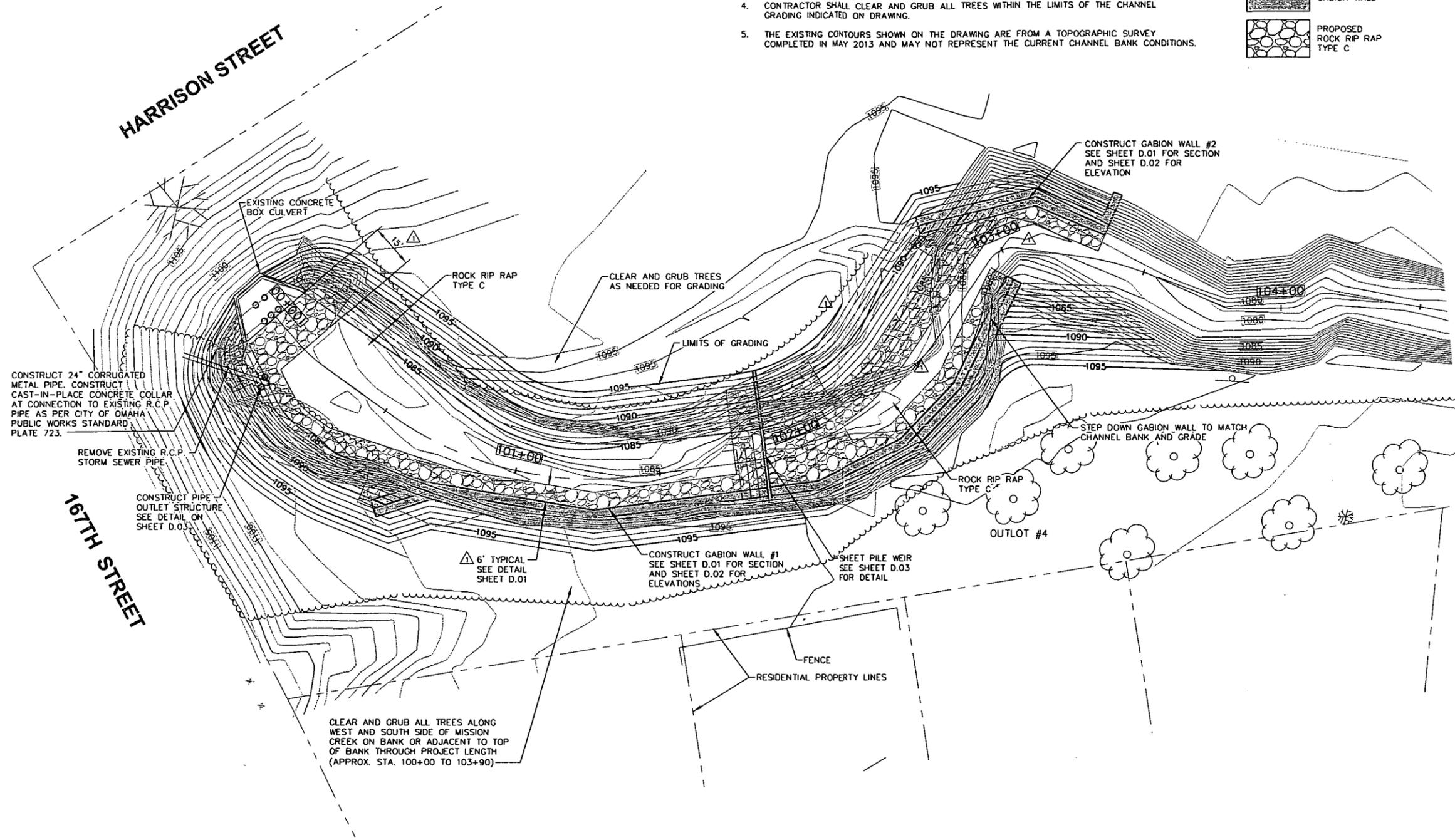
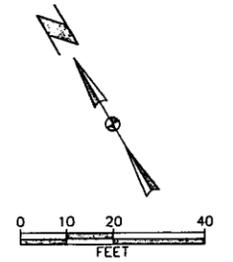


