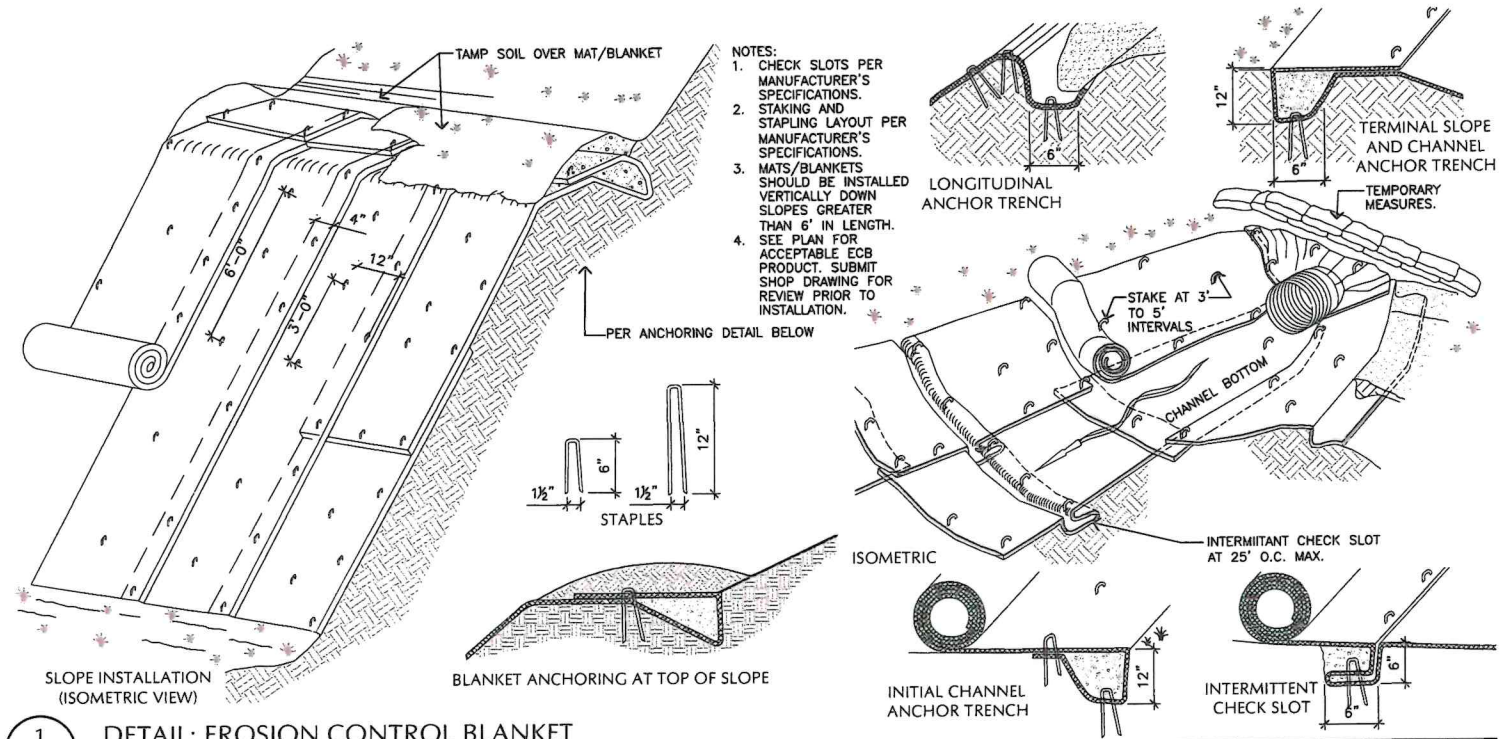
BACKFILL AND EXCAVATION SHALL BE COMPACTED TO 95% MAXIMUM PROCTOR DENSITY AND 98% TOP 1-FOOT. CONDITION OPTIMUM MOISTURE TO -1% TO +3%.

DEWATERING

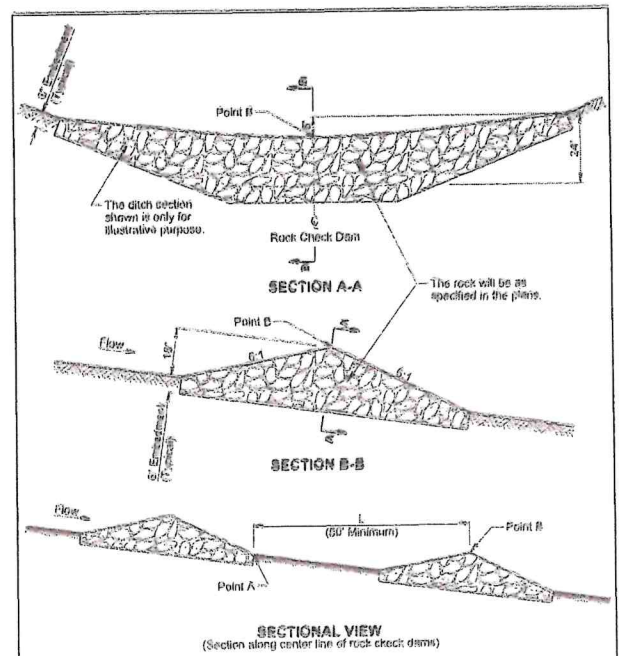
DEWATERING IS NOT ANTICIPATED PER GEOTECHNICAL REPORT AND IS CONSIDERED INCIDENTAL. DEWATERING ACTIVITIES SHALL BE CONDUCTED IN COMPLIANCE WITH THE "GENERAL PERMIT TO DISCHARGE UNDER THE SURFACE WATER DISCHARGE SYSTEM FOR TEMPORARY DEWATERING ACTIVITIES IN SOUTH DAKOTA", SDDENR PERMIT NO. SDG 070000. A COPY OF THE PERMIT IS AVAILABLE THROUGH SDDENR. THE CONTRACTOR IS REQUIRED TO FURNISH THE "REQUEST FOR AUTHORIZATION" TO DENR REQUIRED UNDER THE PERMIT AND FOR EACH SCHEDULE. OBTAIN DENR AUTHORIZATION, AND FURNISH A SEPARATE COPY OF AUTHORIZATION TO THE RESPECTIVE OWNER AT THE PRECONSTRUCTION CONFERENCE. THE CONTRACTOR IS RESPONSIBLE FOR PERFORMING SELF-MONITORING ACTIVITIES INCLUDING SAMPLING, TESTING AND REPORTING AS MAY BE DETERMINED TO BE REQUIRED UNDER THE AUTHORIZATION TO DISCHARGE. PAYMENT FOR OBTAINING THE NECESSARY AUTHORIZATION TO DISCHARGE, AND FOR ALL COMPLIANCE ACTIVITIES AND OBLIGATIONS BY THE CONTRACTOR SHALL BE ABSORBED INTO THE ITEM TO WHICH IT RELATES. NO ADDITIONAL PAYMENT WILL BE MADE.

Sub Sheet <div style="font-size: 2em; font-weight: bold; text-align: center;">LA-1</div> Sheet _____ OF _____	DESIGNED BY: CMW DRAWN BY: CAD APPROVED BY: CMW PROJECT NO. 231201 DATE: JUNE 18, 2024	<table border="1" style="width:100%; border-collapse: collapse;"> <thead> <tr> <th>NO.</th> <th>REVISION</th> <th>DATE</th> </tr> </thead> <tbody> <tr><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td></tr> </tbody> </table>	NO.	REVISION	DATE										<div style="font-size: 1.5em; font-weight: bold;">Estimate of Quantities & General Notes</div>	<div style="font-size: 1.5em; font-weight: bold;">Boot Hill Estates Phase 1</div> Deadwood, SD	Wyss Associates, Inc. Landscape Architecture Land Planning Streetscape Design <small>728 Sixth Street - Rapid City, South Dakota 57701-3670 Ph. 605.348.2268 admin@wyssassociates.com www.wyssassociates.com Est. 1981 - Celebrating Over 40 Years of Award Winning Landscape Design</small>
NO.	REVISION	DATE															

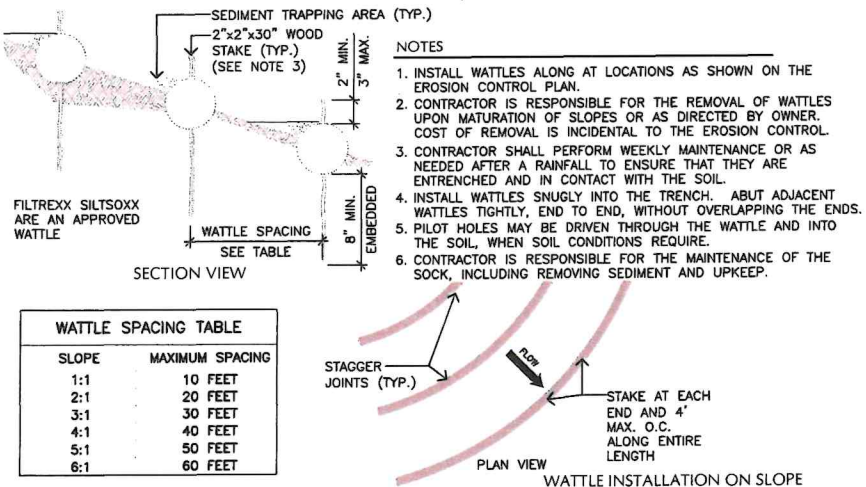
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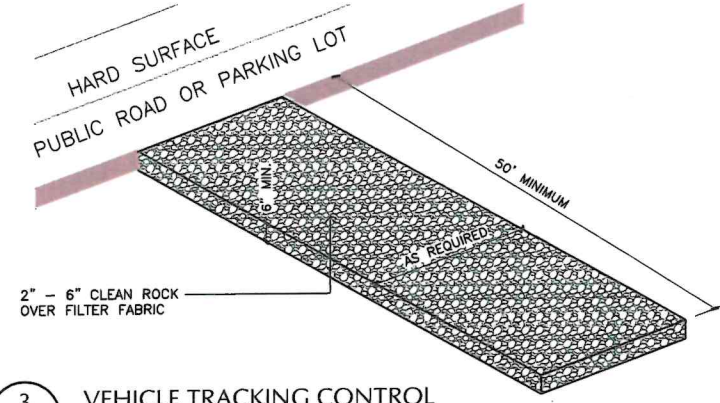
1 **DETAIL: EROSION CONTROL BLANKET**
 SCALE: 1/2" = 1'-0"



