

# CITY OF DULUTH

## DEPARTMENT OF PARKS AND RECREATION

### PLAN SYMBOLS

- 600'

PROPERTY LINES
- ONE FOOT INTERVAL

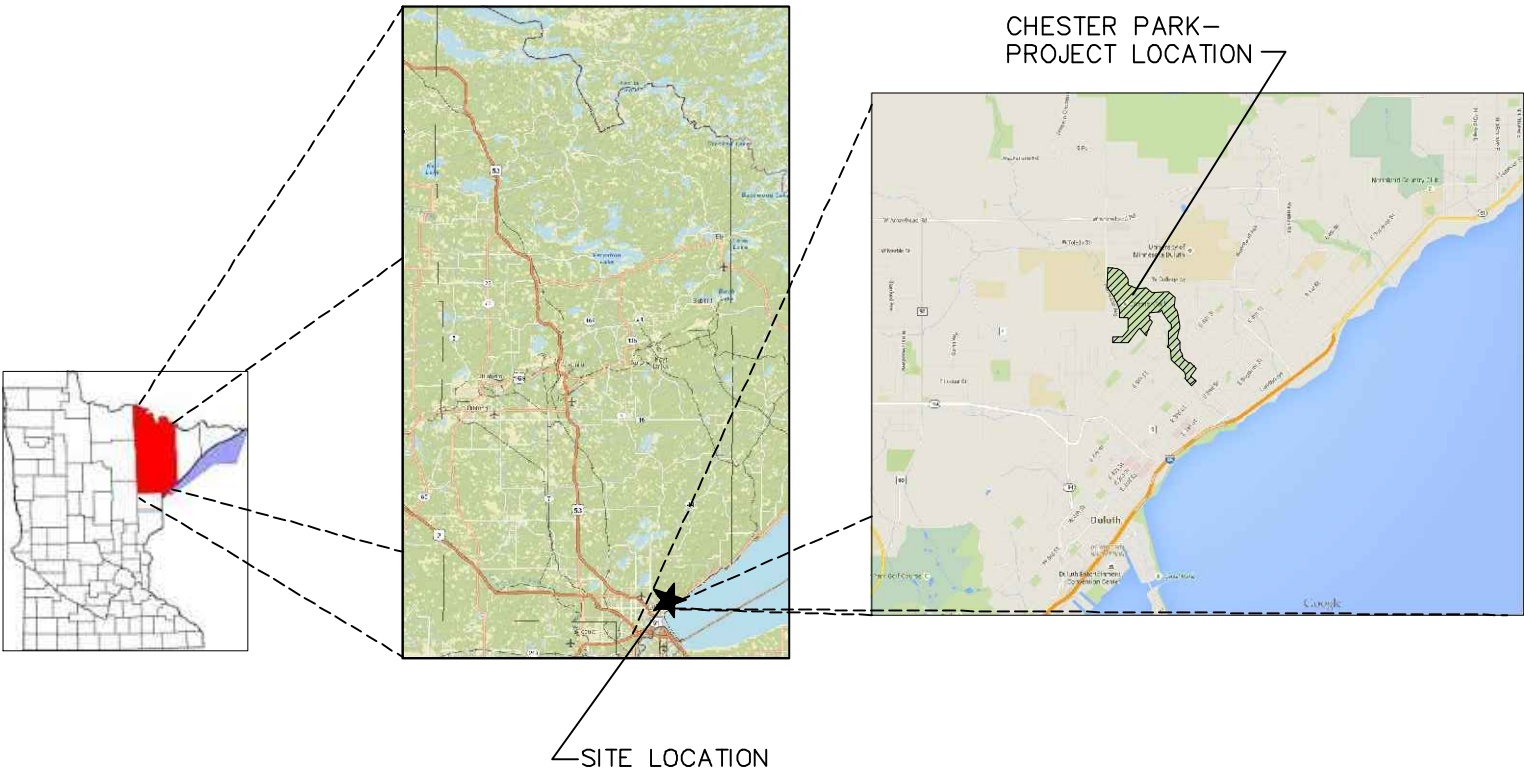
EXISTING CONTOUR LINES
- TRAIL

TRAIL

### CONSTRUCTION PLANS FOR:

CHESTER PARK  
TRAIL REPAIRS  
FEMA SITE 305

CITY PROJECT NO.



### PROJECT LOCATION MAP

NOT TO SCALE

### KEY PLAN

NOT TO SCALE

THE SUBSURFACE UTILITY INFORMATION IN THIS PLAN IS UTILITY LEVEL D. THIS QUALITY LEVEL WAS DETERMINED ACCORDING TO THE GUIDELINES OF CI/ASCE 38-02, ENTITLED "STANDARD GUIDELINES FOR THE COLLECTION AND DEPICTION OF EXISTING SUBSURFACE UTILITY DATA".

WARNING:  
LOCATION OF UNDERGROUND UTILITIES TO BE VERIFIED BY CONTRACTOR. CALL BEFORE DIGGING. GOPHER STATE ONE CALL 1-800-252-1166 REQUIRED BY LAW

### GOVERNING SPECIFICATIONS

THE 2005 EDITION OF THE MINNESOTA DEPARTMENT OF TRANSPORTATION "STANDARD SPECIFICATIONS FOR CONSTRUCTION" SHALL GOVERN.  
AVAILABLE AT: <http://www.dot.state.mn.us/pre-letting/spec/index.html>

ALL TRAFFIC CONTROL DEVICES AND SIGNING SHALL CONFORM TO THE MN MUTCD, INCLUDING THE FIELD MANUAL DATED JANUARY 2014.  
AVAILABLE AT: <http://www.dot.state.mn.us/trafficeng/publ/fieldmanual2011/index.html>

THE 2015 EDITION OF THE CITY OF DULUTH PUBLIC WORKS AND UTILITIES DEPARTMENT STANDARD CONSTRUCTION SPECIFICATIONS AND SUPPLEMENTS OR ADDENDUMS SHALL APPLY. \_\_\_\_\_ SHALL BE THE GOVERNING SPECIFICATIONS.

THE 2014 EDITION OF MINNESOTA DEPARTMENT OF TRANSPORTATION SEEDING MANUAL  
<http://www.dot.state.mn.us/environment/erosion/pdf/seedingmanual.pdf>

### INDEX

SHEET NO.	DESCRIPTION
L-1	TITLE SHEET & INDEX MAP
L-2	TRAIL LOCATOR MAP
L-3	TYPICAL TRAIL CROSS SECTION
L-4	TYPICAL TRAIL CROSS SECTIONS
L-5	TRAIL ALIGNMENT DETAILS
L-6	EROSION CONTROL DETAILS
L-7 - L-12	TRAIL PLANS

THIS PLAN CONTAINS 12 SHEETS

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

Luke W. Sydow

LANDSCAPE ARCHITECT (TYPED OR PRINTED NAME)



LANDSCAPE ARCHITECT

APRIL 7, 2016

DATE

#25866

REG. NO.

CITY APPROVAL

APPROVED

PARKS MANAGER

DATE



LANDSCAPE ARCHITECTURE

ASSOCIATES

WWW.SASLANDARCH.COM

219 WEST FIRST STREET, SUITE 350  
DULUTH, MN 55802  
(P) 218.391.1335  
(F) 218.722.6697

COPYRIGHT 2015 ALL DRAWN AND WRITTEN INFORMATION APPEARING HEREIN SHALL NOT BE DUPLICATED, DISCLOSED OR OTHERWISE USED WITHOUT WRITTEN CONSENT OF SAS+ASSOCIATES.

ISSUE RECORD/REVISION	
PURPOSE	DATE

CHESTER PARK  
TRAIL REPAIRS  
CITY OF DULUTH, MINNESOTA

SHEET KEY

SHEET TITLE

COVER SHEET

DATE: 4/7/16

DRAWN BY: LWS

CHECKED BY: LWS

PROJECT NUMBER 15320

SHEET NUMBER L-1

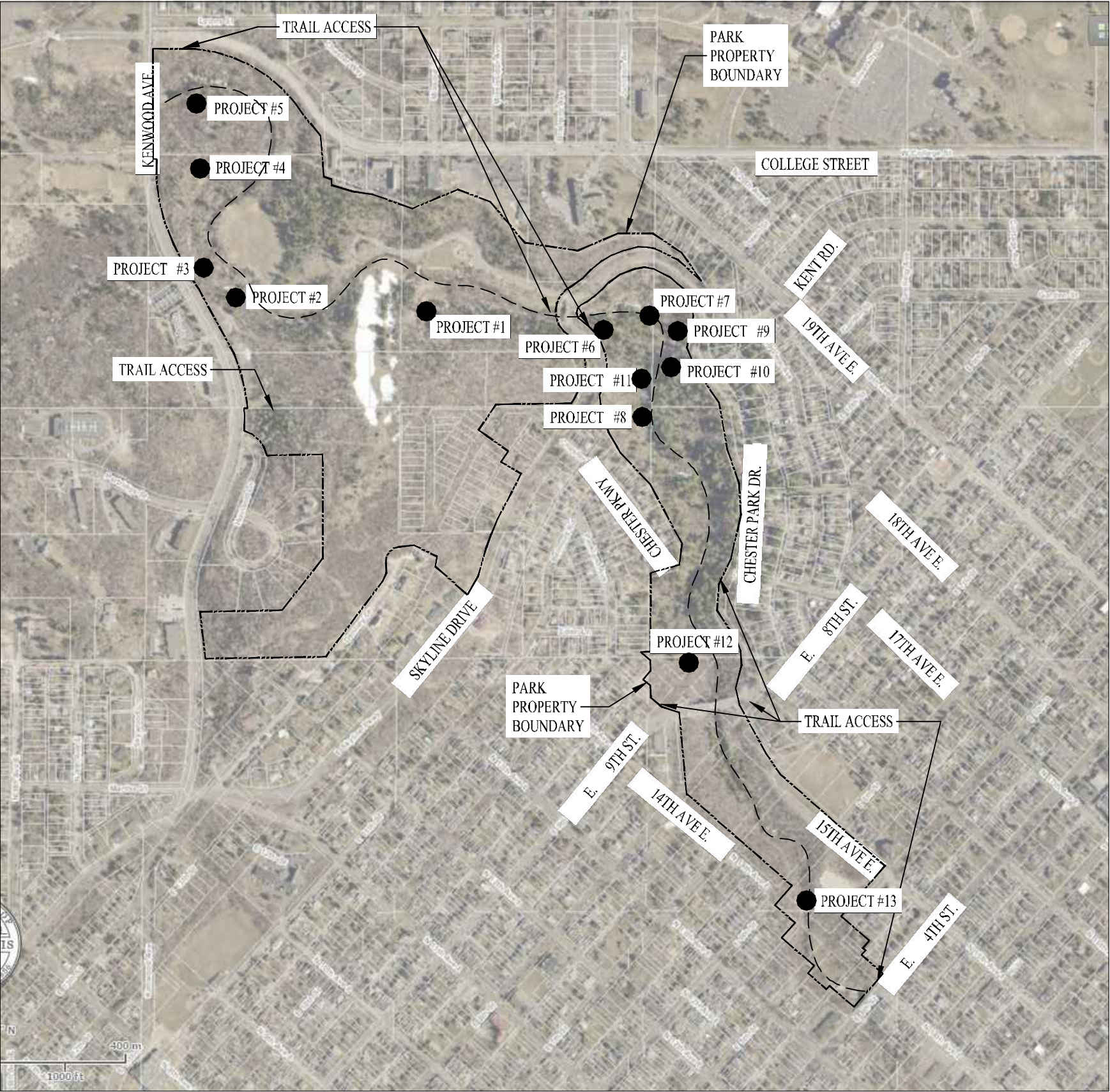
CITY OF DULUTH PROJECT NO.