NOTES

1. CONTRACTOR SHALL RESTRICT CONSTRUCTION OPERATIONS TO THE LIMITS OF OUTLOT NO. 4.
2. ALL CHANNEL BANK SLOPES NOT ARMORED SHALL BE SEEDED WITH CHANNEL SEED MIX AND COVERED WITH ROLLED EROSION CONTROL TYPE C350 AS MANUFACTURED BY NORTH AMERICAN GREEN OR APPROVED EQUAL.
3. ALL AREAS OUTSIDE OF THE CHANNEL DISTURBED BY CONSTRUCTION OPERATIONS SHALL BE HYDRAULICALLY SEEDED AND MULCHED WITH FLEXTERRA HP-FGM AS MANUFACTURED BY PROFILE PRODUCTS OR APPROVED EQUAL. SEEDING SHALL BE TYPE "A" SEED MIX.
4. CONTRACTOR SHALL CLEAR AND GRUB ALL TREES WITHIN THE LIMITS OF THE CHANNEL GRADING INDICATED ON DRAWING.
5. THE EXISTING CONTOURS SHOWN ON THE DRAWING ARE FROM A TOPOGRAPHIC SURVEY COMPLETED IN MAY 2013 AND MAY NOT REPRESENT THE CURRENT CHANNEL BANK CONDITIONS.

LEGEND

- 90 — EXISTING MAJOR CONTOUR
- 91 — EXISTING MINOR CONTOUR
- 90 — PROPOSED MAJOR CONTOUR
- 91 — PROPOSED MINOR CONTOUR
- — PROPOSED GRADING LIMITS
-  PROPOSED GABION WALL
-  PROPOSED ROCK RIP RAP TYPE C



SITE AND GRADING PLAN
SCALE: 1" = 20'

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ngm
ASSOCIATES INC.
ENGINEERING ARCHITECTURE SURVEYING
council bluffs iowa

LEL	drawn	02/13/14	date
WJG	designed		
WJG	approved		
JUNE 13	REVISED RIPRAP LIMITS		revision

project: MISSION CREEK CHANNEL REESTABLISHMENT - PHASE III
MILLARD PARK SUBDIVISION
client: SANITARY AND IMPROVEMENT DISTRICT 162
sheet: SITE AND GRADING PLAN

project no. 703510-008
sheet C.02

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06-28-13

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BID ITEM REFERENCE NOTES

GENERAL

ALL SPECIFICATION REFERENCES BELOW ARE TO THE CITY OF OMAHA STANDARD SPECIFICATION FOR PUBLIC WORKS CONSTRUCTION, AND SUPPLEMENTAL SPECIFICATIONS CURRENT AS OF DATE OF THIS PROJECT, UNLESS NOTED OTHERWISE. ALL MATERIALS NOT DIRECTLY SPECIFIED ON THE DRAWINGS SHALL CONFORM TO THE CITY OF OMAHA STANDARD SPECIFICATIONS.

SUBMITTALS

THE CONTRACTOR SHALL SUBMIT MANUFACTURER'S DATA, CERTIFICATES OF COMPLIANCE AND/OR TESTING INDICATING COMPLIANCE TO THE REQUIREMENTS STATED AND REFERENCED ON THESE DRAWINGS FOR THE MATERIALS SPECIFIED.

