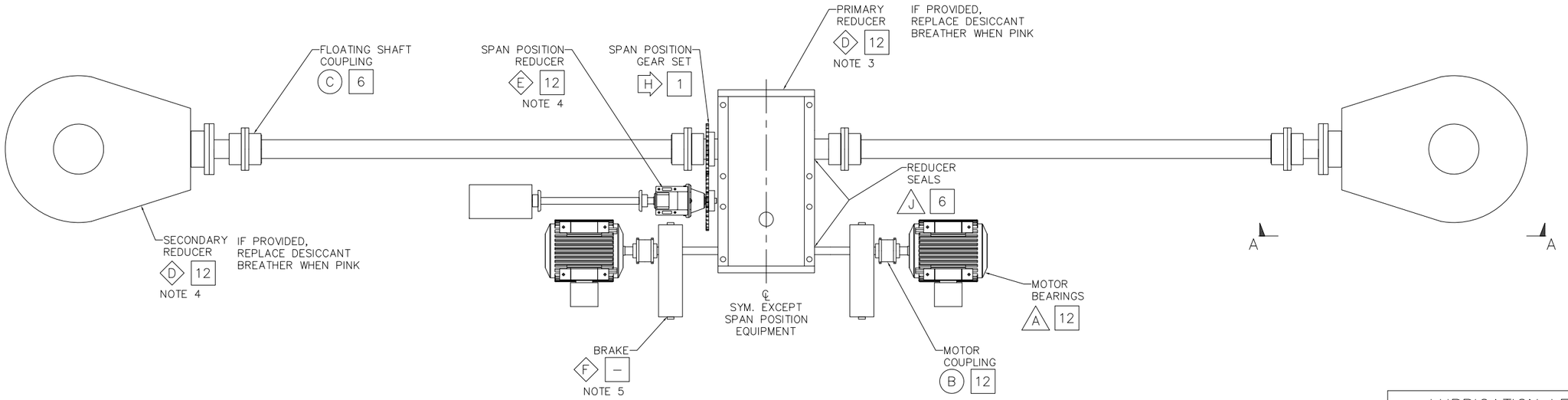
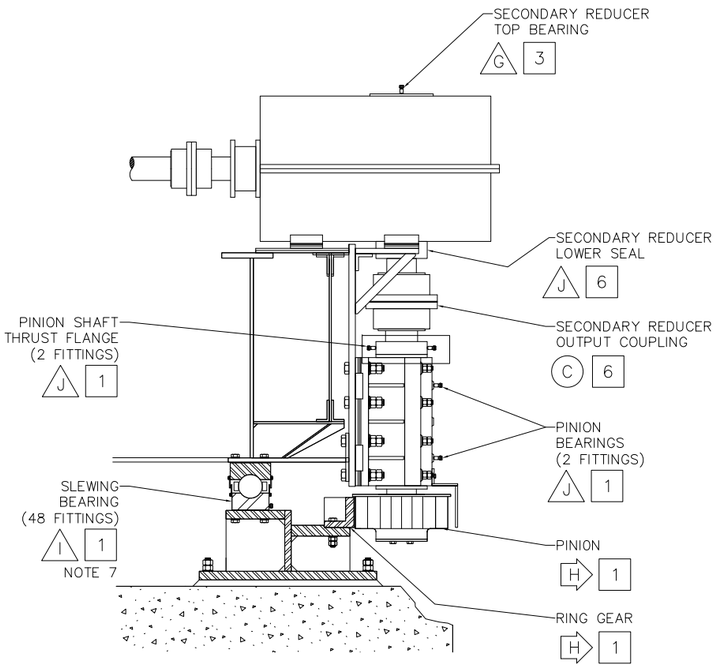


PLAN VIEW
SPAN DRIVE ASSEMBLY



VIEW A–A
ELEVATION AT LOW SPEED MACHINERY

NOTES:
1. SEE LUBRICANT SCHEDULES FOR RECOMMENDED CAPACITIES.
2. LUBRICANT COMPATIBILITY MUST BE CONSIDERED WHEN SWITCHING LUBRICANTS. THE LUBRICANTS PROVIDED BELOW ARE CONSIDERED APPROPRIATE FOR THE COMPONENTS, BUT THEIR COMPATIBILITY WITH EACH OTHER CANNOT BE VERIFIED WITHOUT TESTING. FOR THIS REASON, DO NOT MIX LUBRICANTS. WHEN SWITCHING LUBRICANTS, TAKE CARE TO COMPLETELY REMOVE OLD LUBRICANTS TO THE EXTENT POSSIBLE PRIOR TO PROVIDING NEW. CONSULT A LUBRICATION ENGINEER PRIOR TO SELECTING A LUBRICATION ALTERNATIVE NOT SHOWN IN THE TABLE.
3. THE PROVIDED LUBRICATION FREQUENCIES SHOULD BE CONSIDERED A BASELINE. ADJUST THE LUBRICATION FREQUENCY AS NECESSARY TO ENSURE WEARING COMPONENTS REMAIN FULLY LUBRICATED.
4. PROVIDE AN ANNUAL TEST OF THE REDUCER OIL. DETERMINE WHEN REPLACEMENT OF THE OIL IS NECESSARY BASED ON TEST RESULTS. REPLACE OIL FOR SMALLER REDUCERS WHERE TESTING IS NOT PRACTICAL.
5. BRAKE THRUSTERS ARE INTENDED TO BE SEALED FOR LIFE. INSPECT AND TOP OFF AS NECESSARY TO THE LEVEL RECOMMENDED BY THE MANUFACTURER. REPLACE THRUSTERS WITH SIGNIFICANT LEAKAGE.
6. TO LUBRICATE THE COUPLINGS, REMOVE TWO PIPE PLUGS IN THE COUPLING COVERS. INSERT A LUBRICATION FITTING INTO ONE OF THE PORTS AND LEAVE THE OTHER PORT OPEN TO FUNCTION AS A VENT. PUMP IN NEW LUBRICANT UNTIL ALL OLD LUBRICANT HAS DRAINED FROM THE VENT PORT AND NEW LUBRICANT BEGINS TO DRAIN.
7. THE MANUFACTURER RECOMMENDS OPERATING THE BRIDGE WHILE GREASING THE SLEWING BEARING.