DRAWN BY: LWS

SHEET NO. 1 OF 12



\\s01\proj\15205\ChesterPark\15205-ChesterPark-TrailRepairs.dwg  
PLOT DATE: 4/7/16  
PLOT BY: LWS



LOCATOR MAP  
NOT TO SCALE



TRAIL CONSTRUCTION NOTES:

1. CONTRACTOR SHALL ESTABLISH ALL REASONABLE BARRICADES, SIGNAGE, TRAIL CLOSURES, ETC., TO ENSURE SAFETY OF THE PUBLIC DURING THIS WORK.
2. ALL TRAILS SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE SPECIFICATIONS AND THE "TYPICAL TRAIL CROSS SECTION AND TRAIL CROSS SECTION TYPES "A, B & C" AS SHOWN ON SHEET L-1.4, L-1.6 & L-1.7, OTHER REQUIREMENTS AND DETAILS ON SHEETS L-1.8 THROUGH L-1.12.
3. CONTRACTORS SHALL BE RESPONSIBLE FOR RESTORING TO PRE-CONSTRUCTION CONDITION ANY SURFACES, STRUCTURES, SITE ELEMENTS SUCH AS STEPS, WALLS, BENCHES, RAILINGS, ETC., DAMAGED DUE TO THEIR WORK UNDER THIS CONTRACT, AT NO ADDITIONAL COST TO THE OWNER UNLESS AGREED TO IN WRITING BY BOTH PARTIES.
4. CARE MUST BE TAKEN AT ALL TIMES TO MINIMIZE / ELIMINATE ALL SITE IMPACTS TO SOIL AND VEGETATION OUTSIDE WHAT IS REQUIRED FOR THIS WORK.
5. SUBMIT TO OWNER  $\frac{1}{4}$  CF SIZE SAMPLE OF LIMESTONE TRAIL SURFACING MATERIAL FOR APPROVAL PRIOR TO PLACEMENT.

EXISTING DATA NOTES:

EXISTING TOPOGRAPHIC INFORMATION IS BASED ON ONE FOOT INTERVAL LIDAR DATA PROVIDED BY ST LOUIS COUNTY THAT WAS FLOWN THE THE SPRING OF 2015.

ALL OTHER EXISTING CONDITIONS ARE "TRACED" FROM AERIAL PHOTOGRAPHY. THEY ARE NOT TO BE CONSIDERED ACCURATE AND ARE PROVIDED AS A CONVENIENCE TO THE CONTRACTOR.

IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO FIELD VERIFY EXISTING CONDITIONS AND NOTIFY OWNER OF ANY DISCREPANCIES PRIOR TO COMMENCING WORK.



**+ ASSOCIATES**  
WWW.SASLANDARCH.COM

219 WEST FIRST STREET, SUITE 350  
DULUTH, MN 55802  
(P) 218.391.1335  
(F) 218.722.6697

COPYRIGHT 2015 ALL DRAWN AND WRITTEN INFORMATION APPEARING HEREIN SHALL NOT BE DUPLICATED, DISCLOSED OR OTHERWISE USED WITHOUT WRITTEN CONSENT OF SAS+ASSOCIATES.

ISSUE RECORD/REVISION

PURPOSE	DATE

CHESTER PARK  
TRAIL REPAIRS  
CITY OF DULUTH, MINNESOTA



SHEET KEY

SHEET TITLE

PROJECT LOCATIONS

DATE: 4/7/16

DRAWN BY: LWS

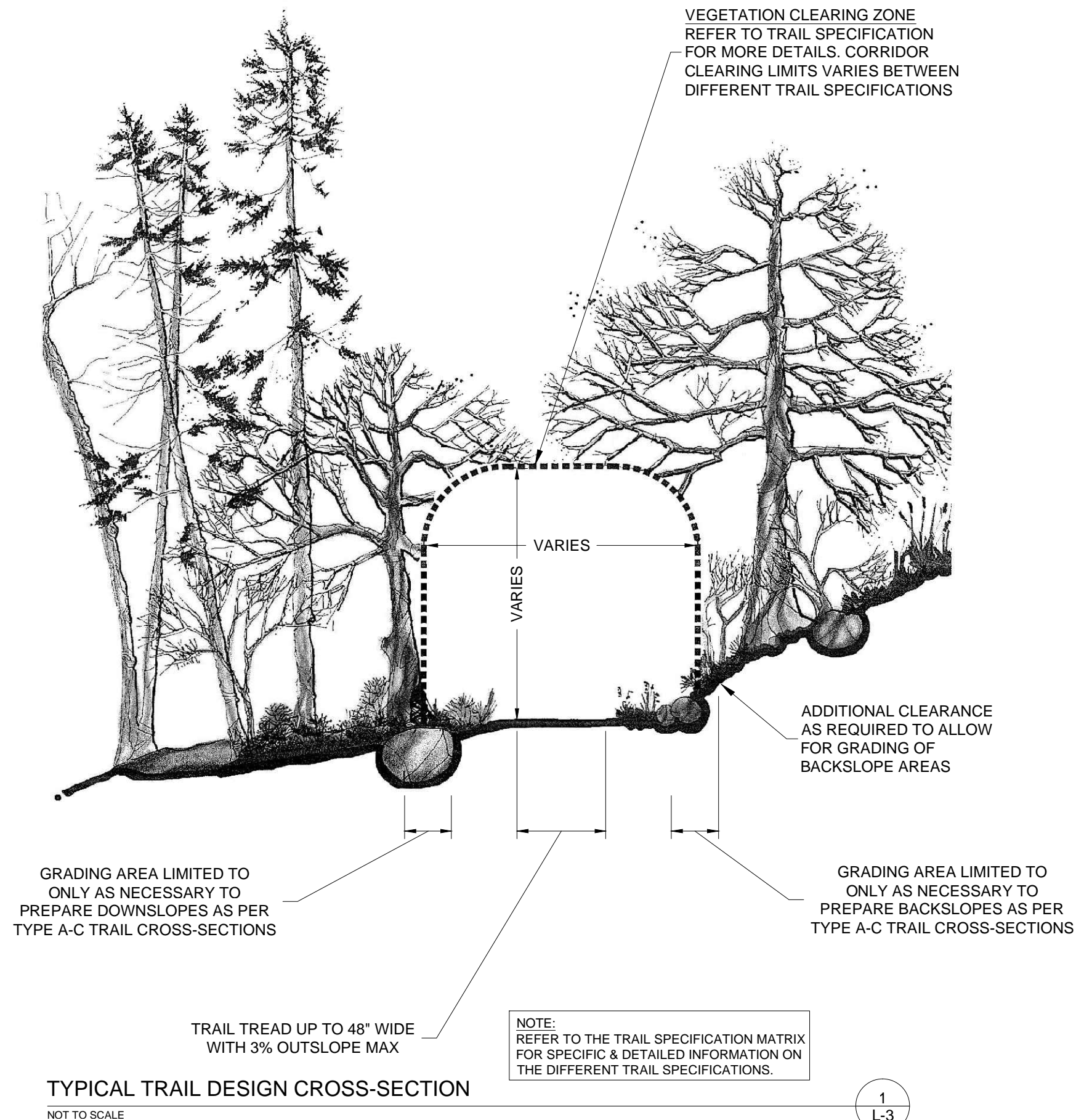
CHECKED BY: LWS

PROJECT NUMBER  
15205

SHEET NUMBER

L-2





TYPICAL TRAIL DESIGN NOTES:

1. THE GRAPHIC ON THIS SHEET ILLUSTRATES A TYPICAL TRAIL CROSS-SECTION HIGHLIGHTING TREAD AND VEGETATION CLEARANCE ZONE WIDTHS.
2. IN SELECT SITUATION THE TRAIL WIDTH MAY BE MODIFIED IN RESPONSE TO THE TERRAIN OR SITE CONDITIONS.
3. SEE SPECIFICATIONS FOR FURTHER DETAILS ON TREAD AND CORRIDOR CLEARING AND TYPICAL TRAIL DESIGN CROSS-SECTIONS
4. SEE SHEET L-6 & SPECIFICATIONS FOR RECOMMENDED BEST MANAGEMENT PRACTICES FOR EROSION CONTROL MEASURES.
5. AFTER COMPLETION OF ALL GRADING, THE TRAIL TREAD SHALL BE MECHANICALLY COMPACTED TO ITS SPECIFIED WIDTH USING A VIBRATORY PLATE, SHEEP'S FOOT, OR OTHER APPROVED EQUAL COMPACTOR.
6. CUT BRUSH AND SLASH MUST BE DISPOSED IN AN UPLAND LOCATION AND MUST BE KEPT OUT OF STREAMS, GULLIES, SWALES, WETLANDS, AND LOW AREAS. SEE SPECIFICATIONS FOR DETAILS.
7. NO EXCAVATION OR FILL PERMITTED IN WET & LOWLAND AREAS. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO CONSULT WITH THE OWNER PRIOR TO DOING ANY WORK WITHIN SUSPECTED WET & LOWLAND AREAS.

