SCHEDULE 220 REMODELING CHEMICAL LABORATORY

P M A' S TRACE SYSTEM FOR PROJECT MANAGEMENT

SCHEDULE REPORT BY ACTIVITY CODE

BASE DATE 27 SEP 76
FNSH DATE 2 NOV 76

DATA DATE 27 SEP 76
CUTF DATE 30 JUL 76

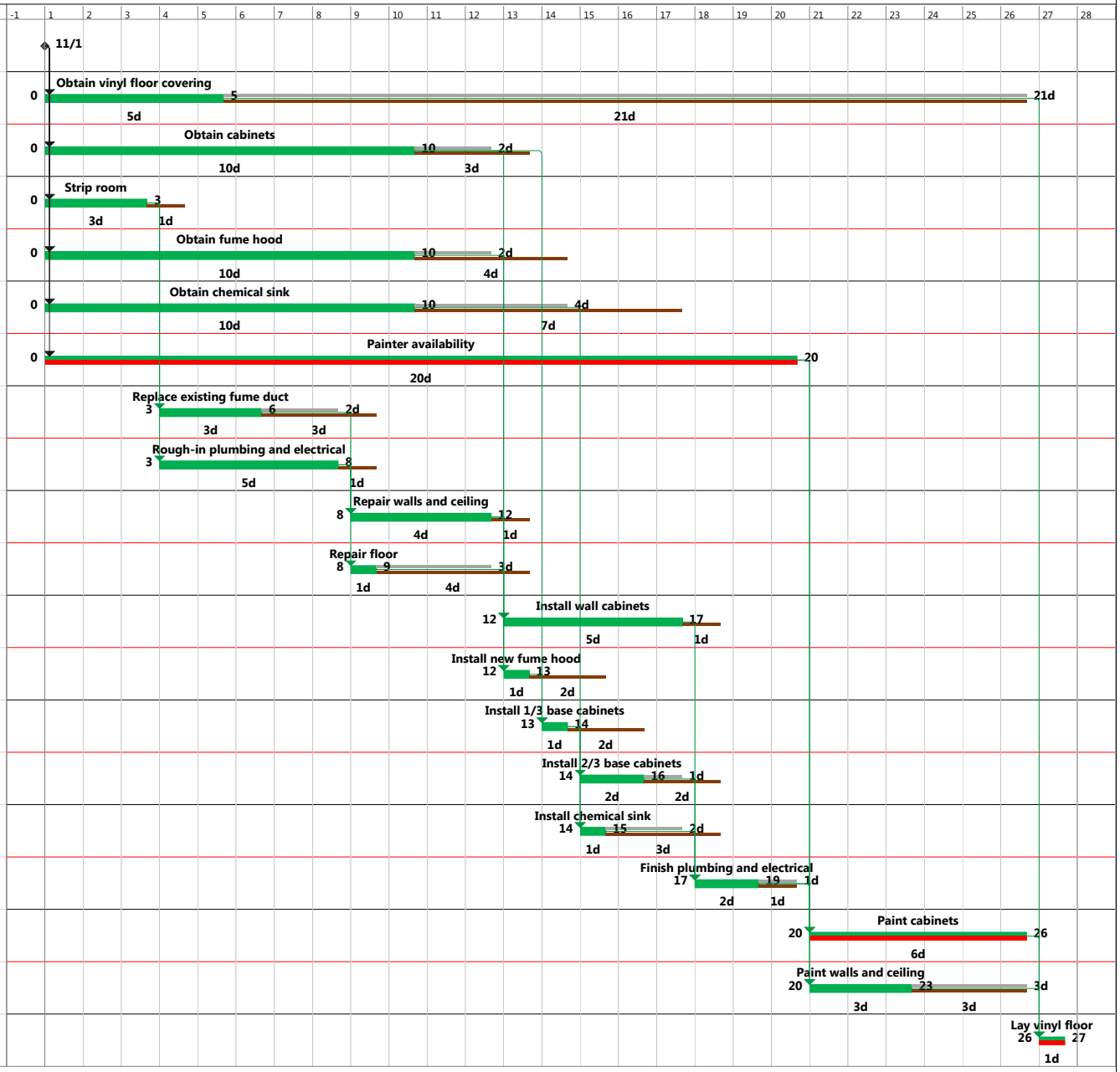
LOWR SPAN 27 SEP 76
UPPR SPAN 2 NOV 76

RUN DATE 4 JAN 77
PERM 1

| ID CODE | ACTIVITY DESCRIPTION | DAYS LEFT | WORK WEEK | % COMP | START EARLY ( ) MEANS | START LATE ACTUAL | FINISH EARLY ( ) MEANS | FINISH LATE ACTUAL | TOTAL FLOAT | FREE FLOAT |
|---|---|---|---|---|---|---|---|---|---|---|
| 005 | 5 CONTRACT AWARD | 0.0 | 71 | 0 | 27SEP76 | 27SEP76 | 27SEP76 | 27SEP76 | 0.0 | 0.0 |
| 010 | 10 OBTAIN VINYL FLOOR COVERING | 5.0 | 51 | 0 | 27SEP76 | 26OCT76 | 1OCT76 | 1NOV76 | 21.0 | 21.0 |
| 015 | 15 OBTAIN CABINETS | 10.0 | 51 | 0 | 27SEP76 | 30SEP76 | 8OCT76 | 13OCT76 | 3.0 | 2.0 |
| | 20 STRIP ROOM | 3.0 | 51 | 0 | 27SEP76 | 28SEP76 | 29SEP76 | 30SEP76 | 1.0 | 0.0 |
| | 25 OBTAIN FUME HOOD | 10.0 | 51 | 0 | 27SEP76 | 1OCT76 | 8OCT76 | 14OCT76 | 4.0 | 2.0 |
| | 30 OBTAIN CHEMICAL SINK | 10.0 | 51 | 0 | 27SEP76 | 6OCT76 | 8OCT76 | 19OCT76 | 7.0 | 4.0 |
| | 35 PAINTER AVAILABILITY | 20.0 | 51 | 0 | 27SEP76 | 27SEP76 | 22OCT76 | 22OCT76 | 0.0 | 0.0 |