LUBRICATION LEGEND	
SYMBOL	APPLICATION
◇	OIL RESERVOIR – POUR OR PUMP
○	GREASE GUN – REMOVE PURGE PLUG, GREASE AND REPLACE PLUG
△	GREASE GUN – LUBE FITTING
⇨	BRUSH, SPRAY OR SWAB
□	SERVICE FREQUENCY IN MONTHS

LUBRICANT LIST			
CODE	SPEC.	LUBRICANT	REMARKS
A	NLGI #2	MOBIL POLYREX EM CHEVRON SRI 2	MOTOR BEARINGS
B	NLGI #1	MOBILUX EP 1, MOBILUX EP 111 FALK LTG P66 DYNALIFE L–EP 1	HIGH SPEED COUPLINGS
C	NLGI #0,1	MOBILUX EP 0 FALK LTG P66 DYNALIFE L–EP 0	LOW SPEED COUPLINGS
D	ISO 320 SYNTH.	MOBIL SHC 632 PHILLIPS 66 SYNCON R&O OIL 320	PRIMARY & SECONDARY REDUCERS
E	ISO 220 SYNTH.	MOBIL SHC 630 PHILLIPS 66 SYNCON R&O OIL 220	SPAN POSITION REDUCER
F	ISO 10	SHELL MORLINA 10	BRAKE THRUSTERS
G	NLGI #2	PHILLIPS 66 MULTIPLEX 600#2 SKF LGHB 2	ROLLER BEARINGS
H	–	LUBRIPLATE GEAR SHIELD HEAVY CHEVRON OPEN GEAR LUBE	OPEN GEARS
I	NLGI #2	MOBILUX EP 2	SLEWING BEARING
J	NLGI #2	PHILLIPS 66 MULTIPLEX 600#2 SKF LGHB 2 MOBILUX EP 2	PLAIN BEARINGS AND SEALS
K	NLGI #1.5	MOBILITH SHC 460	ACTUATOR

REVISIONS

DATE	BY	DESCRIPTION

SB ENGINEERING
Stafford Bandlow Engineering, Inc.
800 Hyde Park
Doylestown, PA 18902
www.sbengineering.net