TRAIL BIDDING NOTES:

1. TREE REMOVAL, STUMP REMOVAL, BRUSH REMOVAL, AND LIMB TRIMMING IS INCLUDED IN THE CONTRACTOR'S UNIT BID PRICE FOR TRAIL CONSTRUCTION TYPES "A, B & C". (SEE SPECIFICATION FOR FURTHER DETAILS)
2. TRAIL TREAD GRADING AND COMPACTING IS INCLUDED IN THE CONTRACTORS UNIT BID PRICE FOR TRAIL CONSTRUCTION TYPES "A, B & C". (SEE SPECIFICATION FOR FURTHER DETAILS)
3. PUSHING ASIDE ROCKS OR FRACTURED STONE ENCOUNTERED WHILE GRADING THE TRAIL IS INCLUDED IN THE CONTRACTOR'S UNIT BID PRICE FOR TRAIL CONSTRUCTION TYPES "A, B & C". (SEE SPECIFICATIONS FOR FURTHER DETAILS)
4. GRADING THROUGH LOW SPOTS, FLATTER AREAS, EARTHEN PILES, LANDSLIDES, MISCELLANEOUS DEBRIS, AND FALLEN WOODY MATERIALS IS INCLUDED IN THE CONTRACTOR'S UNIT BID PRICE FOR TRAIL CONSTRUCTION TYPES "A, B & C". (SEE SPECIFICATIONS FOR FURTHER DETAILS)
5. GRADE REVERSALS ARE REQUIRED AT A MINIMUM EVERY 100 LF. GRADE REVERSALS ARE INCLUDED IN THE CONTRACTOR'S UNIT BID PRICE FOR TRAIL CONSTRUCTION TYPES "A, B & C". (SEE SPECIFICATIONS FOR FURTHER DETAILS)

**SAS**  
LANDSCAPE ARCHITECTURE  
+ ASSOCIATES  
WWW.SASLANDARCH.COM  
219 WEST FIRST STREET, SUITE 350  
DULUTH, MN 55802  
(P) 218.391.1335  
(F) 218.722.6697

COPYRIGHT 2015 ALL DRAWN AND WRITTEN INFORMATION APPEARING HEREIN SHALL NOT BE DUPLICATED, DISCLOSED OR OTHERWISE USED WITHOUT WRITTEN CONSENT OF SAS+ASSOCIATES.

ISSUE RECORD/REVISION	
PURPOSE	DATE

CHESTER PARK  
TRAIL REPAIRS  
CITY OF DULUTH, MINNESOTA

SHEET KEY	
SHEET TITLE	
TYPICAL TRAIL SECTION	
DATE	4/7/16
DRAWN BY:	LWS
CHECKED BY:	LWS
PROJECT NUMBER	15205
SHEET NUMBER	L-3

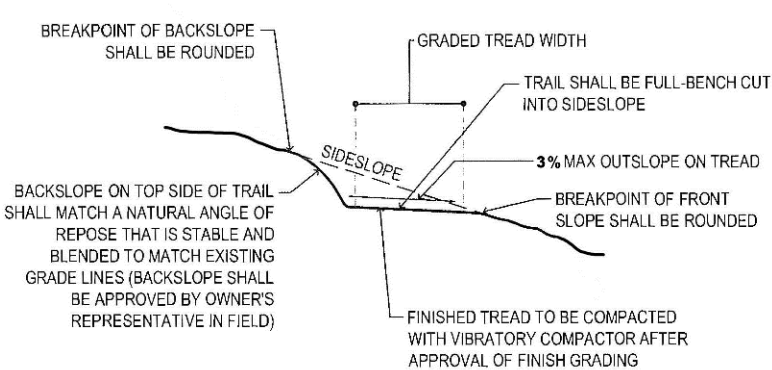
FIELD MEASUREMENT NOTES:

1. MEASUREMENT AND PAYMENTS FOR TRAIL CONSTRUCTION TYPE IS BASED ON THE SLOPE AVERAGES AS DEPICTED IN THE TRAIL ALIGNMENT SECTION OF THIS PLAN SET AND IN THE TRAIL SLOPE ANALYSIS MAP (FOUND IN THE SPECS).
2. TRAIL TYPES AND QUANTITIES ARE PROVIDED AS A CONVENIENCE TO THE CONTRACTOR. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY FIELD QUANTITIES AND NOTIFY THE OWNER OF ANY DISCREPANCIES PRIOR TO COMMENCING WORK.

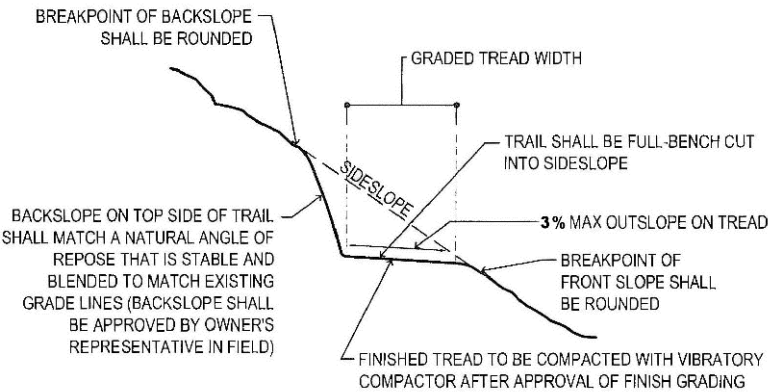
CONSTRUCTION NOTE:

1. PARTIAL BENCH CUT IS ALLOWED WHEN DONE PROPERLY WITH A DOWNHILL RETAINING WALL AND COMPACTED BACKFILL. REFER TO PAGE 159 OF (TRAIL SOLUTIONS: IMBA'S GUIDE TO BUILDING BETTER SINGLETRACK).
2. GRADING THROUGH LOW SPOTS, FLATTER AREAS, EARTHEN PILES, LANDSLIDES, MISCELLANEOUS DEBRIS, AND FALLEN WOODY MATERIALS IS INCLUDED IN THE CONTRACTOR'S UNIT BID PRICE FOR TRAIL CONSTRUCTION TYPES "A, B & C". (SEE SPECIFICATIONS FOR FURTHER DETAILS)
3. CONTRACTOR IS EXPECTED TO CREATE FREQUENT GRADE REVERSALS REGARDLESS OF THE LOCAL LANDSCAPE. THIS MAY REQUIRE LOCALIZED TOPOGRAPHY MODIFICATIONS INCLUDING BUT NOT LIMITED TO RAISED TREAD, BORROW PITS AND SUMPS WHEN BUILDING THOUGH LANDSCAPES WITH LOW SLOPE ANGLES AND FLATTER AREAS SUCH AS TYPE "A" TRAIL.
4. UNLESS SHOWN ON A SPECIFIC DETAIL THE OUTSLOPE SHALL BE CONSTRUCTED AS SHOWN BELOW.

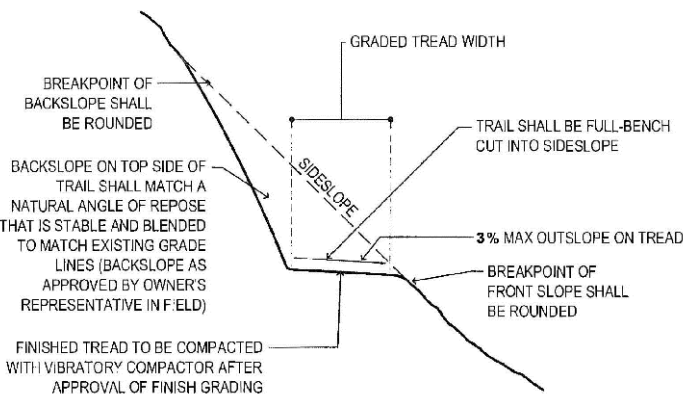
NOTE:  
CONTRACTOR CANNOT INVOICE  
FOR BOTH TRAIL CONSTRUCTION,  
TYPES A, B & C, AND CONSTRUCTED  
FEATURES OF A GIVEN LINEAR  
FOOT OF TRAIL.



TYPE "A" (LOW SIDESLOPE TRAIL) 3%-15% SIDESLOPE



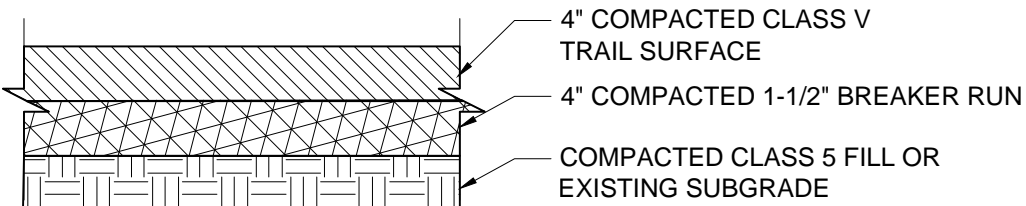
TYPE "B" (MEDIUM SIDESLOPE TRAIL) 16%-60% SIDESLOPE



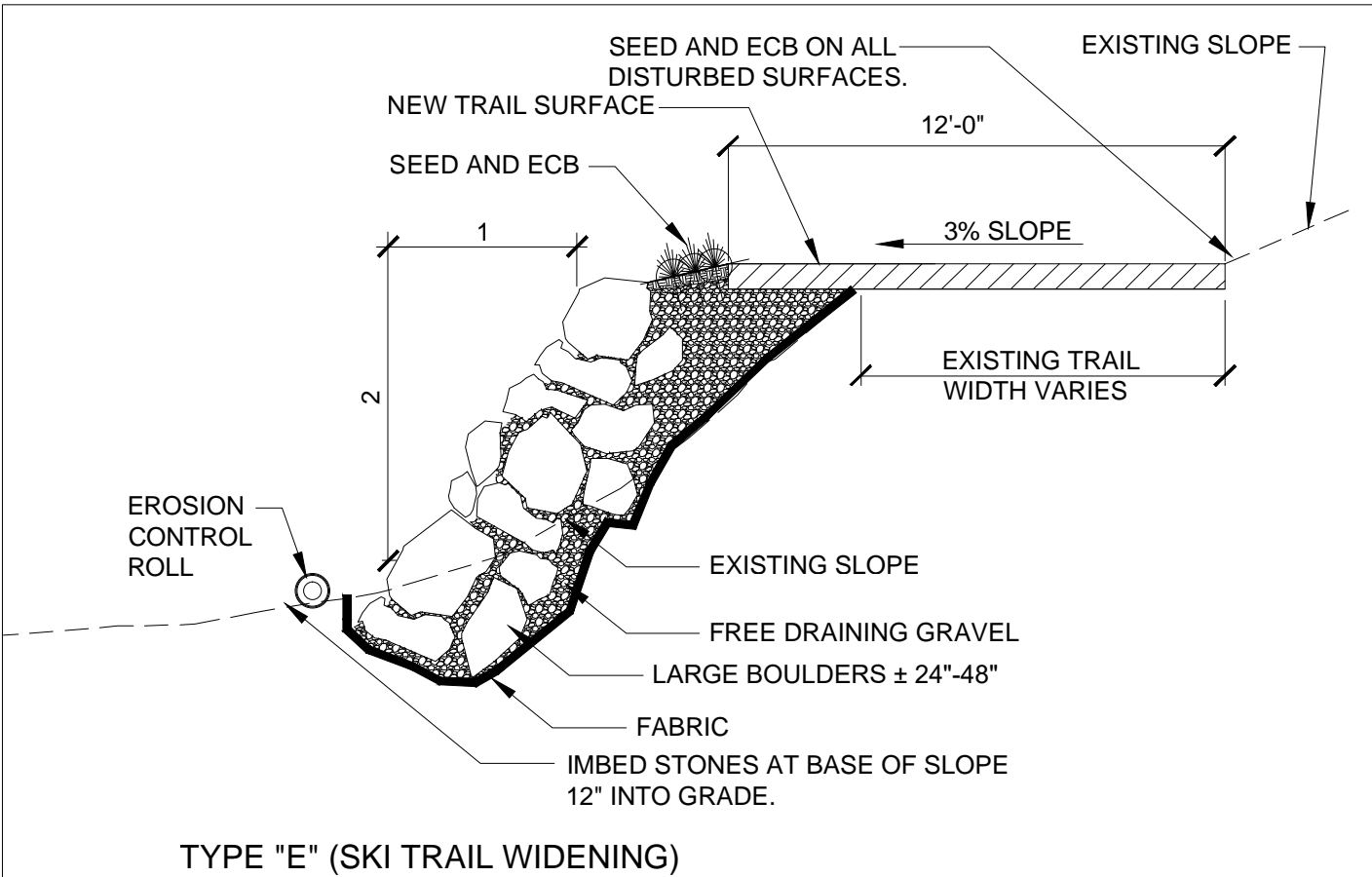
TYPE "C" (HIGH SIDESLOPE TRAIL) 61%+ SIDESLOPE