4 **DETAIL: ROCK CHECK DAM**
 SCALE: 1/2" = 1'-0"



2 **DETAIL: WATTLE INSTALLATION (EROSION CONTROL)**
 SCALE: 3/4" = 1'-0"



3 **VEHICLE TRACKING CONTROL**
 SCALE: 1" = 10'-0"

Sub Sheet <h1 style="font-size: 2em; margin: 0;">LA-2</h1> Sheet _____ OF _____	DESIGNED BY: CMW DRAWN BY: CAD APPROVED BY: CMW PROJECT NO.: 231201 DATE: JUNE 18, 2024	<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>NO.</th> <th>REVISION</th> <th>DATE</th> </tr> </thead> <tbody> <tr><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td></tr> </tbody> </table>	NO.	REVISION	DATE										Sheet Title <h2 style="margin: 0;">Typical Sections and Standard Details</h2>	Project Name <h2 style="margin: 0;">Boot Hill Estates Phase 1</h2> <p style="margin: 0;">Deadwood, SD</p>	Wyss Associates, Inc. Landscape Architecture Land Planning Streetscape Design 728 Sixth Street - Rapid City, South Dakota 57701-3670 Ph. 605.348.2268 admin@wyssassociates.com www.wyssassociates.com Est. 1981 - Celebrating Over 40 Years of Award Winning Landscape Design
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EROSION AND SEDIMENT CONTROL PLAN PROJECT OWNER CERTIFICATION:

"THIS EROSION & SEDIMENT CONTROL REPORT & ATTACHED SITE CONSTRUCTION PLAN APPEAR TO FULFILL THE TECHNICAL CRITERIA & THE CRITERIA FOR EROSION & SEDIMENT CONTROL REQUIREMENTS. I UNDERSTAND THAT ADDITIONAL EROSION CONTROL MEASURES MAY BE NEEDED IF UNFORESEEN EROSION OR SEDIMENT CONTROL PROBLEMS OCCUR OR IF THE SUBMITTED PLAN DOES NOT FUNCTION AS INTENDED."

EROSION AND SEDIMENT CONTROL PLAN PREPARED BY:

- CHRISTOPHER M WEHRLÉ
- WYSS ASSOCIATES, INC.
- 728 SIXTH ST, RAPID CITY, SD 57701
- 605.348.2268

SITE DESCRIPTION

AT A MINIMUM INCLUDE THE FOLLOWING:

- COMMERCIAL DEVELOPMENT;
- EXISTING SITE IS NATIVE GRASS WITH SOME UN-VEGETATED AREAS;
- SITE DRAINS SOUTH TO NORTH TOWARDS WHITEWOOD CREEK;
- SOILS ARE CONSIDERED VERY GRAVELLY LOAM WITH SOME CLAY IN LIMITED AREAS;
- ESTIMATED AREA OF DISTURBANCE IS 6.0 ACRES;
- SEQUENCE OF ACTIVITIES IS TO SET EROSION CONTROL MEASURES, REMOVE & STOCKPILE TOPSOIL, GRADE SITE, CONSTRUCT UTILITIES, INSTALL SURFACING, FINAL EROSION CONTROL SEEDING & MULCHING, REMOVE EROSION CONTROL DEVICES AFTER 70% STABILIZATION.

EROSION AND SEDIMENT CONTROL CONSTRUCTION SITE PLAN

THE ATTACHED EROSION AND SEDIMENT CONTROL CONSTRUCTION SITE PLAN IS PROVIDED TO ESTABLISH A NUMBER OF EROSION CONTROL DEVICES FOR BIDDING PURPOSES AND TO PROVIDE INFORMATION TO THE CONTRACTOR TO AID IN THE PROCESS OF OBTAINING ALL ASSOCIATED CONSTRUCTION PERMITS. THE CONTRACTOR IS RESPONSIBLE FOR THE METHODS AND MEANS REQUIRED FOR IMPLEMENTING ANY AND ALL CONSTRUCTION ACTIVITIES TO BE IN COMPLIANCE WITH ALL PERMITS.

STORMWATER POLLUTION PREVENTION PLAN AND PERMITS

THE PRIME CONTRACTOR IS THE RESPONSIBLE PARTY FOR PREPARING A NOTICE OF INTENT (NOI) FOR FILING FOR COVERAGE UNDER THE SOUTH DAKOTA DEPARTMENT OF AGRICULTURE AND NATURAL RESOURCES TO OBTAIN COVERAGE UNDER THE GENERAL PERMIT FOR STORM WATER DISCHARGES ASSOCIATED WITH CONSTRUCTION ACTIVITIES.

THE DEVELOPER IS THE PROJECT OWNER. THE NOI AND THE CONTRACTOR CERTIFICATION SHALL BE SUBMITTED TO THE PROJECT OWNER. THE PROJECT OWNER WILL RETURN TO THE CONTRACTOR ONCE SIGNATURES HAVE BEEN OBTAINED. THE CONTRACTOR SHALL SUBMIT NOI TO SDDANR.

THE PRIME CONTRACTOR IS THE RESPONSIBLE PARTY FOR PREPARING THE NOTICE OF TERMINATION (NOT) FOR THE SDDANR ONCE "FINAL STABILIZATION" HAS BEEN OBTAINED ON THE PROJECT. THE NOI SHALL BE SUBMITTED TO THE PROJECT OWNER. PLEASE REFER TO THE SDDANR GENERAL PERMIT FOR DEFINITIONS OF FINAL STABILIZATION. PER PERMIT REQUIREMENTS, THE CONTRACTOR SHALL AT ALL TIMES HAVE A COPY OF THE SDDANR NOI PERMIT LETTER, STORMWATER POLLUTION PREVENTION PLAN WITH ASSOCIATED EROSION AND SEDIMENT CONTROL PLAN DRAWINGS, AND INSPECTION REPORTS LOCATED WITHIN OR ADJACENT TO THE PROJECT LIMITS AVAILABLE FOR REVIEW. THE CONTRACTOR SHALL ENSURE THAT THIS INFORMATION IS LOCATED WITHIN A WEATHER TIGHT, SECURE ENCLOSURE AND CLEARLY LABELED.

MODIFICATIONS TO THE ESCP

THE ENGINEER MAY ORDER CHANGES TO THE ESCP AND/OR THE CONTRACTOR IS RESPONSIBLE TO REQUEST CHANGES TO THE ESCP IF UNFORESEEN CHANGES OCCUR, OR THE ESCP DOES NOT PERFORM AS INTENDED, OR TO IMPROVE THE EFFECTIVENESS OF THE ESCP, OR TO COMPLY WITH THE SD DENR PERMIT. THE LANDSCAPE ARCHITECT WILL EVALUATE AND DETERMINE IF ANY CONTRACTOR REQUESTED CHANGES TO THE ESCP SHOULD BE MADE. THE CONTRACTOR IS RESPONSIBLE TO IMPLEMENT THESE CHANGES AS SOON AS PRACTICAL. THE CONTRACTOR SHALL HAVE AVAILABLE, ON-SITE, THE ORIGINAL ESCP WITH ANY MODIFICATIONS IMPLEMENTED IDENTIFIED ON THE ESCP.

INSPECTIONS

THE CONTRACTOR SHALL ENSURE THAT QUALIFIED PERSONNEL PERFORM INSPECTIONS ON THE PROJECT AT THE FOLLOWING MINIMUM FREQUENCY UNTIL THE SITE HAS REACHED FINAL STABILIZATION AND A NOTICE OF TERMINATION IS SUBMITTED TO THE SD DANR:

- PRIOR TO REMOVAL OF ANY SURFACING OR TOPSOIL
- ONCE EVERY SEVEN CALENDAR DAYS (MINIMUM), WHEN RUNOFF IS UNLIKELY DUE TO WINTER CONDITIONS THE INSPECTIONS MAY BE REDUCED TO ONCE A MONTH.
- WITHIN 24 HOURS OF EVERY RAINFALL 1/2 INCH OR GREATER.
- AFTER A SNOW MELT THAT CAUSES EROSION.
- WITHIN 24 HOURS OF A COMPLAINT BEING MADE TO THE CONTRACTOR OR PROJECT OWNER. THE ENGINEER RESERVES THE RIGHT TO PERFORM INSPECTIONS MORE FREQUENTLY THAN IDENTIFIED AND ADDITIONAL INSPECTIONS WILL BE MADE OF OBVIOUS ITEMS IF NON-COMPLIANCE EXISTS. IF THE CONTRACTOR FAILS TO ATTEND ANY INSPECTIONS, IT DOES NOT RELIEVE THEM OF THEIR RESPONSIBILITY TO COMPLY WITH ANY CORRECTION OF MAINTENANCE ACTIONS REQUIRED.