DESIGNER: R. KANAGY

PERFORMED FOR: GREAT LAKES CONSTRUCTION

SHEET TITLE: SPAN DRIVE AND SUPPORT LUBRICATION SCHEDULE

DRAWING NO.: CENTER LUBE 1/2

PROJECT NAME: CENTER SWING BRIDGE LUBRICATION SCHEDULE
CITY OF CLEVELAND

NOTES:
1. SEE LUBRICANT SCHEDULES FOR RECOMMENDED CAPACITIES.
2. LUBRICANT COMPATIBILITY MUST BE CONSIDERED WHEN SWITCHING LUBRICANTS. THE LUBRICANTS PROVIDED BELOW ARE CONSIDERED APPROPRIATE FOR THE COMPONENTS, BUT THEIR COMPATIBILITY WITH EACH OTHER CANNOT BE VERIFIED WITHOUT TESTING. FOR THIS REASON, DO NOT MIX LUBRICANTS. WHEN SWITCHING LUBRICANTS, TAKE CARE TO COMPLETELY REMOVE OLD LUBRICANTS TO THE EXTENT POSSIBLE PRIOR TO PROVIDING NEW. CONSULT A LUBRICATION ENGINEER PRIOR TO SELECTING A LUBRICATION ALTERNATIVE NOT SHOWN IN THE TABLE.
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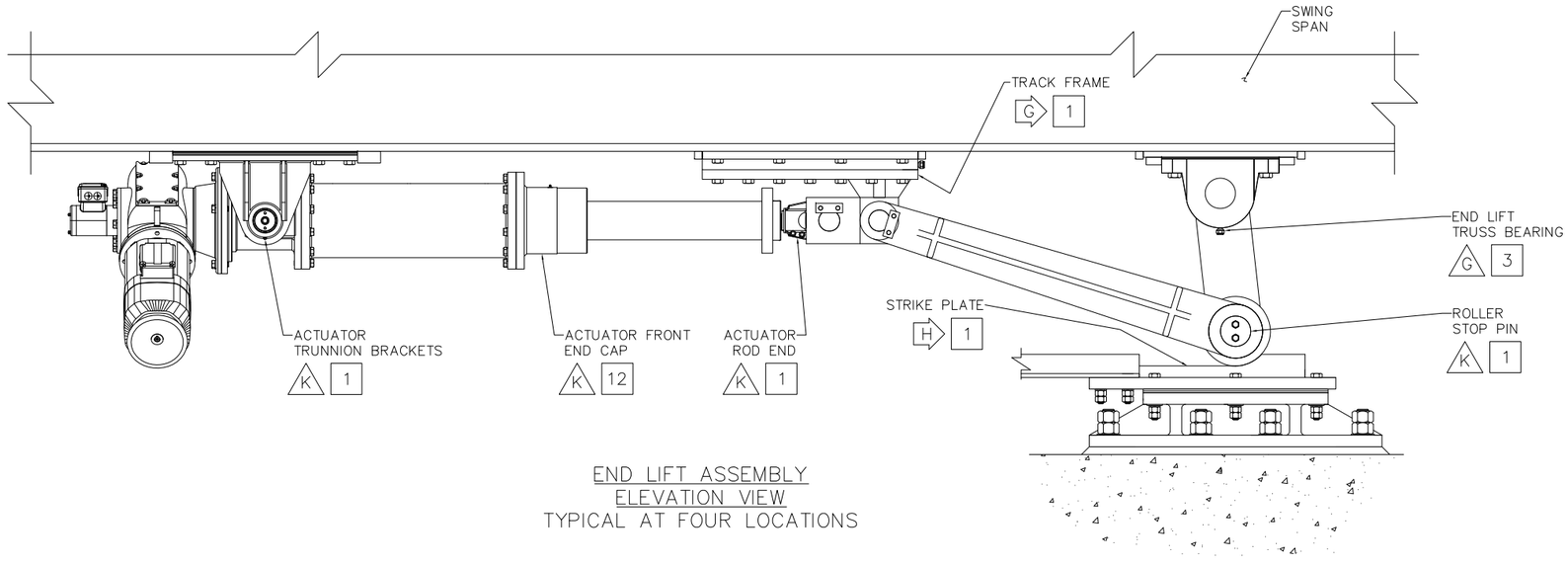

END LIFT ASSEMBLY
ELEVATION VIEW
TYPICAL AT FOUR LOCATIONS

LUBRICATION LEGEND	
SYMBOL	APPLICATION
◇	OIL RESERVOIR – POUR OR PUMP
○	GREASE GUN – REMOVE PURGE PLUG, GREASE AND REPLACE PLUG
△	GREASE GUN – LUBE FITTING
⇨	BRUSH, SPRAY OR SWAB
□	SERVICE FREQUENCY IN MONTHS

LUBRICANT LIST

CODE	SPEC.	LUBRICANT	REMARKS
A	NLGI #2	MOBIL POLYREX EM CHEVRON SRI 2	MOTOR BEARINGS
B	NLGI #1	MOBILUX EP 1, MOBILUX EP 111 FALK LTG P66 DYNALIFE L–EP 1	HIGH SPEED COUPLINGS
C	NLGI #0,1	MOBILUX EP 0 FALK LTG P66 DYNALIFE L–EP 0	LOW SPEED COUPLINGS
D	ISO 320 SYNTH.	MOBIL SHC 632 PHILLIPS 66 SYNCON R&O OIL 320	PRIMARY & SECONDARY REDUCERS
E	ISO 220 SYNTH.	MOBIL SHC 630 PHILLIPS 66 SYNCON R&O OIL 220	SPAN POSITION REDUCER
F	ISO 10	SHELL MORLINA 10	BRAKE THRUSTERS
G	NLGI #2	PHILLIPS 66 MULTIPLEX 600#2 SKF LGHB 2	ROLLER BEARINGS
H	–	LUBRIPLATE GEAR SHIELD HEAVY CHEVRON OPEN GEAR LUBE	OPEN GEARS
I	NLGI #2	MOBILUX EP 2	SLEWING BEARING
J	NLGI #2	PHILLIPS 66 MULTIPLEX 600#2 SKF LGHB 2 MOBILUX EP 2	PLAIN BEARINGS AND SEALS
K	NLGI #1.5	MOBILITH SHC 460	ACTUATOR

REVISIONS

DATE	BY	DESCRIPTION

SB ENGINEERING
Stafford Bandlow Engineering, Inc.
800 Hyde Park
Doylestown, PA 18902
www.sbengineering.net

DESIGNER: R. KANAGY

PERFORMED FOR: GREAT LAKES CONSTRUCTION

SHEET TITLE: END LIFT LUBRICATION SCHEDULE

DRAWING NO.: CENTER LUBE 2/2

PROJECT NAME: CENTER SWING BRIDGE LUBRICATION SCHEDULE
CITY OF CLEVELAND