TYPICAL TRAIL CROSS-SECTIONS (A-C TRAIL TYPES)

NOT TO SCALE



TYPE "D" (TYPICAL BREAKER RUN TRAIL CROSS SECTION)



TYPE "E" (SKI TRAIL WIDENING)



ASSOCIATES

WWW.SASLANDARCH.COM

219 WEST FIRST STREET, SUITE 350  
DULUTH, MN 55802  
(P) 218.391.1335  
(F) 218.722.6697

COPYRIGHT 2015 ALL DRAWN AND WRITTEN  
INFORMATION APPEARING HEREIN SHALL NOT BE  
DUPLICATED, DISCLOSED OR OTHERWISE USED  
WITHOUT WRITTEN CONSENT OF  
SAS+ASSOCIATES.

ISSUE RECORD/REVISION

PURPOSE	DATE

CHESTER PARK  
TRAIL REPAIRS  
CITY OF DULUTH, MINNESOTA

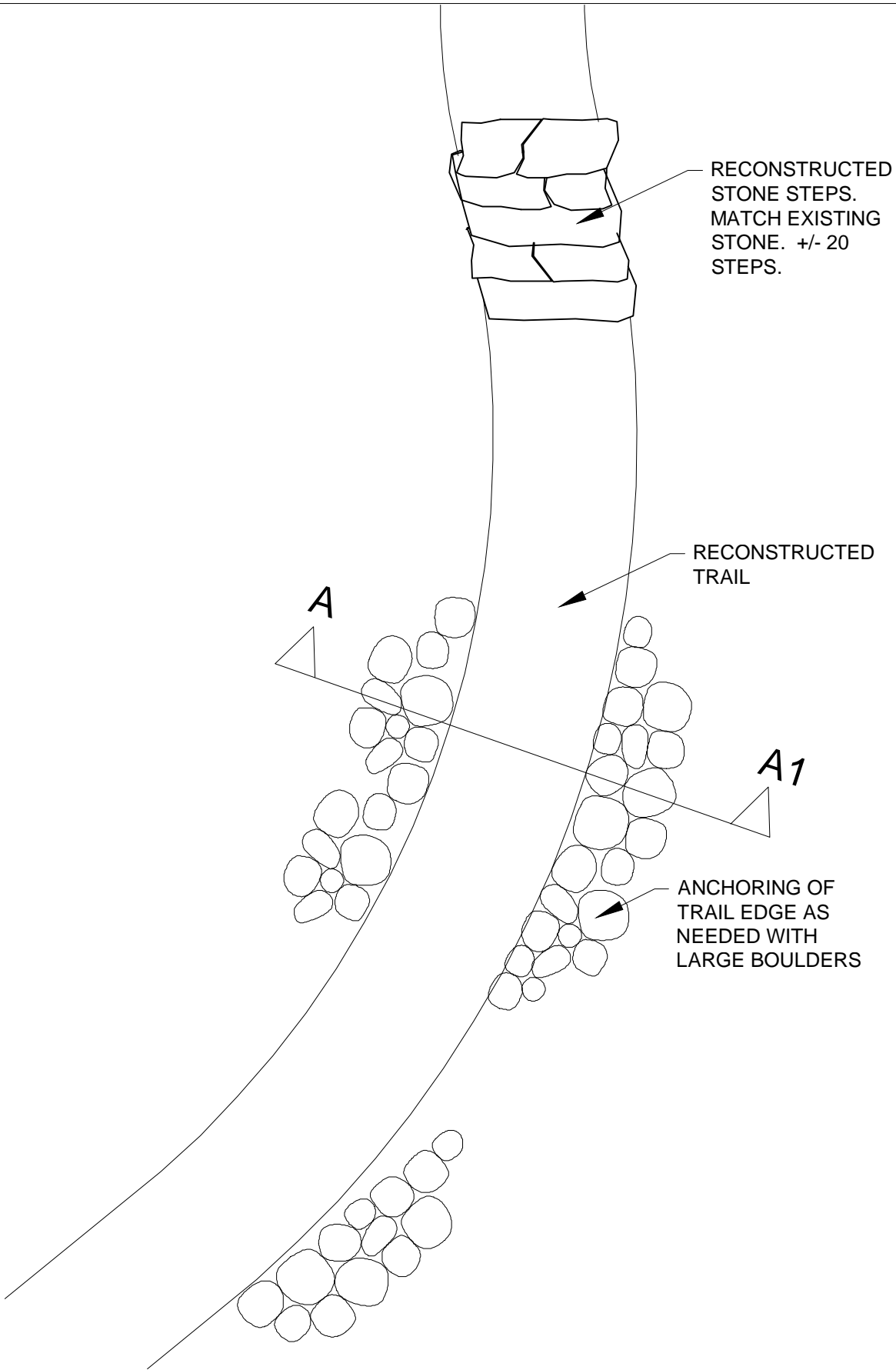
SHEET KEY

SHEET TITLE  
TRAIL SECTIONS

DATE	4/7/16
DRAWN BY:	LWS
CHECKED BY:	LWS
PROJECT NUMBER	15205
SHEET NUMBER	L-4

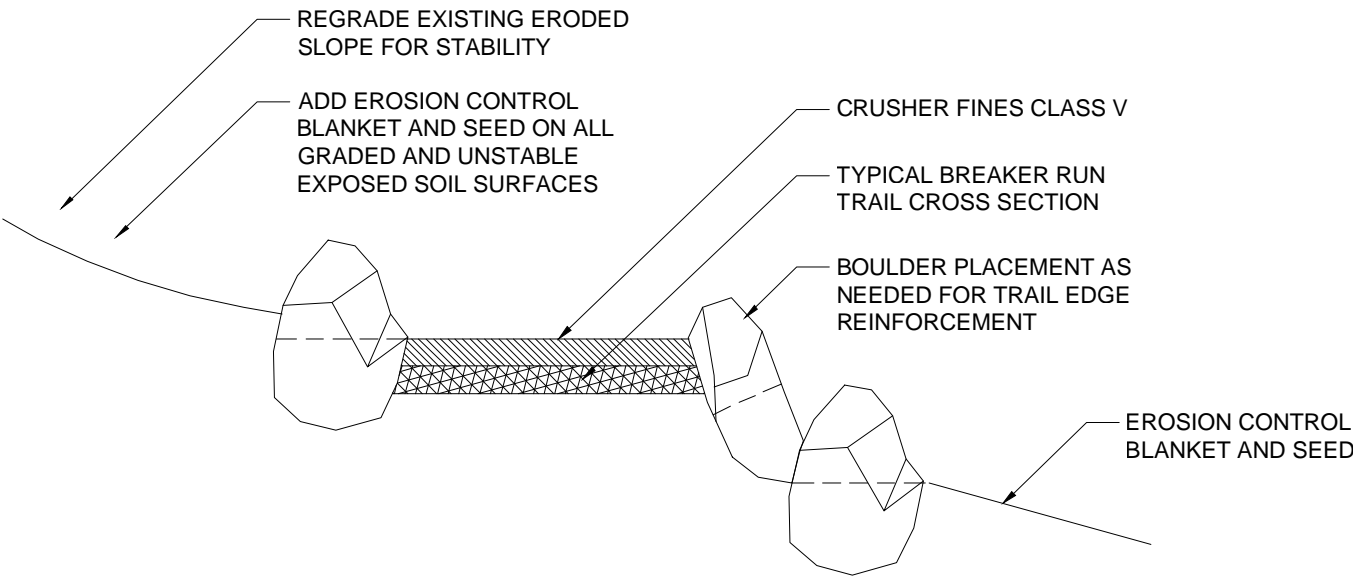


4/16/16 10:10 AM  
P:\Projects\2015\15205 Chester Park Trail Repairs\15205 Chester Park Trail Repairs.dwg



PROJECT #7 FEMA 305-8  
NOT TO SCALE

1  
L-5



TRAIL CROSS SECTION A - A1  
NOT TO SCALE

2  
L-5



**+ ASSOCIATES**  
WWW.SASLANDARCH.COM

219 WEST FIRST STREET, SUITE 350  
DULUTH, MN 55802  
(P) 218.391.1335  
(F) 218.722.6697

COPYRIGHT 2015 ALL DRAWN AND WRITTEN  
INFORMATION APPEARING HEREIN SHALL NOT BE  
DUPLICATED, DISCLOSED OR OTHERWISE USED  
WITHOUT WRITTEN CONSENT OF  
SAS+ASSOCIATES.