| | 40 REPLACE EXISTING FUME DUCT | 3.0 | 51 | 0 | 30SEP76 | 5OCT76 | 4OCT76 | 7OCT76 | 3.0 | 2.0 |
| | 45 ROUGH IN PLUMBING & ELECTRICAL | 5.0 | 51 | 0 | 30SEP76 | 1OCT76 | 6OCT76 | 7OCT76 | 1.0 | 0.0 |
| | 50 REPAIR WALLS & CEILING | 4.0 | 51 | 0 | 7OCT76 | 8OCT76 | 12OCT76 | 13OCT76 | 1.0 | 0.0 |
| | 55 REPAIR FLOOR | 1.0 | 51 | 0 | 7OCT76 | 13OCT76 | 7OCT76 | 13OCT76 | 4.0 | 3.0 |
| | 60 INSTALL WALL CABINETS | 5.0 | 51 | 0 | 13OCT76 | 14OCT76 | 19OCT76 | 20OCT76 | 1.0 | 0.0 |
| | 65 INSTALL NEW FUME HOOD | 1.0 | 51 | 0 | 13OCT76 | 15OCT76 | 13OCT76 | 15OCT76 | 2.0 | 0.0 |
| | 70 INSTALL 1/3 BASE CABINETS | 1.0 | 51 | 0 | 14OCT76 | 18OCT76 | 14OCT76 | 18OCT76 | 2.0 | 0.0 |
| | 75 INSTALL 2/3 BASE CABINETS | 2.0 | 51 | 0 | 15OCT76 | 19OCT76 | 18OCT76 | 20OCT76 | 2.0 | 1.0 |
| | 80 INSTALL CHEMICAL SINK | 1.0 | 51 | 0 | 15OCT76 | 20OCT76 | 15OCT76 | 20OCT76 | 3.0 | 2.0 |
| | 85 FINISH PLUMBING & ELECTRICAL | 2.0 | 51 | 0 | 20OCT76 | 21OCT76 | 21OCT76 | 22OCT76 | 1.0 | 1.0 |
| | 90 PAINT CABINETS | 6.0 | 51 | 0 | 25OCT76 | 25OCT76 | 1NOV76 | 1NOV76 | 0.0 | 0.0 |
| | 95 PAINT WALLS & CEILING | 3.0 | 51 | 0 | 25OCT76 | 28OCT76 | 27OCT76 | 1NOV76 | 3.0 | 3.0 |
| 100 | 100 LAY VINYL FLOOR | 1.0 | 51 | 0 | 2NOV76 | 2NOV76 | 2NOV76 | 2NOV76 | 0.0 | 0.0 |