ITEM 1 - MOBILIZATION

THE BID PRICE FOR "MOBILIZATION" SHALL BE MEASURED AND PAID FOR AT A LUMP SUM PRICE AND SHALL INCLUDE COSTS OF PREPARATORY WORK AND OPERATIONS, INCLUDING, BUT NOT LIMITED TO THOSE NECESSARY FOR THE MOVEMENT OF PERSONNEL, EQUIPMENT, SUPPLIES AND INCIDENTALS TO THE PROJECT SITE, AND FOR ALL OTHER WORK AND OPERATIONS WHICH MUST BE PERFORMED OR COSTS INCURRED PRIOR TO BEGINNING WORK ON THE VARIOUS ITEMS OF THE PROJECT SITE. ANY ADDITIONAL MOBILIZATIONS WILL BE AT THE CONTRACTORS EXPENSE.

ITEM 2 - CLEARING AND GRUBBING GENERAL

THE BID PRICE FOR "CLEARING AND GRUBBING GENERAL" SHALL BE MEASURED AND PAID AT A LUMP SUM UNIT PRICE AND SHALL CONFORM TO THE REQUIREMENTS OF SECTION 101 OF THE CITY OF OMAHA STANDARD SPECIFICATIONS. THE PRICE SHALL BE FULL COMPENSATION FOR ALL EQUIPMENT, MATERIALS AND LABOR NECESSARY TO REMOVE ALL BRUSH AND DEBRIS AND DISPOSE OF OFF-SITE IN ACCORDANCE WITH ALL FEDERAL, STATE AND LOCAL REGULATIONS.

ITEM 3 - EARTHWORK (EXCAVATION)

THE BID PRICE FOR "EARTHWORK (EXCAVATION)" SHALL BE MEASURED AND PAID AT THE UNIT PRICE PER CUBIC YARD AND SHALL CONFORM TO THE REQUIREMENTS OF SECTION 02200 OF THE SPECIFICATIONS.

THE CONTRACTOR IS EXPECTED TO SEPARATE OUT UNSUITABLE EXCAVATED MATERIALS FROM SUITABLE EXCAVATED MATERIALS DURING THE COURSE OF CONSTRUCTION. NO PAYMENT WILL BE MADE FOR EXCESS MATERIALS HAULED OFF SITE.

ITEM 4 - HAUL-IN AND PLACE TOPSOIL

THE BID PRICE FOR "HAUL-IN AND PLACE TOPSOIL" SHALL BE MEASURED AND PAID AT THE UNIT PRICE PER CUBIC YARD AND SHALL CONFORM TO THE REQUIREMENTS OF SECTION 201 OF THE CITY OF OMAHA STANDARD SPECIFICATIONS. THE PRICE SHALL BE FULL COMPENSATION FOR ALL LABOR, MATERIALS AND EQUIPMENT NECESSARY OR INCIDENTAL TO COMPLETE THE WORK.

ITEM 5 - REMOVE SIDEWALK

THE BID PRICE FOR "REMOVE SIDEWALK" SHALL BE MEASURED AND PAID AT THE UNIT PRICE PER SQUARE FOOT (SF) AND SHALL CONFORM TO THE REQUIREMENTS OF SECTION 104 OF THE CITY OF OMAHA STANDARD SPECIFICATIONS. THE PRICE SHALL BE FULL COMPENSATION FOR ALL LABOR, MATERIALS AND EQUIPMENT NECESSARY OR INCIDENTAL TO COMPLETE THE WORK INCLUDING REQUIRED SAW CUTTING.

ITEM 6 - CONSTRUCT 4" CONCRETE SIDEWALK

THE BID PRICE FOR "CONSTRUCT 4" CONCRETE SIDEWALK" SHALL BE MEASURED AND PAID AT THE UNIT PRICE PER SQUARE FOOT AND SHALL CONFORM TO THE REQUIREMENTS OF SECTION 503 OF THE CITY OF OMAHA STANDARD SPECIFICATIONS. THE PRICE SHALL BE FULL COMPENSATION FOR ALL LABOR, MATERIALS AND EQUIPMENT NECESSARY OR INCIDENTAL TO COMPLETE THE WORK INCLUDING JOINTS.