ISSUE RECORD/REVISION	
PURPOSE	DATE

# CHESTER PARK TRAIL REPAIRS CITY OF DULUTH, MINNESOTA

SHEET KEY

SHEET TITLE  
TRAIL ALIGNMENT

DATB 4/7/16  
DRAWN BY: LWS  
CHECKED BY: LWS

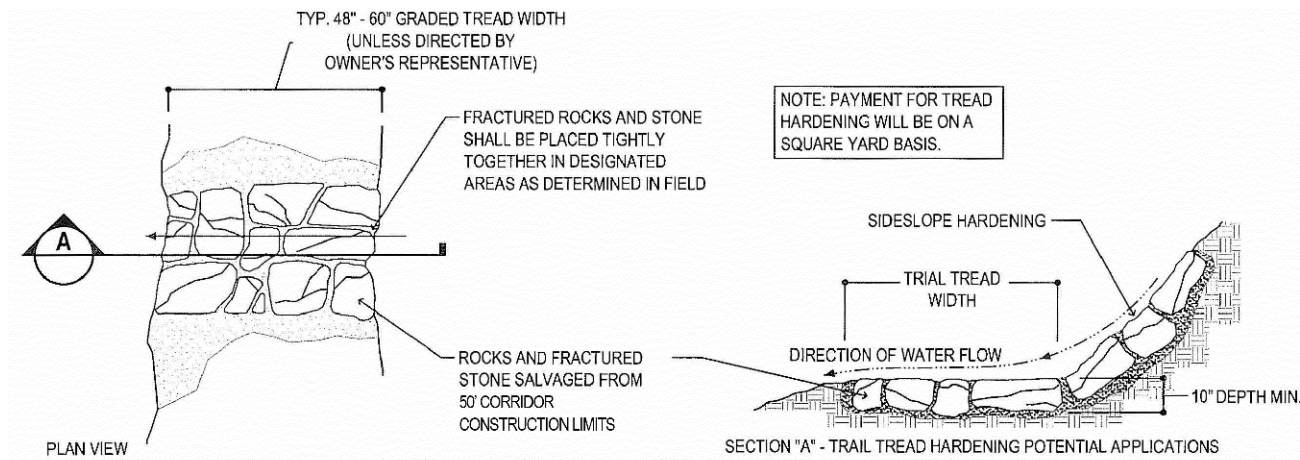
PROJECT NUMBER 15205

SHEET NUMBER  
L-5

CITY OF DULUTH PROJECT NO.

DRAWN BY: LWS

SHEET NO. 5 OF 12



TRAIL TREAD ROCK ARMORING AND SIDESLOPE ARMORING DETAIL

NOT TO SCALE

1  
L-6

CONSTRUCTION NOTE:

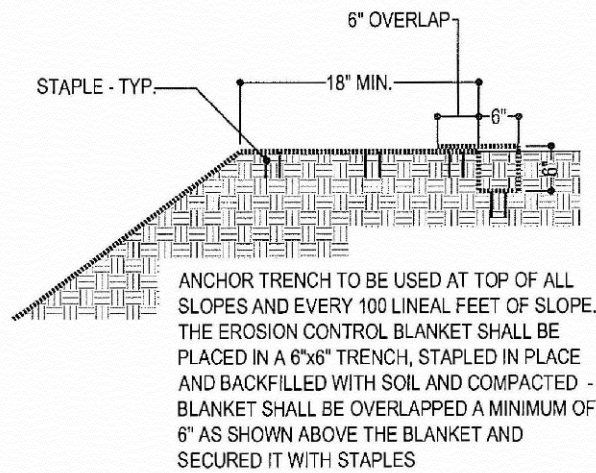
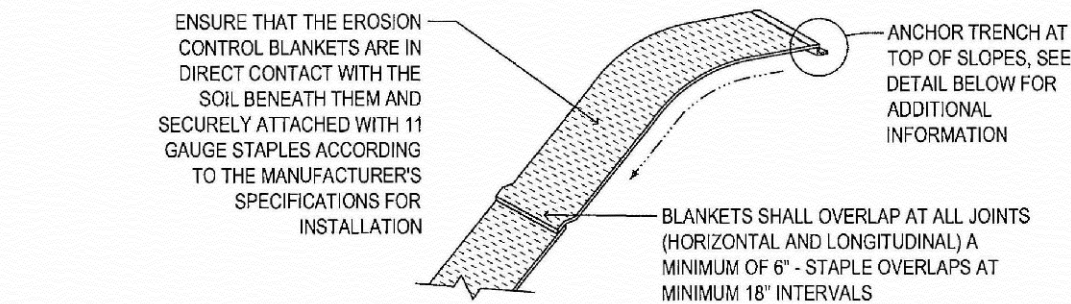
BACKFILL BEDDING MATERIAL SHALL BE 3"- 6" OF 3/4" - CRUSHED ROCK. THE SAME CRUSHED ROCK CAN BE UTILIZED FOR FILL BETWEEN THE SET ROCK/STONE.

10" MINIMUM ROCK/STONE SET DEPTH.

SEAMS RUNNING IN THE DIRECTION OF TRAVEL SHALL BE MINIMIZED IN BOTH LENGTH AND WIDTH. SEAM WIDTH SHALL BE MINIMIZED AND SEAM STAGGERING SHALL BE USED WHERE POSSIBLE.

NOTES:

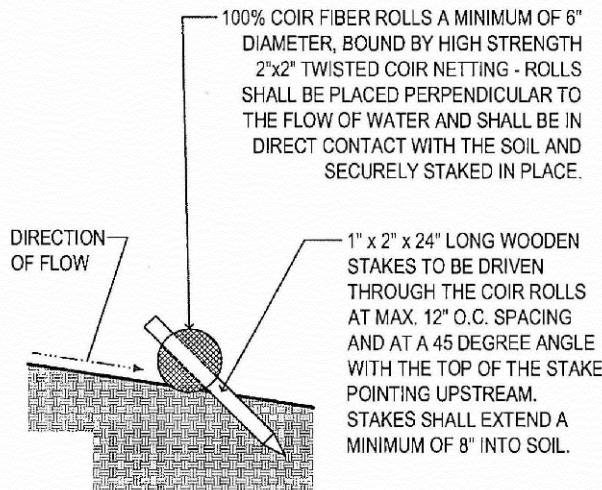
1. ALL DISTURBED AREAS NOT PART OF ACTIVE TREAD TO BE STABILIZED WITHIN 7 DAYS OF NOT BEING WORKED. SEE L-6 FOR DETAILS.
2. WHENEVER POSSIBLE USE NATIVE DUFF MATERIALS FOUND IN THE TRAIL CORRIDOR AS A MULCH FOR COVERING SOIL EXPOSED BY BACKSLOPE AND DOWNSLOPE CUTS. WOOD CHIPS MADE FROM WOODY MATERIAL CLEARED AS A RESULT OF THE CORRIDOR CLEARING ARE AN ACCEPTABLE ALTERNATIVE TO NATIVE DUFF MULCH.
3. FOR SLOPE ANGLES UNDER 3:1 USE TEMPORARY EROSION CONTROL SEED MIX AND FOR DISTURBED AREAS THAT ARE LACKING ADEQUATE NATIVE DUFF MATERIAL.
4. FOR SLOPE ANGLES 3:1 AND OVER USE PERMANENT EROSION CONTROL SEED MIX AND EROSION CONTROL BLANKET FOR LAND SLIDE AREAS AND AREAS OF HEAVY DISTURBANCE. THESE AREAS MUST BE APPROVED BY THE OWNER.
5. SEE SPEC SECTION 4.2 FOR SEED MIX TYPE.
6. AFTER COMPLETION OF ALL GRADING, THE TRAIL TREAD SHALL BE MECHANICALLY COMPACTED TO ITS SPECIFIED WIDTH USING A VIBRATORY PLATE, SHEEP'S FOOT, OR OTHER APPROVED EQUAL COMPACTOR.
7. CUT BRUSH AND SLASH MUST BE DISPOSED IN AN UPLAND LOCATION AND MUST BE KEPT OUT OF STREAMS, GULLIES, SWALES, WETLANDS, AND LOW AREAS. SEE SPECIFICATIONS FOR DETAILS.
8. NO EXCAVATION OR FILL PERMITTED IN WET & LOWLAND AREAS. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO CONSULT WITH THE OWNER PRIOR TO DOING ANY WORK WITHIN SUSPECTED WET & LOWLAND AREAS.



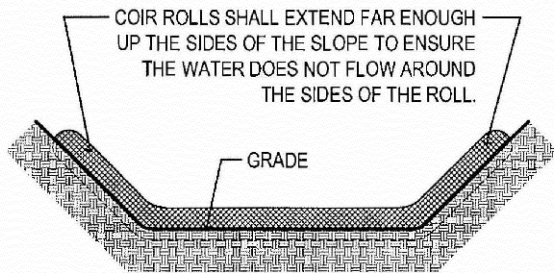
EROSION CONTROL BLANKET:

**CATEGORY 3:**  
FOR DISTURBED AREAS WITH SLOPES BETWEEN 3:1 AND 2:1, COVER WITH CATEGORY 3 EROSION CONTROL BLANKET CONSISTING OF 100% STRAW MATRIX, SUCH AS WESTERN EXCELSIOR EXCEL SS-2 WITH ALL NATURAL NETTING (OR APPROVED EQUAL) MEETING THE MnDOT SPECIFICATION SECTION 3885 REQUIREMENTS.

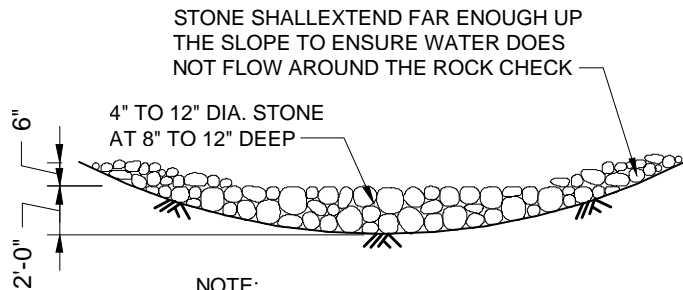
**CATEGORY 4:**  
FOR DISTURBED AREAS WITH 2:1 SLOPES OR OVER, COVER WITH CATEGORY 4 EROSION CONTROL BLANKET CONSISTING OF 30% COCONUT / 70% STRAW BLEND, SUCH AS WESTERN EXCELSIOR EXCEL CS-3 WITH ALL NATURAL NETTING (OR APPROVED EQUAL) MEETING THE MnDOT SPECIFICATION SECTION 3885 REQUIREMENTS.



CROSS-SECTION DETAIL

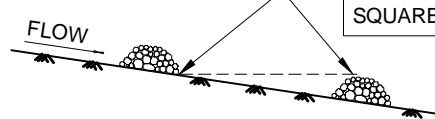


SECTION VIEW



NOTE:  
ROCK CHECKS TO BE USED IN AREAS OF CONCENTRATED FLOW

FOR MULTIPLE OR SERIES OF CHECKS THE BOTTOM OF UPPER CHECK SHOULD BE SAME ELEVATION AS THE TOP OF THE LOWER CHECK TO PROVIDE FOR POOLING



NOTE:  
PAYMENT FOR ROCK CHECKS WILL BE ON A SQUARE YARD BASIS.

WOOD FIBER BLANKET DETAIL

NOT TO SCALE

2  
L-6

COIR ROLL DETAIL

NOT TO SCALE

3  
L-6

ROCK CHECK DETAIL

NOT TO SCALE

4  
L-6



LANDSCAPE ARCHITECTURE

+ ASSOCIATES

WWW.SASLANDARCH.COM

219 WEST FIRST STREET, SUITE 350  
DULUTH, MN 55802  
(P) 218.391.1335  
(F) 218.722.6697

COPYRIGHT 2015 ALL DRAWN AND WRITTEN INFORMATION APPEARING HEREIN SHALL NOT BE DUPLICATED, DISCLOSED OR OTHERWISE USED WITHOUT WRITTEN CONSENT OF SAS+ASSOCIATES.