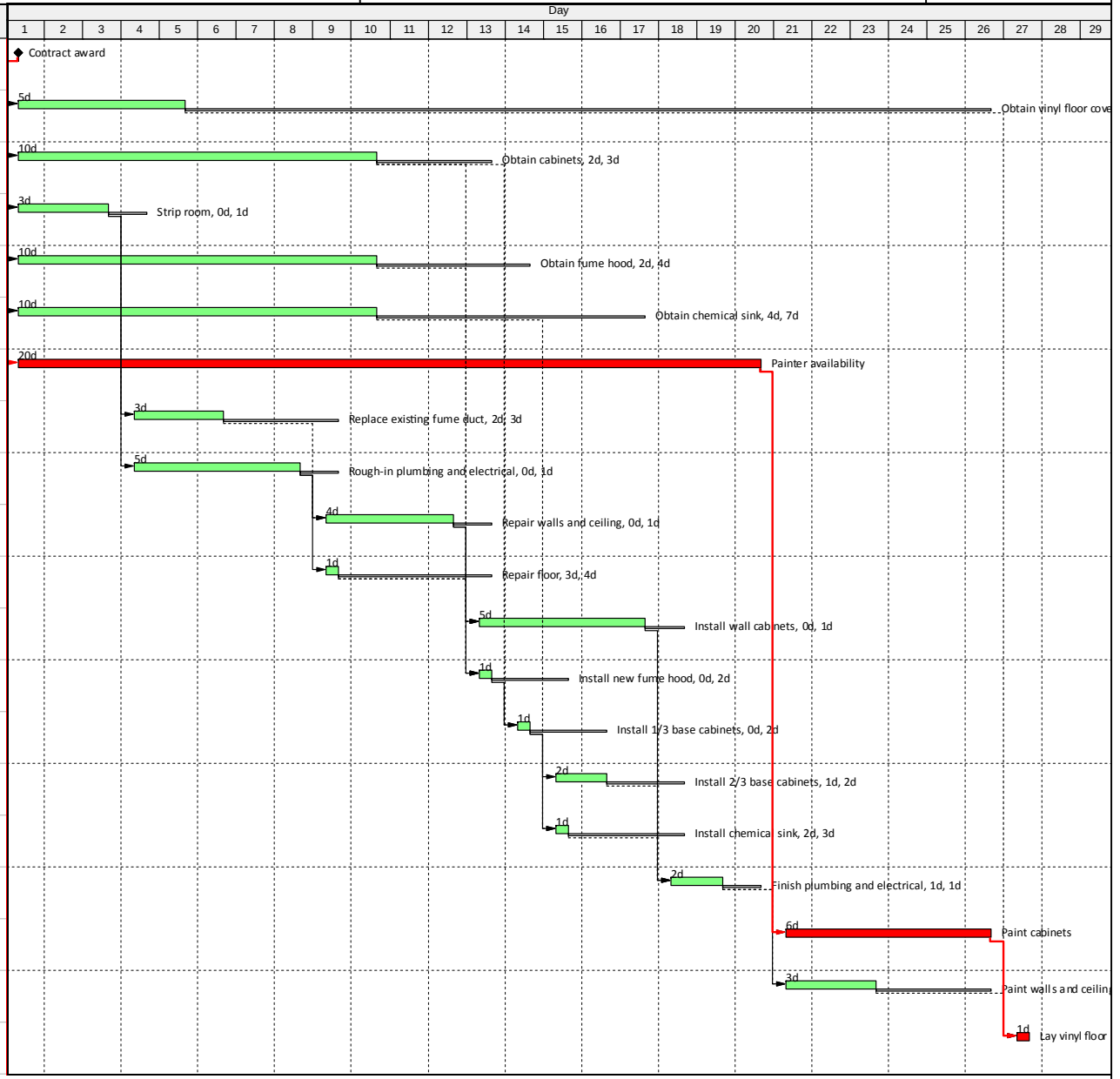
WORK WEEK = DAYS-PER-WEEK, START DAY, CALENDAR S2 = SCHEDULED DATE, TYPE II
TOTAL FLOAT = MAXIMUM DAY DELAY FREE FLOAT = ALLOWABLE DAY DELAY
TOTAL DURATION (CALENDAR DAYS) = 37