ITEM 7 - CONSTRUCT ROCK RIP RAP - TYPE C

THE BID PRICE FOR "CONSTRUCT ROCK RIP RAP - TYPE C" SHALL BE MEASURED AND PAID AT THE UNIT PRICE PER TON AND SHALL CONFORM TO THE REQUIREMENTS OF SECTION 806 OF THE CITY OF OMAHA STANDARD SPECIFICATIONS. THE PRICE SHALL BE FULL COMPENSATION FOR ALL LABOR, MATERIALS AND EQUIPMENT NECESSARY OR INCIDENTAL TO COMPLETE THE WORK.

ITEM 8 - GROUT FOR RIP RAP

THE BID PRICE FOR "GROUT FOR RIP RAP" SHALL BE MEASURED AND PAID AT THE UNIT PRICE PER CUBIC YARD (CY). THE PRICE SHALL BE FULL COMPENSATION FOR ALL LABOR, MATERIALS AND EQUIPMENT NECESSARY OR INCIDENTAL TO COMPLETE THE WORK.

ITEM 9 - GEOTEXTILE FABRIC

THE BID PRICE FOR "GEOTEXTILE FABRIC" SHALL BE MEASURED AND PAID AT THE UNIT PRICE PER SQUARE YARD AND SHALL CONFORM TO THE REQUIREMENTS OF SECTION 301 WITH THE FOLLOWING MODIFICATIONS AND/OR CLARIFICATIONS:

"GEOTEXTILE FABRIC" SHALL HAVE A MINIMUM LONG TERM DESIGN STRENGTH OF 400 LBS/FT IN BOTH THE MACHINE AND CROSS/MACHINE DIRECTIONS.

GEOTEXTILE FABRIC SHALL BE PLACED BELOW ALL RIP RAP AND GABION BASKETS AS INDICATED ON THE DRAWINGS.

ITEM 10 - GABION BASKET

THE BID PRICE FOR "GABION BASKET" SHALL BE MEASURED AND PAID AT THE UNIT PRICE PER CUBIC YARD BASKETS SUPPLIED AND SHALL CONFORM TO THE REQUIREMENTS OF SECTION 812 OF THE CITY OF OMAHA STANDARD SPECIFICATIONS. THE PRICE SHALL BE FULL COMPENSATION FOR ALL LABOR, MATERIALS AND EQUIPMENT NECESSARY OR INCIDENTAL TO COMPLETE THE WORK.

ITEM 11 - STEEL SHEET PILING

THE BID PRICE FOR "STEEL SHEET PILING" SHALL BE MEASURED AND PAID AT THE UNIT PRICE PER SQUARE FOOT AND SHALL CONFORM TO THE REQUIREMENTS OF SECTION 602 OF THE CITY OF OMAHA STANDARD SPECIFICATIONS. THE PRICE SHALL BE FULL COMPENSATION FOR ALL LABOR, MATERIALS AND EQUIPMENT NECESSARY OR INCIDENTAL TO COMPLETE THE WORK.

THE STEEL SHEET PILE SHALL BE P222 SECTION.

ITEM 12 - CONSTRUCT 24" CORRUGATED METAL PIPE

THE BID PRICE FOR "CONSTRUCT 24" CORRUGATED METAL PIPE" SHALL BE MEASURED AND PAID AT THE UNIT PRICE PER LINEAR FOOT (LF). THE PRICE SHALL BE FULL COMPENSATION FOR ALL LABOR, MATERIALS AND EQUIPMENT NECESSARY OR INCIDENTAL TO COMPLETE THE WORK.

CORRUGATED METAL PIPE AND INSTALLATION SHALL CONFORM TO THE REQUIREMENTS OF SECTION 701 OF THE CITY OF OMAHA STANDARD SPECIFICATIONS.