ISSUE RECORD/REVISION

PURPOSE	DATE

CHESTER PARK  
TRAIL REPAIRS  
CITY OF DULUTH, MINNESOTA

SHEET KEY

SHEET TITLE  
EROSION CONTROL  
DETAILS

DATE 4/7/16

DRAWN BY: LWS

CHECKED BY: LWS

PROJECT NUMBER 03110

SHEET NUMBER

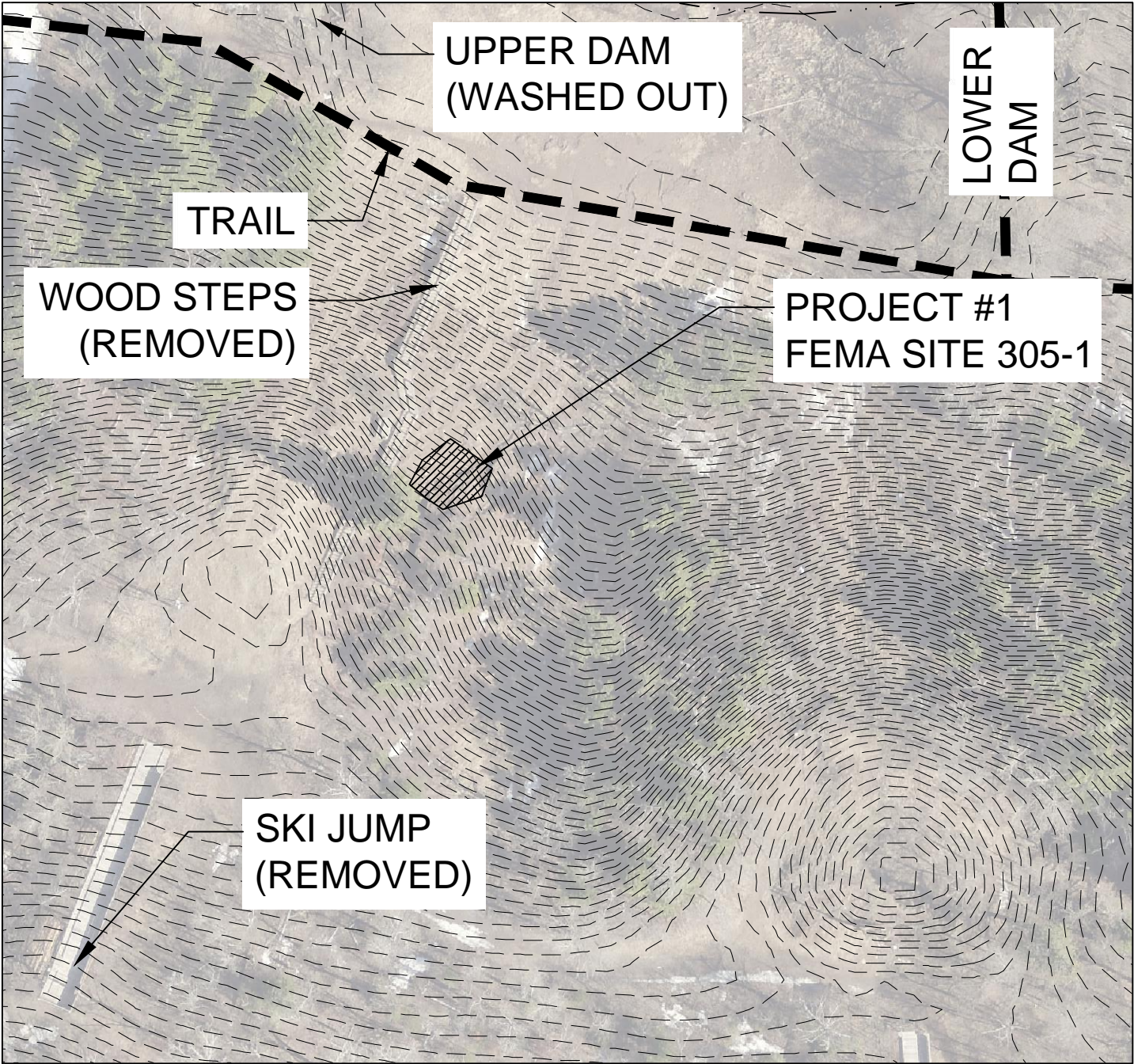
L-6

CITY OF DULUTH PROJECT NO.

DRAWN BY: LWS

SHEET NO. 6 OF 12



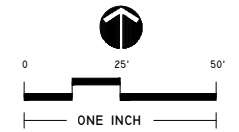


**NOTE:**  
CONTRACTOR CANNOT INVOICE  
FOR BOTH TRAIL CONSTRUCTION,  
TYPES A, B & C, AND CONSTRUCTED  
FEATURES OF A GIVEN LINEAR  
FOOT OF TRAIL.

**NOTE:**  
SEE BID WORKSHEET B FOR AN  
ESTIMATED SUMMARY OF  
CONSTRUCTED FEATURE QUANTITIES.

ISSUE RECORD/REVISION	
PURPOSE	DATE

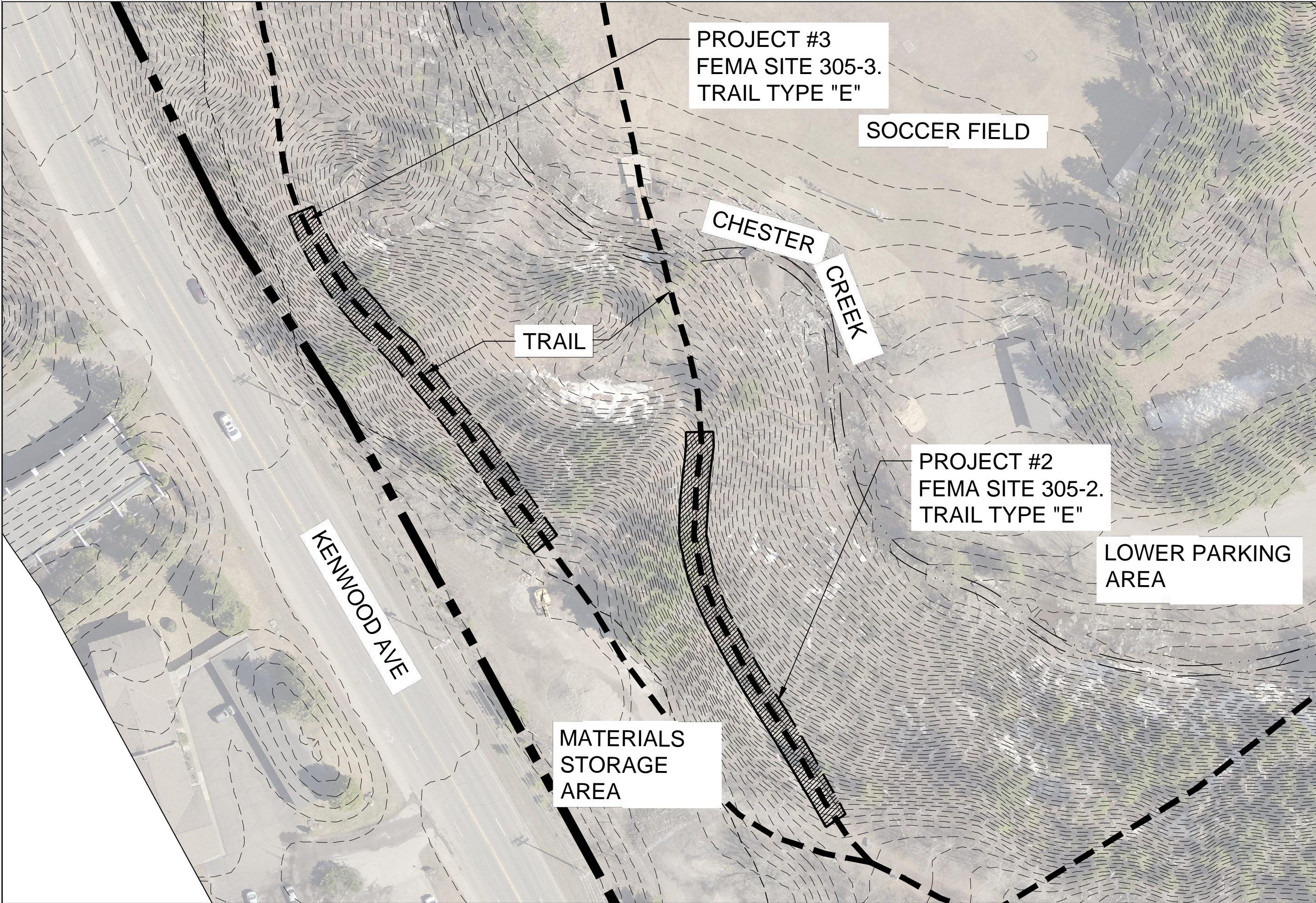
**CHESTER PARK**  
**TRAIL REPAIRS**  
CITY OF DULUTH, MINNESOTA



SHEET KEY

SHEET TITLE	
TRAIL PLAN	
DATE:	4/7/16
DRAWN BY:	LWS
CHECKED BY:	LWS
PROJECT NUMBER	15205
SHEET NUMBER	L-7





**ASSOCIATES**  
WWW.SASLANDARCH.COM

219 WEST FIRST STREET, SUITE 350  
DULUTH, MN 55802  
(P) 218.391.1335  
(F) 218.722.6697

COPYRIGHT 2015 ALL DRAWN AND WRITTEN  
INFORMATION APPEARING HEREIN SHALL NOT BE  
DUPLICATED, DISCLOSED OR OTHERWISE USED  
WITHOUT WRITTEN CONSENT OF  
SAS+ASSOCIATES.