ITEMS NOTED AS BEING NON-COMPLIANT OR NEEDING MAINTENANCE AS A RESULT OF THE INSPECTIONS MUST BE CORRECTED AS SOON AS PRACTICAL. THE SITE SHALL CONTINUE TO BE CONSIDERED IN NON-COMPLIANCE UNTIL THE ISSUE HAS BEEN CORRECTED TO THE SATISFACTION OF THE ENGINEER. NOTICE OF TERMINATION

THE CONTRACTOR IS RESPONSIBLE FOR COMPLYING WITH THE ESCP UNTIL A NOTICE OF TERMINATION (NOT) OF COVERAGE UNDER THE GENERAL PERMIT HAS BEEN ISSUED. THE NOTICE WILL BE PREPARED BY THE CONTRACTOR FOR SUBMITTAL TO THE OWNOR AND TO THE SD DENR WHEN ALL STORM WATER DISCHARGES COVERED BY THE PERMIT ARE ELIMINATED AND FINAL STABILIZATION HAS BEEN ACHIEVED ON ALL PORTIONS OF THE SITE FOR WHICH THE PERMITEE IS RESPONSIBLE. FINAL STABILIZATION MEANS EITHER OR A

- COMBINATION OF:
- ALL SOIL DISTURBING ACTIVITIES AT THE SITE HAVE BEEN COMPLETED AND UNIFORM PERENNIAL
- VEGETATIVE COVER WITH A DENSITY OF 70% OF THE NATIVE COVER FOR UNPAVED AREAS AND AREAS
- NOT COVERED BY PERMANENT STRUCTURES HAS BEEN ESTABLISHED, OR EQUIVALENT PERMANENT

- STABILIZATION MEASURES (RIPRAP, GABIONS, OR GEO-TEXTILES) HAVE BEEN EMPLOYED;

GOOD HOUSEKEEPING

NON-STRUCTURAL BMP'S USED AS GOOD HOUSEKEEPING MEASURES CAN, TO SOME DEGREE, PREVENT THE DEPOSITION OF POLLUTANTS ON THE URBAN LANDSCAPE OR REMOVE POLLUTANTS AT THEIR SOURCE. THE SOURCE OF POLLUTANTS FOR ASSIMILATION INTO STORM WATER IS THE LAND SURFACE ITSELF, ESPECIALLY THE IMPERVIOUS SURFACES IN THE URBAN AREA. THUS, IT IS EXPECTED THAT WHEN NON-STRUCTURAL MEASURES ARE EFFECTIVELY IMPLEMENTED, THEY WILL REDUCE THE AMOUNT OF POLLUTANTS BEING DEPOSITED ON THE LAND SURFACES FOR EVENTUAL CONTACT WITH STORM WATER AND TRANSPORTED TO THE RECEIVING WATER SYSTEM. THEREFORE, THE CONTRACTOR SHOULD EVALUATE AND DETERMINE WHICH APPROPRIATE GOOD HOUSEKEEPING MEASURES LISTED BELOW SHOULD BE USED. OPERATIONS AND MAINTENANCE: TO ASSURE THAT EQUIPMENT AND WORK RELATED PROCESSES ARE WORKING WELL; THE FOLLOWING PRACTICES CAN BE IMPLEMENTED:

- MAINTAIN DRY AND CLEAN FLOORS AND GROUND SURFACES BY USING BROOMS, SHOVELS, VACUUM CLEANERS, OR CLEANING MACHINES RATHER THAN WET CLEANUP METHODS.
- REGULARLY PICK UP AND DISPOSE GARBAGE AND WASTE MATERIAL.
- MAKE SURE ALL EQUIPMENT AND RELATED PROCESSES ARE WORKING PROPERLY AND PREVENTATIVE MAINTENANCE IS KEPT UP WITH ON BOTH.
- ROUTINELY INSPECT EQUIPMENT AND PROCESSES FOR LEAKS OR CONDITIONS THAT COULD LEAD TO DISCHARGES OF CHEMICALS OR CONTACT OF STORM WATER WITH RAW MATERIALS, INTERMEDIATE MATERIALS, WASTE MATERIALS, OR PRODUCTS USED ON-SITE.
- ASSURE ALL SPILL CLEANUP PROCEDURES ARE UNDERSTOOD BY EMPLOYEES. TRAINING OF EMPLOYEES ON PROPER CLEANUP PROCEDURES SHALL BE IMPLEMENTED.
- DESIGNATE SEPARATE AREAS OF THE SITE FOR AUTO PARKING VEHICLE REFUELING, CONCRETE TRUCK WASH-OUT, AND ROUTINE MAINTENANCE.
- CLEAN UP LEAKS, DRIPS, AND OTHER SPILLS IMMEDIATELY.
- COVER AND MAINTAIN DUMPSTER'S AND WASTE RECEPTACLES.

MATERIAL STORAGE PRACTICES: IMPROPERLY STORING MATERIAL ON-SITE CAN LEAD TO THE RELEASE OF MATERIALS AND CHEMICALS THAT CAN CAUSE STORM WATER RUNOFF POLLUTION. PROPER STORAGE TECHNIQUES INCLUDE THE FOLLOWING:

- PROVIDE ADEQUATE AISLE SPACE TO FACILITATE MATERIAL TRANSFER AND EASE OF ACCESS FOR INSPECTION.
- STORE CONTAINERS, DRUMS, AND BAGS AWAY FROM DIRECT TRAFFIC ROUTES TO PREVENT ACCIDENTAL SPILLS.
- STACK CONTAINERS ACCORDING TO MANUFACTURER'S INSTRUCTIONS TO AVOID DAMAGING THE CONTAINERS FROM IMPROPER WEIGHT DISTRIBUTION.
- STORE CONTAINERS ON PALLETS OR SIMILAR DEVICES TO PREVENT CORROSION OF CONTAINERS THAT RESULTS FROM CONTAINERS COMING IN CONTACT WITH MOISTURE ON THE GROUND.
- STORE TOXIC OR HAZARDOUS LIQUIDS WITHIN CURBED AREA OR SECONDARY CONTAINERS.
- ASSIGN RESPONSIBILITY OF HAZARDOUS MATERIAL INVENTORY TO A LIMITED NUMBER OF PEOPLE WHO ARE TRAINED TO HANDLE SUCH MATERIALS.

MATERIAL INVENTORY PRACTICES: AN UP-TO-DATE INVENTORY KEPT ON ALL MATERIALS (BOTH HAZARDOUS AND NON-HAZARDOUS) PRESENT ON-SITE WILL HELP TRACK HOW MATERIALS ARE STORED AND HANDLED ONSITE, AND IDENTIFY WHICH MATERIALS AND ACTIVITIES POSE THE MOST RISK TO THE ENVIRONMENT. THE FOLLOWING DESCRIPTION PROVIDES THE BASIC STEPS IN COMPLETING A MATERIAL INVENTORY:

- IDENTIFY ALL CHEMICAL SUBSTANCES PRESENT AT THE WORK SITE. PERFORM A WALK-THROUGH OF THE SITE, REVIEW PURCHASE ORDERS, LIST CHEMICAL SUBSTANCES USED, AND OBTAIN MATERIAL SAFETY DATA SHEETS (MSDS) FOR ALL CHEMICALS.
- LABEL ALL CONTAINERS. LABELS SHALL PROVIDE NAME AND TYPE OF SUBSTANCE, STOCK NUMBER, EXPIRATION DATE, HEALTH HAZARDS, HANDLING SUGGESTIONS, AND FIRST AID INFORMATION. THIS MATERIAL CAN ALSO BE FOUND ON THE MSDS.
- CLEARLY MARK ON THE HAZARDOUS MATERIALS INVENTORY WHICH CHEMICALS REQUIRE SPECIAL HANDLING, STORAGE, USE, AND DISPOSAL CONSIDERATIONS. DECISIONS ON THE AMOUNTS OF HAZARDOUS MATERIALS THAT ARE STORED ON-SITE SHALL INCLUDE AN EVALUATION OF ANY EMERGENCY CONTROL SYSTEMS THAT ARE IN PLACE. ALL STORAGE AREAS SHALL BE DESIGNED TO CONTAIN ANY SPILLS.

TRAINING AND PARTICIPATION: FREQUENT AND PROPER TRAINING IN GOOD HOUSEKEEPING TECHNIQUES REDUCES THE POSSIBILITY OF CHEMICALS OR EQUIPMENT THAT WILL BE MISHANDLED. REDUCING WASTE GENERATION IS ANOTHER IMPORTANT POLLUTION PREVENTION TECHNIQUE. THE FOLLOWING ARE WAYS TO GET PEOPLE INVOLVED IN GOOD HOUSEKEEPING PRACTICES.

- PROVIDE INFORMATION SESSIONS ON GOOD HOUSEKEEPING PRACTICES IN TRAINING PROGRAMS.
- DISCUSS GOOD HOUSEKEEPING AT MEETINGS.
- PUBLICIZE POLLUTION PREVENTION THROUGH POSTERS OR SIGNS.