BID ITEM REFERENCE NOTES

ITEM 13 - CONCRETE PIPE COLLAR

THE BID PRICE FOR "CONCRETE PIPE COLLAR" SHALL BE MEASURED AND PAID AT THE UNIT PRICE PER EACH (EA) AND SHALL CONFORM TO THE REQUIREMENTS OF SECTION 701 OF THE CITY OF OMAHA STANDARD SPECIFICATIONS AND CITY OF OMAHA STANDARD PLATE 723. THE PRICE SHALL BE FULL COMPENSATION FOR ALL LABOR, MATERIALS AND EQUIPMENT NECESSARY OR INCIDENTAL TO COMPLETE THE WORK.

ITEM 14 - PIPE OUTLET STRUCTURE

THE BID PRICE FOR "PIPE OUTLET STRUCTURE" SHALL BE MEASURED AND PAID AT THE UNIT PRICE PER EACH (EA). THE PRICE SHALL BE FULL COMPENSATION FOR ALL LABOR, MATERIALS AND EQUIPMENT NECESSARY OR INCIDENTAL TO COMPLETE THE WORK AS DETAILED ON THE DRAWINGS.

ITEM 15 - ROLLED EROSION CONTROL BLANKET - TYPE C350

THE BID PRICE FOR ROLLED EROSION CONTROL BLANKET - TYPE C350 SHALL BE MEASURED AND PAID AT THE UNIT PRICE PER SQUARE YARD. THE EROSION CONTROL BLANKET SHALL BE TYPE C350, AS MANUFACTURED BY NORTH AMERICAN GREEN OR APPROVED EQUAL. THE PRICE SHALL BE FULL COMPENSATION FOR ALL LABOR, MATERIALS, AND EQUIPMENT NECESSARY OR INCIDENTAL TO COMPLETE THE WORK. THE UNIT PRICE DOES NOT INCLUDE SEED, WHICH SHALL BE PAID FOR UNDER A SEPARATE ITEM. INSTALLATION SHALL CONFORM TO THE REQUIREMENTS OF SECTION 809 OF THE CITY OF OMAHA STANDARD SPECIFICATIONS AND THE MANUFACTURER'S RECOMMENDATIONS.

ALL DISTURBED CHANNEL BANK AREAS REQUIRING SEEDING - CHANNEL, SHALL RECEIVE ROLLED EROSION CONTROL BLANKET C350 TO PROTECT AGAINST SOIL EROSION AND ALLOW FOR VEGETATION ESTABLISHMENT.

THE CONTRACTOR SHALL MAINTAIN SEEDED AREAS WITH ROLLED EROSION CONTROL FOR A MINIMUM OF SIX (6) MONTHS AFTER APPLICATION OF THE SEEDING AND BLANKET MATERIALS. THE ENGINEER RESERVES THE RIGHT TO ACCEPT SEEDED AREAS BEFORE COMPLETION OF THE SIX (6) MONTH PERIOD. THE CONTRACTOR SHALL REINSTALL OR REPLACE ANY DAMAGED EROSION CONTROL BLANKET AT OR BEFORE THE COMPLETION OF THE SIX (6) MONTH PERIOD.

ITEM 16 - HYDRAULIC SEEDING TYPE "A"

THE BID PRICE FOR "HYDRAULIC SEEDING - TYPE "A" SHALL BE MEASURED AND PAID AT THE UNIT PRICE PER SQUARE YARD AND SHALL CONFORM TO THE REQUIREMENTS OF SECTION 802 OF THE CITY OF OMAHA STANDARD SPECIFICATIONS WITH THE FOLLOWING MODIFICATIONS AND/OR CLARIFICATIONS.

HYDRAULIC MULCH SHALL BE FLEXTERRA HP-FGM AS MANUFACTURED BY PROFILE PRODUCTS OR AN APPROVED EQUAL.

ALL AREAS IN SID OUTLOT NO. 4 SHALL BE SEEDED WITH TYPE "A" SEED.

THE CONTRACTOR SHALL MAINTAIN SEEDED AREAS FOR A MINIMUM OF SIX (6) MONTHS AFTER APPLICATION OF THE SEEDING AND MATERIALS. THE ENGINEER RESERVES THE RIGHT TO ACCEPT SEEDED AREAS BEFORE COMPLETION OF THE SIX (6) MONTH PERIOD. THE CONTRACTOR SHALL RESEED ANY AREAS DAMAGED OR NOT FULLY GROWING AT OR BEFORE THE COMPLETION OF THE SIX (6) MONTH PERIOD.