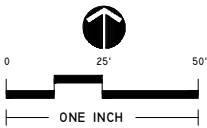
ISSUE RECORD/REVISION

PURPOSE	DATE

# CHESTER PARK

## TRAIL REPAIRS

CITY OF DULUTH, MINNESOTA



SHEET KEY

SHEET TITLE

TRAIL PLAN

DATE: 4/7/16

DRAWN BY: LWS

CHECKED BY: LWS

PROJECT NUMBER 15205

SHEET NUMBER

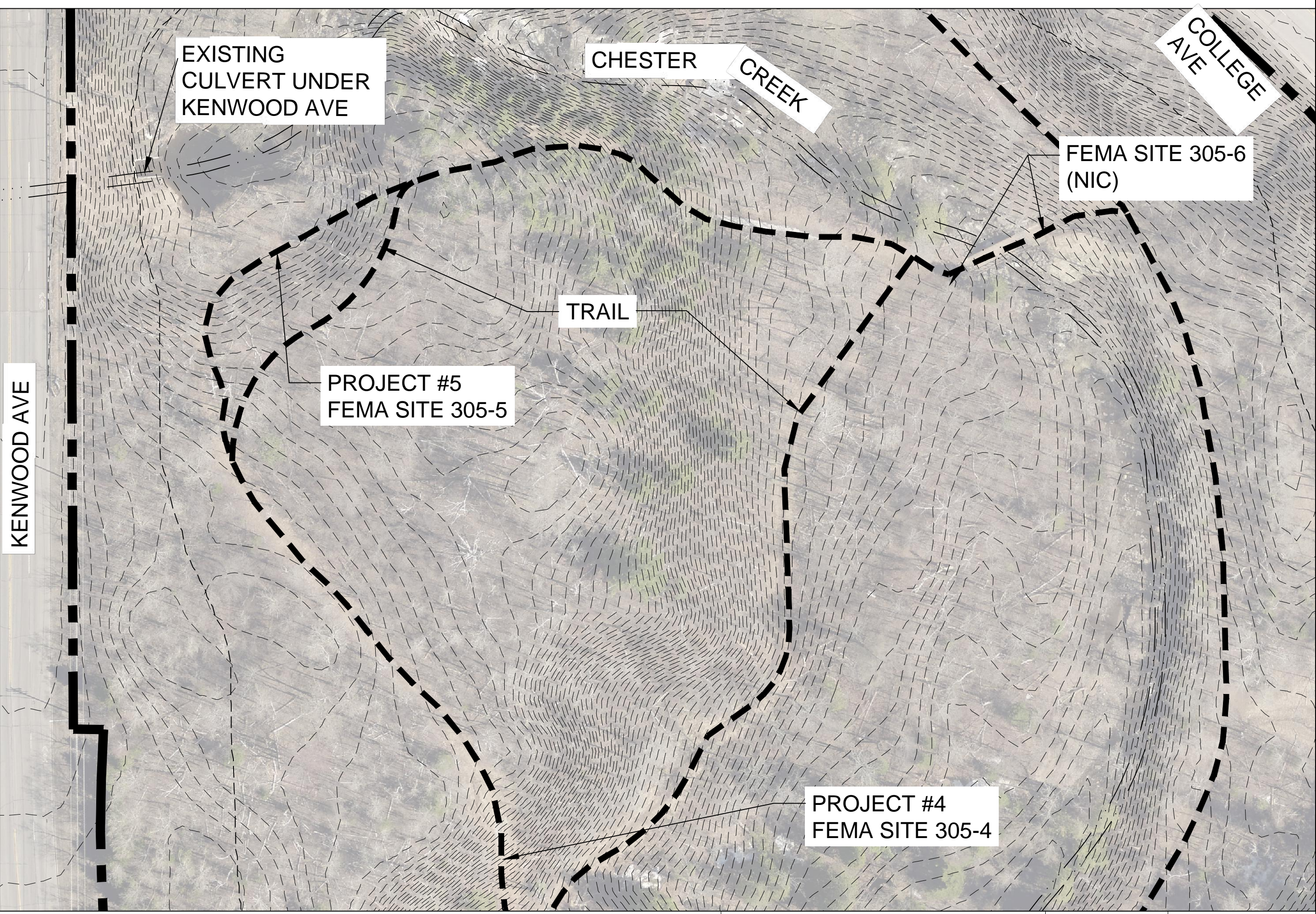
L-8

CITY OF DULUTH PROJECT NO.

DRAWN BY: LWS

SHEET NO. 8 OF 12





As of 2016, 1 file  
1. 2016-01-01 10:00:00 AM  
2. 2016-01-01 10:00:00 AM  
3. 2016-01-01 10:00:00 AM  
4. 2016-01-01 10:00:00 AM  
5. 2016-01-01 10:00:00 AM  
6. 2016-01-01 10:00:00 AM  
7. 2016-01-01 10:00:00 AM  
8. 2016-01-01 10:00:00 AM  
9. 2016-01-01 10:00:00 AM  
10. 2016-01-01 10:00:00 AM  
11. 2016-01-01 10:00:00 AM  
12. 2016-01-01 10:00:00 AM  
13. 2016-01-01 10:00:00 AM  
14. 2016-01-01 10:00:00 AM  
15. 2016-01-01 10:00:00 AM  
16. 2016-01-01 10:00:00 AM  
17. 2016-01-01 10:00:00 AM  
18. 2016-01-01 10:00:00 AM  
19. 2016-01-01 10:00:00 AM  
20. 2016-01-01 10:00:00 AM  
21. 2016-01-01 10:00:00 AM  
22. 2016-01-01 10:00:00 AM  
23. 2016-01-01 10:00:00 AM  
24. 2016-01-01 10:00:00 AM  
25. 2016-01-01 10:00:00 AM  
26. 2016-01-01 10:00:00 AM  
27. 2016-01-01 10:00:00 AM  
28. 2016-01-01 10:00:00 AM  
29. 2016-01-01 10:00:00 AM  
30. 2016-01-01 10:00:00 AM  
31. 2016-01-01 10:00:00 AM  
32. 2016-01-01 10:00:00 AM  
33. 2016-01-01 10:00:00 AM  
34. 2016-01-01 10:00:00 AM  
35. 2016-01-01 10:00:00 AM  
36. 2016-01-01 10:00:00 AM  
37. 2016-01-01 10:00:00 AM  
38. 2016-01-01 10:00:00 AM  
39. 2016-01-01 10:00:00 AM  
40. 2016-01-01 10:00:00 AM  
41. 2016-01-01 10:00:00 AM  
42. 2016-01-01 10:00:00 AM  
43. 2016-01-01 10:00:00 AM  
44. 2016-01-01 10:00:00 AM  
45. 2016-01-01 10:00:00 AM  
46. 2016-01-01 10:00:00 AM  
47. 2016-01-01 10:00:00 AM  
48. 2016-01-01 10:00:00 AM  
49. 2016-01-01 10:00:00 AM  
50. 2016-01-01 10:00:00 AM  
51. 2016-01-01 10:00:00 AM  
52. 2016-01-01 10:00:00 AM  
53. 2016-01-01 10:00:00 AM  
54. 2016-01-01 10:00:00 AM  
55. 2016-01-01 10:00:00 AM  
56. 2016-01-01 10:00:00 AM  
57. 2016-01-01 10:00:00 AM  
58. 2016-01-01 10:00:00 AM  
59. 2016-01-01 10:00:00 AM  
60. 2016-01-01 10:00:00 AM  
61. 2016-01-01 10:00:00 AM  
62. 2016-01-01 10:00:00 AM  
63. 2016-01-01 10:00:00 AM  
64. 2016-01-01 10:00:00 AM  
65. 2016-01-01 10:00:00 AM  
66. 2016-01-01 10:00:00 AM  
67. 2016-01-01 10:00:00 AM  
68. 2016-01-01 10:00:00 AM  
69. 2016-01-01 10:00:00 AM  
70. 2016-01-01 10:00:00 AM  
71. 2016-01-01 10:00:00 AM  
72. 2016-01-01 10:00:00 AM  
73. 2016-01-01 10:00:00 AM  
74. 2016-01-01 10:00:00 AM  
75. 2016-01-01 10:00:00 AM  
76. 2016-01-01 10:00:00 AM  
77. 2016-01-01 10:00:00 AM  
78. 2016-01-01 10:00:00 AM  
79. 2016-01-01 10:00:00 AM  
80. 2016-01-01 10:00:00 AM  
81. 2016-01-01 10:00:00 AM  
82. 2016-01-01 10:00:00 AM  
83. 2016-01-01 10:00:00 AM  
84. 2016-01-01 10:00:00 AM  
85. 2016-01-01 10:00:00 AM  
86. 2016-01-01 10:00:00 AM  
87. 2016-01-01 10:00:00 AM  
88. 2016-01-01 10:00:00 AM  
89. 2016-01-01 10:00:00 AM  
90. 2016-01-01 10:00:00 AM  
91. 2016-01-01 10:00:00 AM  
92. 2016-01-01 10:00:00 AM  
93. 2016-01-01 10:00:00 AM  
94. 2016-01-01 10:00:00 AM  
95. 2016-01-01 10:00:00 AM  
96. 2016-01-01 10:00:00 AM  
97. 2016-01-01 10:00:00 AM  
98. 2016-01-01 10:00:00 AM  
99. 2016-01-01 10:00:00 AM  
100. 2016-01-01 10:00:00 AM



**SAS**  
LANDSCAPE ARCHITECTURE  
+ ASSOCIATES  
WWW.SASLANDARCH.COM

219 WEST FIRST STREET, SUITE 350  
DULUTH, MN 55802  
(P) 218.391.1335  
(F) 218.722.6697

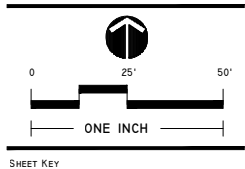
COPYRIGHT 2015 ALL DRAWN AND WRITTEN INFORMATION APPEARING HEREIN SHALL NOT BE DUPLICATED, DISCLOSED OR OTHERWISE USED WITHOUT WRITTEN CONSENT OF SAS+ASSOCIATES.

ISSUE RECORD/REVISION	
PURPOSE	DATE

CHESTER PARK

TRAIL REPAIRS

CITY OF DULUTH, MINNESOTA



SHEET KEY

SHEET TITLE

TRAIL PLAN

DATE: 4/7/16

DRAWN BY: LWS

CHECKED BY: LWS

PROJECT NUMBER

15205

SHEET NUMBER

L-9



SKYLINE  
BRIDGE

PROJECT #6  
FEMA SITE 305-7

TRAIL

PROJECT #7  
FEMA SITE 305-8

KENT  
ROAD

CHESTER  
PARK DRIVE

PROJECT #9  
FEMA SITE 305-14

PROJECT #10  
FEMA SITE 305-13

CHESTER  
CREEK

PROJECT #11  
FEMA SITE 305-15

SKYLINE  
DRIVE

PROJECT #8  
FEMA SITE 305-9

PROJECT #11 —  
FEMA SITE 305-15

PROJECT #8 —  
FEMA SITE 305-9

PROJECT #10  
FEMA SITE 305-13

CHESTER  
PARK DRIVE

**SAS**  
**LANDSCAPE ARCHITECTURE**  
**+ ASSOCIATES**  
**WWW.SASLANDARCH.COM**  
219 WEST FIRST STREET, SUITE 350  
DULUTH, MN 55802  
(P) 218.391.1335  
(F) 218.722.6697

COPYRIGHT 2015 ALL DRAWN AND WRITTEN  
INFORMATION APPEARING HEREIN SHALL NOT BE  
DUPLICATED, DISCLOSED OR OTHERWISE USED  
WITHOUT WRITTEN CONSENT OF  
SAS+ASSOCIATES.