SPILL PREVENTION AND RESPONSE

A SPILL PREVENTION CONTROL AND COUNTERMEASURE PLAN (SPCC) IDENTIFIES AREA WHERE SPILLS CAN OCCUR ON-SITE, SPECIFIES MATERIALS HANDLING PROCEDURES, STORAGE REQUIREMENTS, AND IDENTIFIES SPILL CLEANUP PROCEDURES. THE PLAN IS INTENDED TO ESTABLISH STANDARD OPERATING PROCEDURES AND NECESSARY EMPLOYEE TRAINING TO MINIMIZE THE LIKELIHOOD OF ACCIDENTAL RELEASES OF POLLUTANTS THAT CAN CONTAMINATE STORM WATER.

STORM WATER CONTAMINATION ASSESSMENT, FLOW DIVERSION, RECORD KEEPING, INTERNAL REPORTING, EMPLOYEE TRAINING, AND PREVENTATIVE MAINTENANCE ARE ASSOCIATED BMP'S THAT CAN BE INCORPORATED INTO A COMPREHENSIVE SPILL PREVENTION PLAN.

EMERGENCY SPILL CLEANUP PLANS SHALL INCLUDE THE FOLLOWING INFORMATION:

- A DESCRIPTION OF THE FACILITY INCLUDING THE NATURE OF THE FACILITY ACTIVITY AND GENERAL TYPES AND QUANTITIES OF CHEMICALS STORED AT THE FACILITY.
- A SITE PLAN SHOWING THE LOCATION OF STORAGE AREAS OF CHEMICALS, THE LOCATION OF STORM DRAINS, SITE DRAINAGE PATTERNS, FIREFIGHTING EQUIPMENT AND WATER SOURCE LOCATIONS, AND THE LOCATION AND DESCRIPTION OF ANY DEVICES USED TO CONTAIN SPILLS SUCH AS POSITIVE CONTROL VALVES.
- NOTIFICATION PROCEDURES TO BE IMPLEMENTED IN THE EVENT OF A SPILL SUCH AS PHONE NUMBERS OF KEY PERSONNEL AND APPROPRIATE REGULATORY AGENCIES.
- INSTRUCTIONS REGARDING CLEANUP PROCEDURES.

- DESIGNATED PERSONNEL WITH OVERALL SPILL RESPONSE CLEANUP RESPONSIBILITY.
- QUICK NOTIFICATION OF CITY OF DEADWOOD FIRE AND RESCUE FOR SPILLS THAT CANNOT BE HANDLED BY LOCAL SITE STAFF.

METHODS OF ENSURING SURFACE WATER QUALITY

THE ONLY NON-STORM WATER DISCHARGE ALLOWED BY THE GENERAL PERMIT FOR STORM WATER DISCHARGE ASSOCIATED WITH CONSTRUCTION ACTIVITIES IS UNCONTAMINATED GROUND WATER OR WATERS, USED AS A BEST MANAGEMENT PRACTICE, TO WASH VEHICLES AND CONTROL DUST. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO OBTAIN A GENERAL PERMIT TO DISCHARGE UNDER THE SOUTH DAKOTA SURFACE WATER DISCHARGE SYSTEM FOR TEMPORARY DISCHARGE ACTIVITIES IN SOUTH DAKOTA (DEWATERING PERMIT) FOR ALL OTHER NON-STORM WATER DISCHARGES. ALL MONITORING, TESTING, AND OTHER REQUIREMENTS OF THE DEWATERING PERMIT ARE THE RESPONSIBILITY OF THE CONTRACTOR.

PUMPING (MECHANICALLY DISCHARGING) SEDIMENT LADEN WATER INCLUDING PONDED STORM WATER OR CONTAMINATED TRENCH DEWATERING INTO THE STORM SEWER OR OFF THE PROJECT SITE IS NOT COVERED UNDER THE GENERAL PERMIT. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO OBTAIN AND COMPLY WITH A DEWATERING PERMIT FOR THESE ACTIVITIES. THE ENGINEER MAY NOTIFY THE SD DANR IF THE CONTRACTOR IS OBSERVED PUMPING SEDIMENT LADEN WATER INTO THE STORM SEWER OR OFF SITE. PUMPING SEDIMENT LADEN STORM WATER THROUGH INLET PROTECTION IS NOT ALLOWED AS A BMP.

IN LIEU OF PUMPING SEDIMENT LADEN WATER THE FOLLOWING ARE SOME METHODS THE CONTRACTOR MAY USE TO CONTROL SEDIMENT LADEN WATER:

- THE BEST METHOD IS FOR THE CONTRACTOR TO MAINTAIN POSITIVE DRAINAGE DURING ALL PHASES OF THE PROJECT TO PREVENT WATER FROM PONDING ON THE PROJECT.
- TREAT THE SEDIMENT LADEN WATER ON-SITE THROUGH THE USE OF FILTER BAGS, DEFLOCCULATING CHEMICALS, SEDIMENT BASINS, OR A PORTABLE CONTAINMENT SYSTEM.
- PUMP OR DISCHARGE THE WATER TO OTHER PORTIONS OF THE SITE. THIS IS ALLOWED IF WATERS DO NOT LEAVE THE PROJECT LIMITS.

NO SEPARATE PAYMENT WILL BE MADE TO THE CONTRACTOR TO COMPLY WITH THE DEWATERING PERMIT.

MODIFICATIONS OF EROSION AND SEDIMENT CONTROL DEVICES TO PREVENT PROPERTY DAMAGE

THE CONTRACTOR IS RESPONSIBLE TO MAINTAIN DRAINAGE. IN THE EVENT THAT AN EROSION OR SEDIMENT CONTROL DEVICE IS OBSTRUCTING DRAINAGE AND DAMAGE TO PROPERTY IS POSSIBLE THE CONTRACTOR MAY TEMPORARILY MODIFY OR REMOVE THE DEVICE TO FACILITATE DRAINAGE. THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE ENGINEER TO DISCUSS AND IMPLEMENT ALTERNATIVES TO COMPLY WITH THE ESCP AND GENERAL PERMIT.

DURING THE COURSE OF CONSTRUCTION HEAVY RAINFALL EVENTS MAY OCCUR. THE CONTRACTOR SHALL MAKE SURE THAT THE STORMWATER RUNOFF WILL GO INTO THE INLETS, WHICH MAY REQUIRE REMOVING THE INLET PROTECTION TEMPORARILY. IN NO CASE SHALL THE INLETS BE SO PLUGGED AS TO ALLOW STORMWATER TO GET ONTO HOMEOWNERS PROPERTY OR INTO BASEMENTS. I.E. THE CONTRACTOR NEEDS TO HAVE PERSONNEL ON-SITE DURING RAIN EVENTS TO PULL INLET PROTECTION IF FLOODING OF PRIVATE PROPERTY BEGINS. DO NOT PULL PRIOR TO STORM EVENTS OR IF THE EVENT IS SMALL.

SOIL SURFACE STABILIZATION PRACTICES

AFTER CONSTRUCTION BEGINS, SOIL SURFACE STABILIZATION SHALL BE APPLIED WITHIN 14 DAYS TO ALL DISTURBED AREAS THAT MAY NOT BE AT FINAL GRADE BUT WILL REMAIN DORMANT (UNDISTURBED) FOR PERIODS LONGER THAN 21 CALENDAR DAYS. WITHIN 14 DAYS AFTER FINAL GRADE IS REACHED ON ANY PORTION OF THE SITE, PERMANENT OR TEMPORARY SOIL SURFACE STABILIZATION SHALL BE APPLIED TO DISTURBED AREAS AND SOIL STOCKPILES. THE FOLLOWING TABLE LISTS THE AMOUNT OF TIME VARIOUS EROSION CONTROL MEASURES ARE APPLICABLE:

MAXIMUM TIME LIMITS OF LAND EXPOSURES FOR SELECTION OF EROSION CONTROLS

EROSION CONTROL METHOD	MAXIMUM ALLOWABLE PERIOD OF EXPOSURE (MONTHS)
SURFACE ROUGHENING	1
MULCHING	12
TEMPORARY RE-VEGETATION	12-24
PERMANENT RE-VEGETATION	24 OR MORE
SOIL STOCKPILE RE-VEGETATION	2
EARLY APPLICATION OF ROAD BASE	1

MAINTENANCE

THE CONTRACTOR IS RESPONSIBLE FOR MAINTAINING AND REPAIRING ALL TEMPORARY AND PERMANENT EROSION AND SEDIMENT CONTROL DEVICES UNTIL A NOTICE OF TERMINATION IS FILED.

REMOVAL OF TEMPORARY EROSION AND SEDIMENT CONTROL DEVICES


THE CONTRACTOR IS RESPONSIBLE TO REMOVE ALL TEMPORARY EROSION CONTROL AND SEDIMENT CONTROL DEVICES WHEN THE SITE REACHES FINAL STABILIZATION. NO SEPARATE PAYMENT WILL BE MADE TO THE CONTRACTOR FOR REMOVING SUCH ITEMS.

PERMANENT STABILIZATION MEASURES

PERMANENT SEEDING WILL BE USED FOR PERMANENT STABILIZATION OF ALL AREAS LOCATED THROUGHOUT THE PROJECT.