ITEM 17 - SEEDING - CHANNEL

THE BID PRICE FOR "SEEDING - CHANNEL" SHALL BE MEASURED AND PAID AT THE UNIT PRICE PER SQUARE YARD AND SHALL CONFORM TO THE REQUIREMENTS OF SECTION 802 OF THE CITY OF OMAHA STANDARD SPECIFICATIONS EXCEPT AS REVISED BELOW:

ALL REGRADED AND DISTURBED AREAS IN THE CHANNEL BANK SHALL BE SEEDED WITH THE FOLLOWING SEED MIXTURE:

△ LITTLE BLUESTEM	2.5 LBS PURE LIVE SEED	PLS/ACRE
SIDEOTS GRAMA	3.3 LBS PLS/ACRE	
BLUE GRAMA	0.8 LBS PLS/ACRE	
WESTERN WHEATGRASS	4.0 LBS PLS/ACRE	
VIRGINIA WILDRIE	1.7 LBS PLS/ACRE	
CANADA WILDRIE	5.7 LBS PLS/ACRE	
SWITCH GRASS	1.5 LBS PLS/ACRE	
TALL FESCUE	20.0 LBS PLS/ACRE	
OATS (COVER CROP)	50.0 LBS /ACRE	* NOT PURE LIVE SEED

THE SEED MIXTURE SHOULD BE PLANTED AT THE PROPER SEEDING TIMES OF APRIL 15 TO MAY 15 OR AUGUST 15 TO SEPTEMBER 15. SEED NEEDS TO BE INCORPORATED INTO THE SOIL VIA GRASS DRILL. ALL DISTURBED AREAS SHALL HAVE TOPSOIL PLACED NO LESS THAN 6 INCHES IN DEPTH AND SHALL BE COVERED WITH EROSION CONTROL BLANKET. (BLANKET SHALL BE AS SPECIFIED AND PAID FOR SEPARATELY)

THE CONTRACTOR SHALL MAINTAIN SEEDED AREAS FOR A MINIMUM OF SIX (6) MONTHS AFTER APPLICATION OF THE SEEDING AND MATERIALS. THE ENGINEER RESERVES THE RIGHT TO ACCEPT SEEDED AREAS BEFORE COMPLETION OF THE SIX (6) MONTH PERIOD. THE CONTRACTOR SHALL RESEED ANY AREAS DAMAGED OR NOT FULLY GROWING AT OR BEFORE THE COMPLETION OF THE SIX (6) MONTH PERIOD.

ITEM 18 - SODDING

THE BID PRICE FOR "SODDING" SHALL BE MEASURED AND PAID AT THE UNIT PRICE PER SQUARE YARD AND SHALL CONFORM TO THE REQUIREMENTS OF SECTION 803 OF THE CITY OF OMAHA STANDARD SPECIFICATIONS. ALL DISTURBED AREAS WITHIN THE RIGHT-OF-WAY LIMITS SHALL BE SODDED. ALL LAWN AREAS IN PRIVATE RESIDENTIAL PROPERTY ADJACENT TO SID OUTLOT NO. 4, THAT IS DISTURBED SHALL BE SODDED AT THE CONTRACTOR'S EXPENSE. THE PRICE SHALL BE FULL COMPENSATION FOR ALL LABOR, MATERIALS AND EQUIPMENT NECESSARY OR INCIDENTAL TO COMPLETE THE WORK.