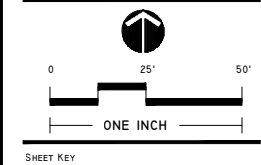
[illegible]

# CHESTER PARK

---

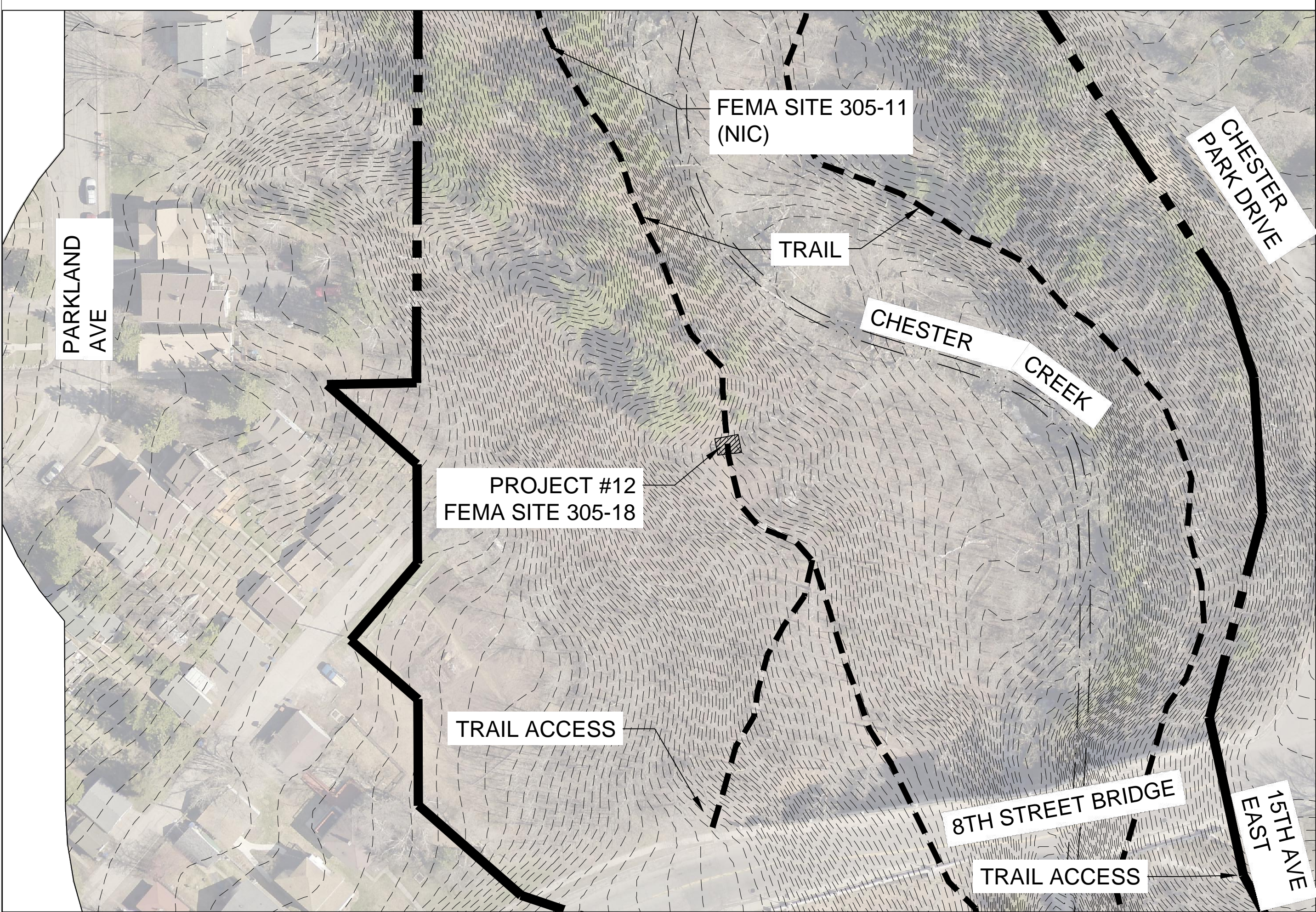
## TRAIL REPAIRS

CITY OF DULUTH, MINNESOTA



SHEET TITLE	
TRAIL PLAN	
<hr/>	
DATE:	4/7/16
DRAWN BY:	LWS
CHECKED BY:	LWS
<hr/>	
PROJECT NUMBER	15205
<hr/>	
SHEET NUMBER	L-10





**SAS**  
LANDSCAPE ARCHITECTURE  
**+ ASSOCIATES**  
WWW.SASLANDARCH.COM  
219 WEST FIRST STREET, SUITE 350  
DULUTH, MN 55802  
(P) 218.391.1335  
(F) 218.722.6697

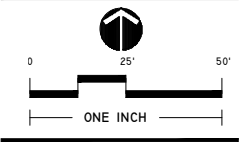
COPYRIGHT 2015 ALL DRAWN AND WRITTEN INFORMATION APPEARING HEREIN SHALL NOT BE DUPLICATED, DISCLOSED OR OTHERWISE USED WITHOUT WRITTEN CONSENT OF SAS+ASSOCIATES.

ISSUE RECORD/REVISION	
PURPOSE	DATE

CHESTER PARK

TRAIL REPAIRS

CITY OF DULUTH, MINNESOTA

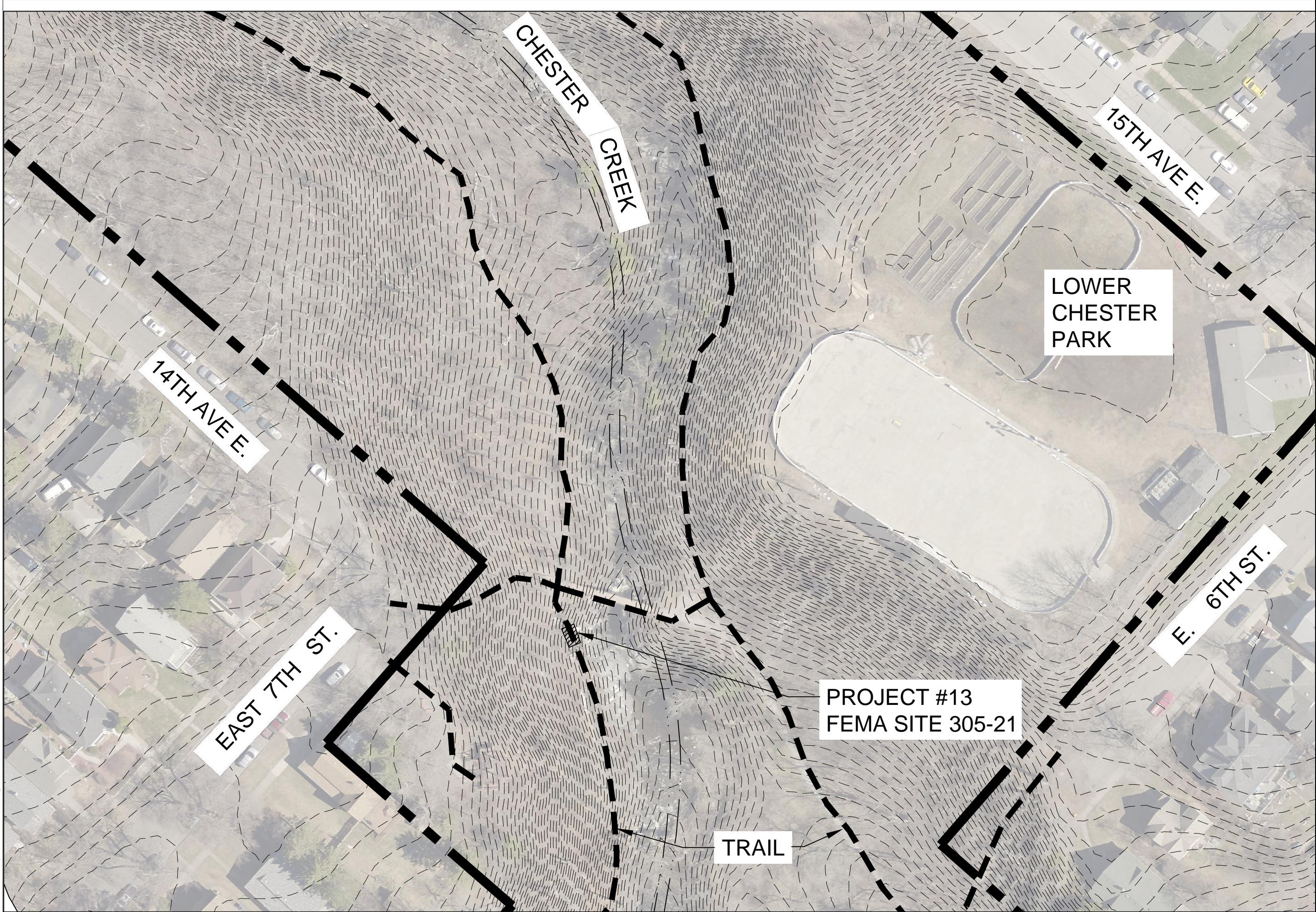


SHEET KEY

SHEET TITLE	
TRAIL PLAN	
DATE:	4/7/16
DRAWN BY:	LWS
CHECKED BY:	LWS
PROJECT NUMBER	15205
SHEET NUMBER	L-II

ALL CITY, TOWN, AND COUNTY PROJECTS ARE DESIGNED BY SAS+ASSOCIATES, INC.





As of 2016, 11:00 AM  
Project: Chester Park Trail Repairs  
Project: Chester Park Trail Repairs



**ASSOCIATES**  
WWW.SASLANDARCH.COM

219 WEST FIRST STREET, SUITE 350  
DULUTH, MN 55802  
(P) 218.391.1335  
(F) 218.722.6697

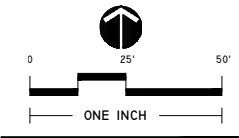
COPYRIGHT 2015 ALL DRAWN AND WRITTEN  
INFORMATION APPEARING HEREIN SHALL NOT BE  
DUPLICATED, DISCLOSED OR OTHERWISE USED  
WITHOUT WRITTEN CONSENT OF  
SAS+ASSOCIATES.

ISSUE RECORD/REVISION	
PURPOSE	DATE

# CHESTER PARK

## TRAIL REPAIRS

CITY OF DULUTH, MINNESOTA



SHEET KEY

SHEET TITLE  
**TRAIL PLAN**

DATE: 4/7/16  
DRAWN BY: LWS  
CHECKED BY: LWS

PROJECT NUMBER  
**15205**

SHEET NUMBER  
**L-12**