EROSION AND SEDIMENT CONTROL SEQUENCE AND TIME SCHEDULE

ANTICIPATED START DATE OF CONSTRUCTION IS SUMMER 2024
INSTALL PRELIMINARY EROSION CONTROL MEASURES PRIOR TO BEGINNING GRADING ACTIVITIES IN EACH PHASE
UTILITY CONSTRUCTION SUMMER 2024
SURFACING SUMMER 2024
SEEDING AND MULCHING SUMMER/FALL 2024

Sub Sheet ER-1 Sheet _____ OF _____	DESIGNED BY: CMW	NO.	REVISION	DATE	Sheet Title	Project Name	Boot Hill Estates Phase 1 Deadwood, SD	 Wyss Associates, Inc. Landscape Architecture Land Planning Streetscape Design 728 Sixth Street - Rapid City, South Dakota 57701-3670 Ph. 605.348.2268 admin@wyssassociates.com www.wyssassociates.com Est. 1981 - Celebrating Over 40 Years of Award Winning Landscape Design
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	APPROVED BY: CMW							
	PROJECT NO. 231201							
	DATE: JUNE 18, 2024							

EROSION AND SEDIMENT CONTROL MEASURES

INSTALLATION OF TEMPORARY EROSION CONTROL MEASURES

THE CONTRACTOR SHALL NOT BEGIN THE REMOVAL OF SURFACING OR TOPSOIL WITHIN THE APPLICABLE WORK AREA UNTIL ALL APPLICABLE TEMPORARY EROSION CONTROL MEASURES ARE PLACED. TEMPORARY EROSION CONTROL MEASURES SHALL BE INSTALLED AS NECESSARY AS CONSTRUCTION PROGRESSES AND THESE TEMPORARY EROSION CONTROL DEVICES SHALL BE INSTALLED WITHIN 24 HOURS AT LOCATIONS IDENTIFIED ON THE ESCP.

SURFACE ROUGHENING (SR)

SURFACE ROUGHENING SHALL BE DONE AFTER TOPSOIL PLACEMENT AND BEFORE PERMANENT SEEDING, FERTILIZING, AND MULCHING APPLICATIONS. REFER TO DETAILS. THE EQUIPMENT USED FOR SURFACE ROUGHENING SHALL BE EQUIPPED WITH TRACKS THAT ARE CAPABLE OF CREATING RIDGES IN THE SOIL THAT ARE PERPENDICULAR TO THE SLOPE. THE FINAL CONDITION OF THE SURFACE ROUGHENING SHALL BE APPROVED BY THE ENGINEER.

ALL COSTS ASSOCIATED WITH SURFACE ROUGHENING INCLUDING LABOR, EQUIPMENT, AND MATERIALS SHALL BE INCIDENTAL.

PERIMETER PROTECTION

PERIMETER PROTECTION SHALL BE INSTALLED AT LOCATIONS SHOWN ON THE PLANS OR AS DIRECTED BY THE ENGINEER, TO RETAIN SEDIMENT FROM BEING TRANSPORTED OFF THE PROJECT SITE. PERIMETER PROTECTION MAY BE CONSTRUCTED WITH SILT FENCE OR SEDIMENT CONTROL WATTLES. PERIMETER PROTECTION SHALL BE INSPECTED IN ACCORDANCE WITH THE SWPPP AND/OR EROSION SEDIMENT CONTROL PERMIT.

PAYMENT FOR PERIMETER PROTECTION WILL BE PER LINEAR FOOT FOR THE VARIOUS ITEMS USED FOR PERIMETER PROTECTION SUCH AS "SILT FENCE" AND "SEDIMENT CONTROL WATTLE".

SEDIMENT CONTROL WATTLES (SCW)

SEDIMENT CONTROL WATTLES CAN BE USED FOR PERIMETER CONTROL, INLET PROTECTION, CHECK DAMS, SLOPE PROTECTION, ETC. AND SHALL BE INSTALLED AT LOCATIONS AS SHOWN ON THE DRAWINGS AND AT LOCATIONS DETERMINED BY THE ENGINEER DURING CONSTRUCTION. REFER TO DETAILS.

THE CONTRACTOR SHALL PROVIDE CERTIFICATION THAT THE SEDIMENT CONTROL WATTLES DO NOT CONTAIN NOXIOUS WEED SEEDS. FOR COMPOST SOCKS THE CONTRACTOR SHALL ALSO PROVIDE CERTIFICATION THAT THE COMPOST USED IS FREE FROM NOXIOUS WEED SEEDS.

THE CONTRACTOR SHALL REMOVE SEDIMENT TRAPPED BY THE WATTLE WHEN THE SURFACE OF THE SEDIMENT REACHES ONE-HALF THE HEIGHT OF THE EXPOSED WATTLE. DAMAGED AREAS SHOULD BE REPAIRED IMMEDIATELY UNTIL THE VEGETATION IS ESTABLISHED AND GROWING THROUGH THE MATERIAL.

THE SEDIMENT CONTROL WATTLE SHALL BE THE DIAMETER SHOWN ON THE DRAWINGS AND SELECTED FROM THE MANUFACTURERS LISTED BELOW: OR APPROVED EQUAL:

MANUFACTURER PRODUCT NAME

AMERICAN EXCELSIOR COMPANY CURLEX SEDIMENT LOG AND AEC PREMIER STRAW WATTLE ARLINGTON, TX
PHONE: 1-800-777-7645
WWW.AMEREXCEL.COM

FLAXTECH LLC BIOLOG FLAX STRAW WATTLE ROCKLAKE, ND

PHONE: 701-266-5417
WWW.FLAXTECH.NET

DIOTEN ENGINEERING, INC. COMPOST FILTER SOCK RAPID CITY, SD

WWW.DIOTEN.COM

ASPEN RIDGE SILT SOCK

RAPID CITY, SD PHONE 605-415-0695
WWW.SILT SOCKSD.COM

THE CONTRACTOR SHALL INSTALL EROSION CONTROL WATTLES ACCORDING TO THE MANUFACTURER'S INSTALLATION INSTRUCTIONS.

SEDIMENT CONTROL WATTLES SHALL BE PAID FOR AT THE CONTRACT UNIT PRICE PER LINEAL FOOT FOR "SEDIMENT CONTROL WATTLE". PAYMENT FOR ALL MATERIALS, LABOR AND EQUIPMENT NECESSARY TO INSTALL, MAINTAIN, REPAIR, AND REMOVE THE SEDIMENT CONTROL WATTLES SHALL BE INCLUDED IN THE CONTRACT UNIT PRICE PER LINEAL FOOT.

REMOVE AND RESET SEDIMENT CONTROL WATTLE

SEDIMENT CONTROL WATTLES MAY BE REMOVED AND RESET AS NECESSARY AS WORK PROGRESSES. THE SEDIMENT CONTROL WATTLES REMOVED AND RESET SHALL BE IN USEABLE CONDITION. ALL COSTS FOR REMOVING AND RESETTING THE SEDIMENT CONTROL WATTLES SHALL BE INCIDENTAL.

REMOVE SEDIMENT CONTROL WATTLE

SEDIMENT CONTROL WATTLE SHALL BE REMOVED WHEN VEGETATION IS ESTABLISHED. SOME OR ALL OF THE SEDIMENT CONTROL WATTLE MAY BE LEFT ON THE PROJECT UNTIL VEGETATION IS ESTABLISHED.

EROSION CONTROL BLANKET (ECB)

EROSION CONTROL BLANKET SHALL BE INSTALLED AT LOCATIONS AS SHOWN ON THE DRAWINGS AND AT LOCATIONS DETERMINED BY THE ENGINEER DURING CONSTRUCTION. REFER TO DETAIL.

EROSION CONTROL BLANKETS ARE PLACED INTO THE FOLLOWING CATEGORIES:

- TYPE 1 - USED FOR TEMPORARY STABILIZATION OF SLOPES OF LESS THAN 10H:1V, NOT ALLOWED IN CHANNEL APPLICATIONS;
- TYPE 2 - USED FOR TEMPORARY STABILIZATION OF SLOPES OF 3H:1V OR LESS, CAN BE USED IN LOW GRADIENT DITCHES AND CHANNELS;
- TYPE 3 - USED FOR TEMPORARY STABILIZATION OF SLOPES OF 2H:1V OR LESS, USED IN DITCHES AND CHANNELS; AND
- TYPE 4 - USED FOR TEMPORARY STABILIZATION OF SLOPES OF 1H:1V OR LESS, USED IN DITCHES AND CHANNELS.

THE EROSION CONTROL BLANKET SHALL BE SELECTED FROM THE MANUFACTURES LISTED BELOW; OR APPROVED EQUAL:

MANUFACTURER PRODUCT NAME

AMERICAN EXCELSIOR CO TYPE 1: CURLEX NETFREE, CURLEX I; AEC PREMIER STRAW S ARLINGTON, TX
TYPE 2: CURLEX II; AEC PREMIER STRAW 2
PHONE: 1-800-777-7645 TYPE 3: CURLEX III; AEC PREMIER STRAW/COCONUT 2
WWW.AMEREXCEL.COM TYPE 4: AEC PREMIER COCONUT 2/NET

WESTERN EXCELSIOR TYPE 1 -SS2 RG

MANCOS, CO TYPE 2 - SS2
PHONE: 1-800-833-8573 TYPE 3 - S2 WWW.WESTERNEXCELSIOR.COM TYPE 4 - CC4

THE CONTRACTOR SHALL INSTALL EROSION CONTROL BLANKET ACCORDING TO THE MANUFACTURER'S INSTALLATION INSTRUCTIONS.