THE CONTRACTOR SHALL MAINTAIN SODDED AREAS FOR A MINIMUM OF SIX (6) MONTHS AFTER PLACEMENT OF THE SOD MATERIALS. THE ENGINEER RESERVES THE RIGHT TO ACCEPT SODDED AREAS BEFORE COMPLETION OF THE SIX (6) MONTH PERIOD. THE CONTRACTOR SHALL RE-SOD AND MAINTAIN ANY AREAS NOT MOIST OR FULLY GROWING AT OR BEFORE THE COMPLETION OF THE SIX (6) MONTH PERIOD. ALL SOD MUST BE MOIST AND GROWING AT THE TIME OF ACCEPTANCE. ANY BROWN SOD OR ANY OTHER SOD THAT APPEARS STRESSED OR DEAD WILL NOT BE ACCEPTED.

ITEM 19 - SILT FENCE

THE BID PRICE FOR "SILT FENCE" SHALL BE MEASURED AND PAID AT THE UNIT PRICE PER LINEAR FOOT AND SHALL CONFORM TO THE REQUIREMENTS OF SECTION 810 OF THE CITY OF OMAHA STANDARD SPECIFICATIONS AND CITY OF OMAHA STANDARD PLATE 5-01. THE PRICE SHALL BE FULL COMPENSATION FOR ALL LABOR, MATERIALS AND EQUIPMENT NECESSARY OR INCIDENTAL TO COMPLETE THE WORK.

ITEMS 20 THRU 29 - TREES AND SHRUBS

THE BID PRICE FOR EACH TYPE OF TREE AND SHRUB ITEM LISTED SHALL BE MEASURED AND PAID AT THE UNIT PRICE PER EACH (EA) AND SHALL CONFORM TO THE REQUIREMENTS OF THE SPECIFICATIONS. THE PRICE SHALL BE FULL COMPENSATION FOR ALL LABOR, MATERIALS AND EQUIPMENT NECESSARY OR INCIDENTAL TO COMPLETE THE WORK.

ESTIMATED QUANTITIES

ITEM NO.	DESCRIPTION	ESTIMATED QUANTITIES	UNITS	FINAL QUANTITIES
1.	MOBILIZATION	1	LS	
2.	CLEARING AND GRUBBING GENERAL	1	LS	
3.	EARTHWORK (EXCAVATION)	2200	CY	
4.	HAUL AND PLACE TOPSOIL	340	CY	
5.	REMOVE SIDEWALK	80	SF	
6.	CONSTRUCT 4" CONCRETE SIDEWALK	80	SF	
7.	CONSTRUCT ROCK RIP RAP TYPE C	640	TN	
8.	GROUT FOR RIP RAP	50	CY	
9.	GEOTEXTILE FABRIC	1400	SY	
10.	GABION BASKET	705	CY	
11.	STEEL SHEET PILING	698	SF	
12.	24" CORRUGATED METAL PIPE	24	LF	
13.	CONCRETE PIPE COLLAR	1	EA	
14.	PIPE OUTLET STRUCTURE	1	EA	
15.	ROLLED EROSION CONTROL BLANKET - C350	1450	SY	
16.	SEEDING - CHANNEL	1450	SY	
17.	HYDRAULIC SEEDING - TYPE A	2200	SY	
18.	SODDING	20	SY	
19.	SILT FENCE	200	LF	
20.	BLACK LOCUST	2	EA	
21.	KENTUCKY COFFEETREE	2	EA	
22.	HACKBERRY	3	EA	
23.	RED OAK	2	EA	
24.	AMERICAN LINDEN	4	EA	
25.	AUTUMN BRILLIANCE SERVICEBERRY	3	EA	
26.	EASTERN REDBUD	5	EA	
27.	GRAY DOGWOOD	8	EA	
28.	GROW-LOW SUMAC	24	EA	
29.	REDSIER DOGWOOD	11	EA	

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JUNE 13 2013
REVISOR RIRAP & SEED MIX 02/13/14
date revision

project MISSION CREEK CHANNEL REESTABLISHMENT - PHASE III
MILLARD PARK SUBDIVISION
client SANITARY AND IMPROVEMENT DISTRICT 162
sheet QUANTITIES

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