EROSION CONTROL BLANKET WILL BE MEASURED TO THE NEAREST SQUARE YARD. MEASUREMENT OF THE OVERLAP AND TOP AND BOTTOM FOLDS WILL NOT BE MADE. EROSION CONTROL BLANKET DAMAGED FROM CAUSES BEYOND THE CONTROL OF THE CONTRACTOR SHALL BE REPLACED AND THE REPLACEMENT QUANTITY ADDED TO THE ORIGINAL QUANTITIES USED.

PAYMENT WILL BE FULL COMPENSATION FOR SHAPING AND FINISHING CHANNEL, INSTALLING MATERIAL AND FURNISHING OF LABOR, EQUIPMENT, STAPLES, MATERIAL, AND INCIDENTALS NECESSARY. PAYMENT WILL BE MADE AT THE CONTRACT UNIT PRICE PER SQUARE YARD FOR "EROSION CONTROL BLANKET".

SHAPING FOR EROSION CONTROL BLANKET

THE AREAS RECEIVING EROSION CONTROL BLANKET SHALL BE SHAPED AS SPECIFIED IN MANUFACTURER'S RECOMMENDATIONS. ALL COSTS FOR SHAPING THE FOR EROSION CONTROL BLANKET INCLUDING LABOR AND EQUIPMENT SHALL BE INCIDENTAL TO THE CONTRACT UNIT PRICE FOR EROSION CONTROL BLANKET .

INLET PROTECTION DEVICE (IPD)

INLET PROTECTION DEVICES SHALL BE INSTALLED TO TEMPORARILY PREVENT SEDIMENT-LADEN RUNOFF FROM ENTERING STORM SEWERS AND/OR INLET PROTECTION DEVICES SHALL BE INSTALLED PROMPTLY AFTER CONSTRUCTION OF INLETS OR PAVING IS COMPLETE (TYPICALLY WITHIN 48 HOURS). THE TYPE OF INLET PROTECTION DEVICE TO BE USED (SEDIMENT CONTROL WATTLES, SILT FENCE, PROPRIETY INLET PROTECTION DEVICES, ETC.) IS DIFFERENTIATED ON THE DRAWINGS AND SHALL BE CONSTRUCTED AT LOCATIONS SHOWN ON THE DRAWINGS. REFER TO DETAILS. PROPRIETY INLET PROTECTION DEVICES SHOULD BE INSTALLED IN ACCORDANCE WITH MANUFACTURER SPECIFICATIONS.

THE CONTRACTOR SHALL REMOVE SEDIMENT TRAPPED BY THE INLET PROTECTION DEVICE WHEN THE SURFACE OF THE SEDIMENT REACHES ONE-HALF THE HEIGHT OF THE PROTECTION DEVICE OR IF PROPRIETARY INLET INSERT DEVICES ARE USED, SEDIMENT SHOULD BE REMOVED IN A TIMELY MANNER TO PREVENT DEVICES FROM BREAKING AND SPILLING SEDIMENT INTO THE STORM DRAIN PER THE MANUFACTURERS RECOMMENDATIONS.

INLET PROTECTION DEVICES SHALL BE REMOVED AND PROPERLY DISPOSED OF WHEN THE DRAINAGE AREA FOR THE INLET HAS REACHED FINAL STABILIZATION.

INLET PROTECTION DEVICES WILL BE MEASURED PER EACH TYPE INSTALLED. ADDITIONAL MEASUREMENT WILL BE MADE WHEN A DIFFERENT TYPE OF INLET PROTECTION IS INSTALLED AT EACH LOCATION. NO ADDITIONAL MEASUREMENT WILL BE MADE WHEN THE SAME TYPE OF INLET PROTECTION DEVICE IS REMOVED AND REINSTALLED AT THE SAME LOCATION. INLET PROTECTION DEVICES WILL BE PAID FOR AT THE CONTRACT UNIT PRICE PER EACH. PAYMENT SHALL BE FULL COMPENSATION FOR ALL MATERIALS, LABOR, EQUIPMENT, AND INCIDENTALS REQUIRED TO INSTALL, MAINTAIN, AND REMOVE THE INLET PROTECTION DEVICE.

VEHICLE TRACKING CONTROL (VTC)

THE CONTRACTOR SHALL INSTALL VEHICLE TRACKING CONTROL MEASURES AT LOCATIONS AS SHOWN ON THE DRAWINGS. REFER TO DETAILS.

THE CONTRACTOR SHALL MAINTAIN THE VEHICLE TRACKING CONTROL SUCH THAT MUD TRACKING AND SEDIMENT FLOW WILL NOT ENTER THE ROADWAY OR ADJACENT DRAINAGE AREAS. THE VEHICLE TRACKING CONTROL SHALL BE ROUTINELY INSPECTED AND THE CONTRACTOR SHALL REPAIR OR REPLACE MATERIAL AS DEEMED NECESSARY BY THE ENGINEER.

PAYMENT TO CONSTRUCT, MAINTAIN, AND REMOVE THE CONSTRUCTION ENTRANCE WILL BE PAID FOR UNDER THE LUMP SUM BID FOR "VEHICLE TRACKING CONTROL".

GRANULAR MATERIAL FOR VEHICLE TRACKING CONTROL

GRANULAR MATERIAL SHALL BE PLACED IN 6 INCH MAXIMUM LIFTS.

AGGREGATE FOR GRANULAR MATERIAL SHALL CONFORM TO THE FOLLOWING GRADATION REQUIREMENTS:

SIEVE SIZE PERCENT PASSING 3" 100% 2 1/2" 90-100% 1 1/2" 25-60% 3/4" 0-10% 1/2" 0-5%
GRANULAR MATERIAL WILL BE PAID FOR UNDER THE LUMP SUM BID FOR "VEHICLE TRACKING CONTROL". PAYMENT SHALL BE FULL COMPENSATION FOR FURNISHING AND PLACING MATERIALS, LABOR, AND EQUIPMENT.

CONCRETE WASHOUT AREA (CWA)

CONCRETE WASHOUT AREA SHALL BE PROVIDED FOR CONCRETE TRUCKS AS NECESSARY. REFER TO DETAILS.

PAYMENT FOR CONSTRUCTION AND MAINTENANCE OF CONCRETE WASHOUT AREAS SHALL BE INCIDENTAL.

STREET SWEEPING

VEHICLE TRACKING OF SEDIMENT FROM THE CONSTRUCTION SITE SHALL BE MINIMIZED. STREET SWEEPING, AS DEEMED NECESSARY BY THE ENGINEER, SHALL BE USED IF EROSION AND SEDIMENT CONTROL BEST MANAGEMENT PRACTICES ARE NOT ADEQUATE TO PREVENT SEDIMENT FROM BEING TRACKED ONTO THE STREET.

THE CONTRACTOR SHALL USE A PICKUP BROOM HAVING INTEGRAL SELF-CONTAINED STORAGE TO CLEAN THE ROADWAY.

ALL COSTS FOR CLEANING THE ROADWAY WITH A PICKUP BROOM SHALL BE INCIDENTAL.

PERMANENT SEEDING

THE AREA TO BE SEEDED CONSIST OF ALL NEWLY GRADED AREAS WITHIN THE PROJECT LIMITS EXCEPT FOR THE TOP OF ROADWAYS, TEMPORARY EASEMENTS UNDER CULTIVATION, AND AREAS DESIGNATED TO BE SOD. PERMANENT SEED MIXTURE: QUICK-2-GRO SEED MIX AVAILABLE FROM WARNE CHEMICAL IN RAPID CITY SD.
25% KENTUCKY BLUEGRASS (LXQ 110 BRAND)
25% PERENNIAL RYEGRASS (LXQ 220 BRAND)
25% CREEPING RED FESCUE (LXQ 330 BRAND)
25% ANNUAL RYEGRASS
SEED AT A RATE OF 5 LBS PER 1,000 SF

SEED MIX SHALL HAVE A SEALED DATE ON THE SEED TAG WITHIN THE PAST 4 YEARS.

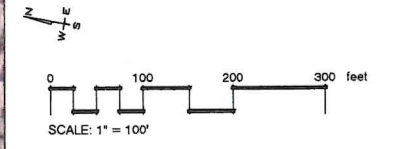
FIBER MULCHING

FIBER MULCH WILL BE APPLIED IN A SEPARATE OPERATION FOLLOWING PERMANENT SEEDING. AN ADDITIONAL 2% BY WEIGHT OF TACKIFIER WILL BE ADDED TO THE FIBER MULCH PRODUCT SELECTED FROM THE APPROVED PRODUCT LIST. IF THE PRODUCT SELECTED HAS GUAR GUM TACKIFIER INCLUDED, THEN THE ADDITIONAL 2% OF TACKIFIER WILL BE GUAR GUM. IF THE PRODUCT SELECTED HAS SYNTHETIC TACKIFIER INCLUDED, THEN THE ADDITIONAL 2% OF TACKIFIER WILL BE SYNTHETIC. THE CONTRACTOR WILL ALLOW THE FIBER MULCH TO CURE A MINIMUM OF 18 HOURS PRIOR TO WATERING OR ANY STORM EVENT TO ENSURE PROPER COHESION BETWEEN THE SOIL AND FIBER PARTICLES. ALL COSTS FOR THE ADDITIONAL TACKIFIER ADDED TO THE FIBER MULCH INCLUDING LABOR, EQUIPMENT, AND MATERIALS WILL BE INCIDENTAL TO THE CONTRACT UNIT PRICE PER POUND FOR "FIBER MULCHING". THE FIBER MULCH PROVIDED WILL BE FROM THE APPROVED PRODUCT LIST. THE APPROVED PRODUCT LIST FOR FIBER MULCH MAY BE VIEWED AT THE FOLLOWING INTERNET SITE:
HTTP://APPS.SD.GOV/HC60APPROVEDPRODUCTS/MAIN.ASPX

Sub Sheet	DESIGNED BY: CMW	NO.	REVISION	DATE	Sheet Title	Project Name		
ER-2	DRAWN BY: CAD				Erosion Control Notes	Boot Hill Estates Phase 1		
Sheet	APPROVED BY: CMW					Deadwood, SD		
OF	PROJECT NO. 231201							
	DATE: JUNE 18, 2024							

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LEGEND:

VTC VEHICLE TRACKING CONTROL

SEE 3 LA-2

Sub Sheet
ER-3
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APPROVED BY:	CMW			
PROJECT NO.	231201			
DATE	JUNE 18, 2024			

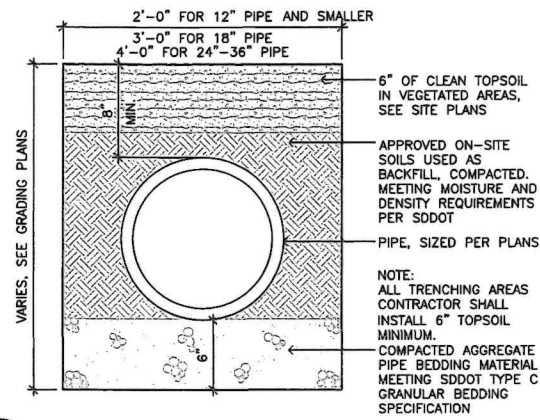
Sheet Title
Erosion Control Plan

Project Name
Boot Hill Estates Phase 1
 Deadwood, SD

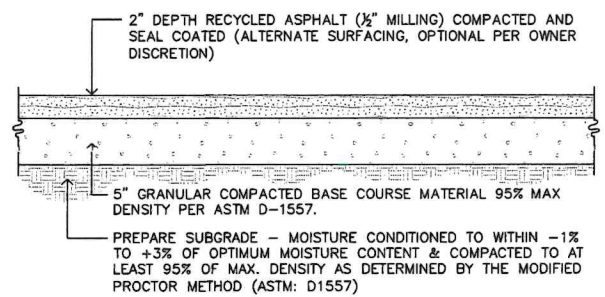
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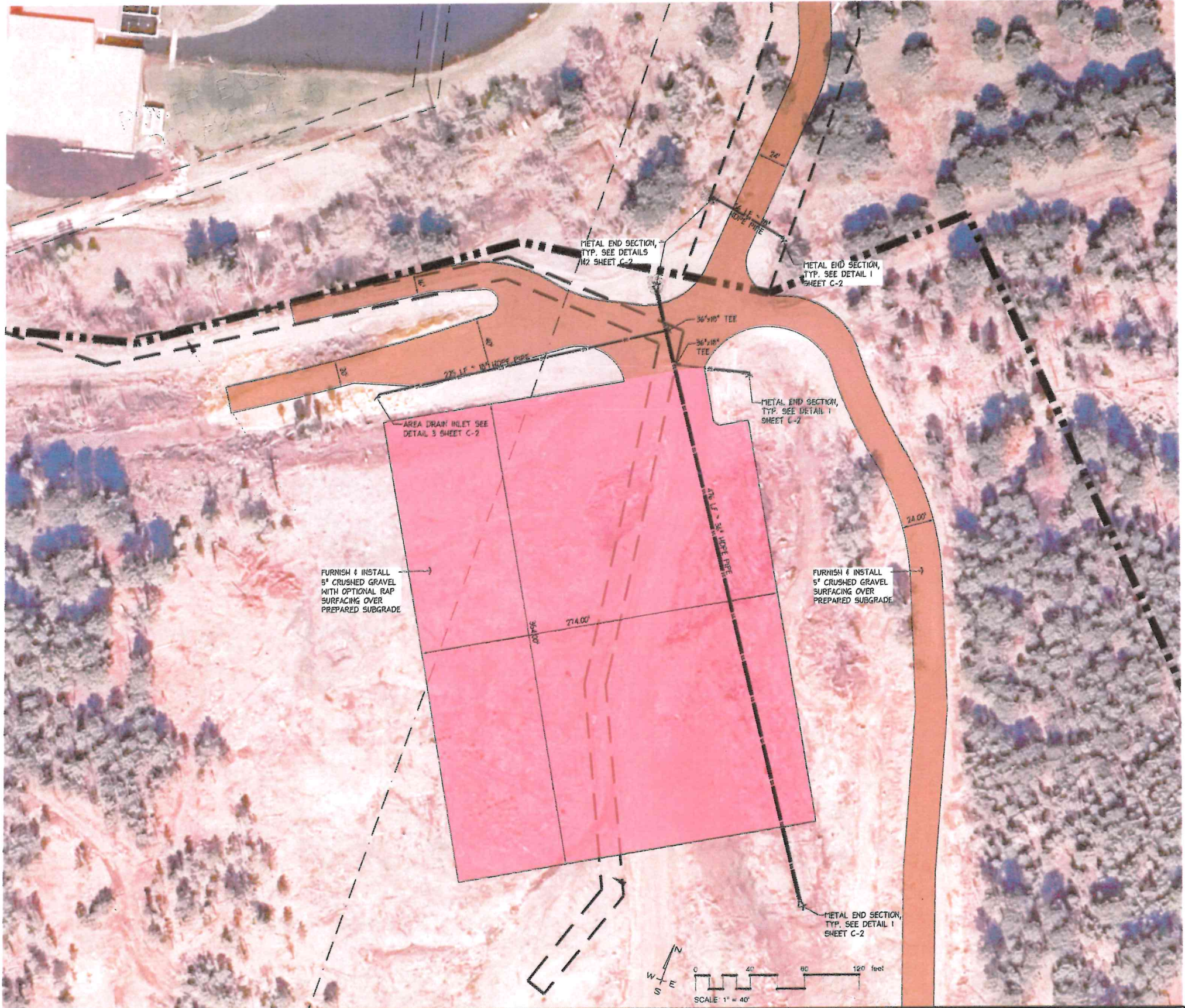
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1 SECTION: STORM SEWER PIPE TRENCH
SCALE: 1 1/2" = 1'-0"

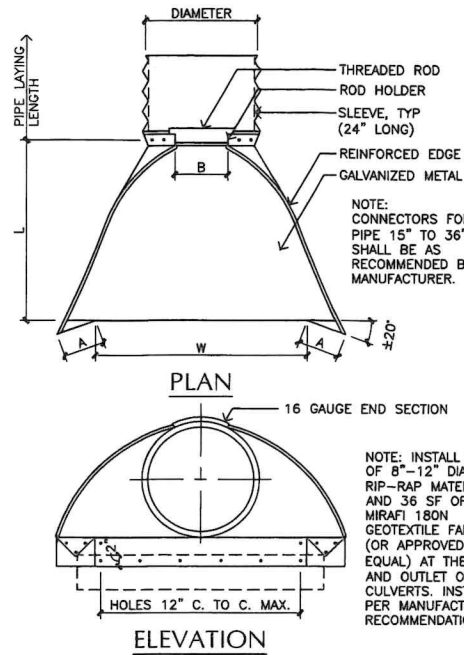


2 SECTION: TYPICAL GRAVEL STAGING AREA SECTION
SCALE: 1 1/2" = 1'-0"



Sub Sheet C-1 Sheet OF	DESIGNED BY: CMW	NO.	REVISION	DATE	Sheet Title Layout Plan	Project Name Boot Hill Estates Phase 1 Deadwood, SD	 Landscape Architecture Land Planning Streetscape Design 728 Sixth Street - Rapid City, South Dakota 57701-3670 Ph. 605.348.2268 admin@wyssassociates.com www.wyssassociates.com Est. 1981 - Celebrating Over 40 Years of Award Winning Landscape Design
	DRAWN BY: CAD						
	APPROVED BY: CMW						
	PROJECT NO. 231201						
	DATE: JUNE 18, 2024						

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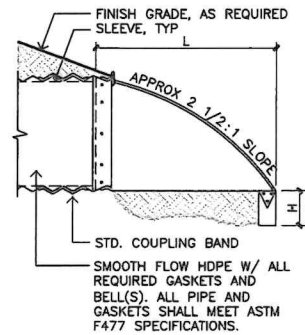


FLARED END DIMENSIONS FOR HDPE PIPE							
PIPE DIA.	GA.	A (1"±)	H (1"±)	L (10"±)	W (2"±)	SLOPE	B (1"±)
8"	16	6"	6"	14"	21"	2.25	27"
12"	16	6.5"	6.5"	25"	29"	2.5	10"
18"	16	7.5"	6.5"	32"	35"	2.5	15"
24"	16	7.5"	6.5"	36"	45"	2.5	18"
36"	16	7.5"	8.6"	58"	63"	2.5	25"

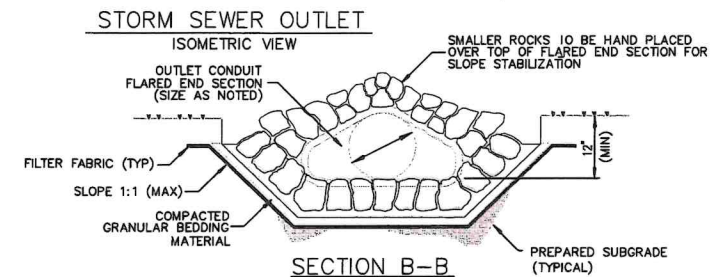
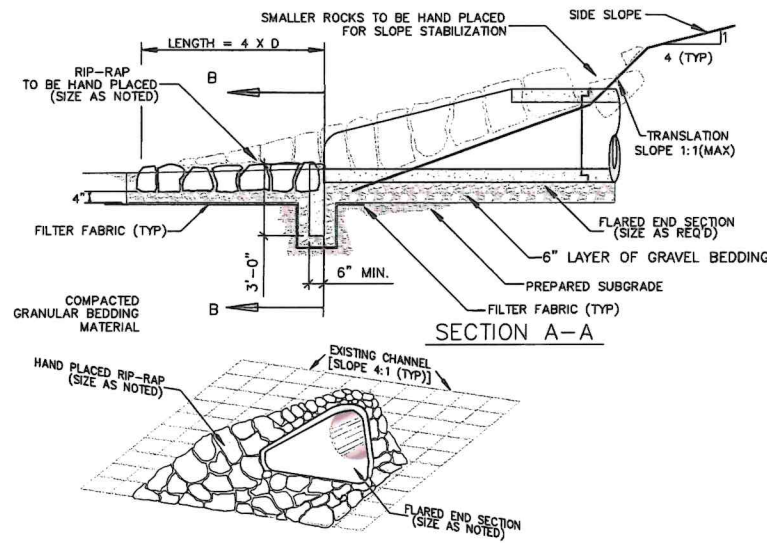
BLACK POLY GOLDFLO SMOOTH FLOW PIPE (ASTM F 2881) AND METAL END SECTIONS MANUFACTURED BY: PRINSCO PIPE 1717 16th Street NE Willmar, MN 56201 1-320-905-7505 (SD REP JOHN SANTJER)

NOTE: CONNECTORS FOR PIPE 15" TO 36" SHALL BE AS RECOMMENDED BY MANUFACTURER.

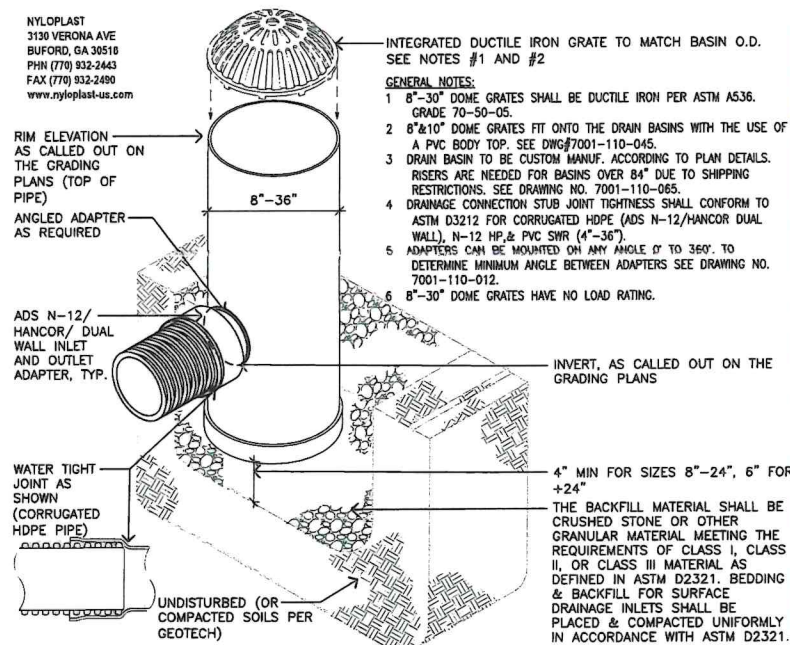
NOTE: INSTALL 1/2 C.Y. OF 8"-12" DIA. RIP-RAP MATERIAL AND 36 SF OF 8oz MIRAFI 180N GEOTEXTILE FABRIC (OR APPROVED EQUAL) AT THE INLET AND OUTLET OF ALL CULVERTS. INSTALL PER MANUFACTURERS RECOMMENDATIONS.



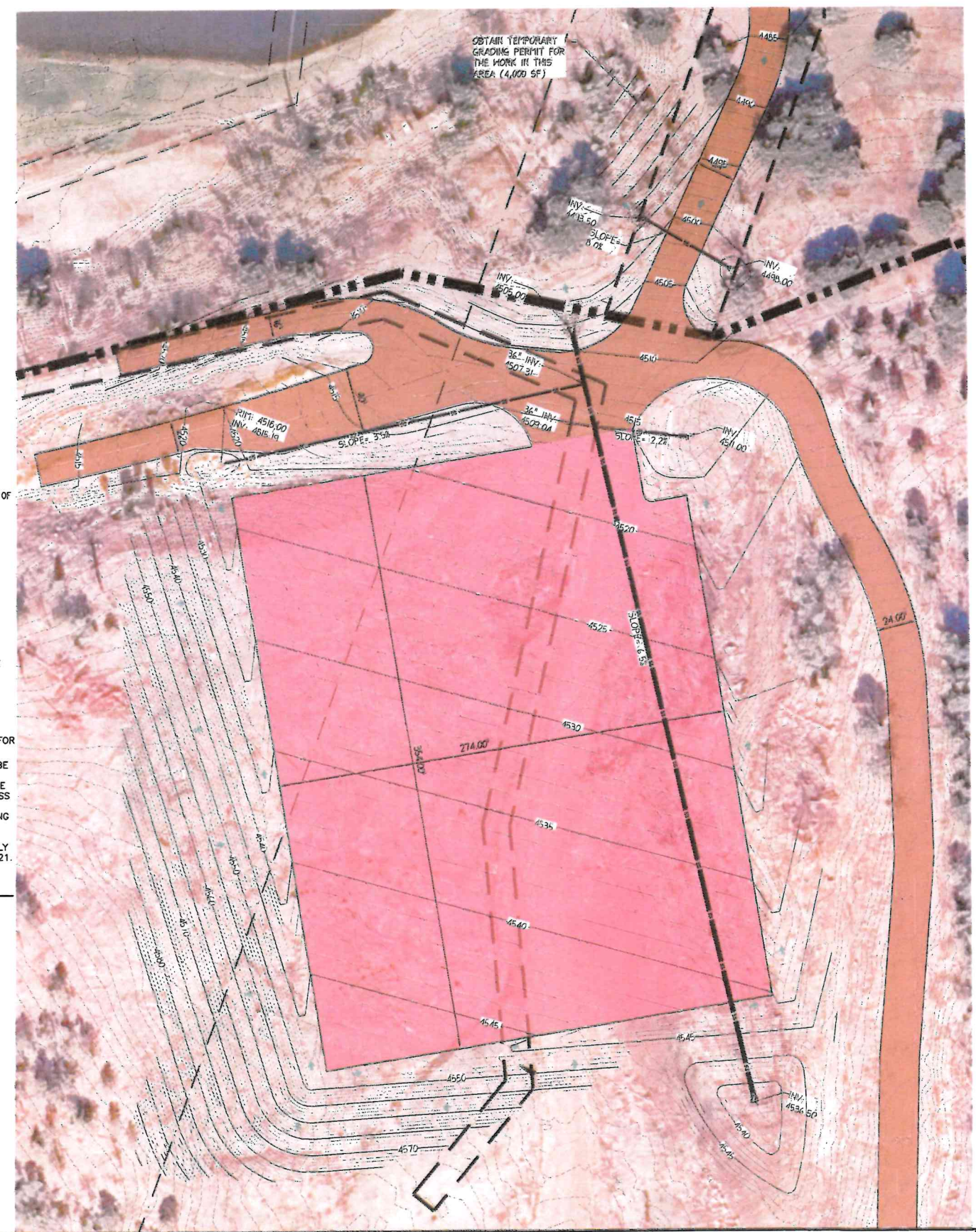
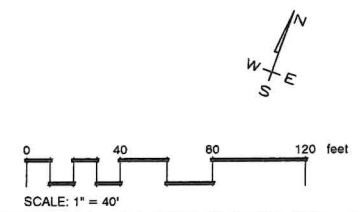
1 C-2 DETAIL: HDPE DRAIN PIPE & METAL CULVERT END SECTION NOT TO SCALE



2 C-2 DETAIL: FLARED END OUTLET PROTECTION SCALE: 1/2" = 1'-0"



3 C-2 SECTION: NYLOPLAST DRAIN BASIN WITH DOME GRATE SCALE: 1 1/2" = 1'-0"



Sub Sheet C-2 Sheet OF	DESIGNED BY: CMW DRAWN BY: CAD APPROVED BY: CMW PROJECT NO. 231201 DATE: JUNE 18, 2024	NO. REVISION DATE	Sheet Title Grading Plan	Project Name Boot Hill Estates Phase 1 Deadwood, SD	<p>Wyss Associates, Inc. Landscape Architecture Land Planning Streetscape Design 728 Sixth Street - Rapid City, South Dakota 57701-3670 Ph. 605.348.2268 admin@wyssassociates.com www.wyssassociates.com Est. 1981 - Celebrating Over 40 Years of Award Winning Landscape Design</p>
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