| ID | No. | Activity | Pred | Orig Dur | T | ESD | EFD | LSD | LFD | TF |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 5 | Contract award | | 0d | 0d | 0 | 0 | 0 | 0 | 0d |
| 2 | 10 | Obtain vinyl floor covering | 1 | 5d | 5d | 0 | 5 | 21 | 26 | 21d |
| 3 | 15 | Obtain cabinets | 1 | 10d | 10d | 0 | 10 | 3 | 13 | 3d |
| 4 | 20 | Strip room | 1 | 3d | 3d | 0 | 3 | 1 | 4 | 1d |
| 5 | 25 | Obtain fume hood | 1 | 10d | 10d | 0 | 10 | 4 | 14 | 4d |
| 6 | 30 | Obtain chemical sink | 1 | 10d | 10d | 0 | 10 | 7 | 17 | 7d |
| 7 | 35 | Painter availability | 1 | 20d | 20d | 0 | 20 | 0 | 20 | 0d |
| 8 | 40 | Replace existing fume duct | 4 | 3d | 3d | 3 | 6 | 6 | 9 | 3d |
| 9 | 45 | Rough-in plumbing and electrical | 4 | 5d | 5d | 3 | 8 | 4 | 9 | 1d |
| 10 | 50 | Repair walls and ceiling | 8,9 | 4d | 4d | 8 | 12 | 9 | 13 | 1d |
| 11 | 55 | Repair floor | 9 | 1d | 1d | 8 | 9 | 12 | 13 | 4d |
| 12 | 60 | Install wall cabinets | 10,3,11 | 5d | 5d | 12 | 17 | 13 | 18 | 1d |
| 13 | 65 | Install new fume hood | 10,5,11 | 1d | 1d | 12 | 13 | 14 | 15 | 2d |
| 14 | 70 | Install 1/3 base cabinets | 13,3 | 1d | 1d | 13 | 14 | 15 | 16 | 2d |
| 15 | 75 | Install 2/3 base cabinets | 14 | 2d | 2d | 14 | 16 | 16 | 18 | 2d |
| 16 | 80 | Install chemical sink | 6,14 | 1d | 1d | 14 | 15 | 17 | 18 | 3d |
| 17 | 85 | Finish plumbing and electrical | 12,15,16 | 2d | 2d | 17 | 19 | 18 | 20 | 1d |
| 18 | 90 | Paint cabinets | 7,17 | 6d | 6d | 20 | 26 | 20 | 26 | 0d |
| 19 | 95 | Paint walls and ceiling | 7,17 | 3d | 3d | 20 | 23 | 23 | 26 | 3d |
| 20 | 100 | Lay vinyl floor | 18,19,2 | 1d | 1d | 26 | 27 | 26 | 27 | 0d |



| Primavera P6 Professional R15.1 | Project: Lab 1:ChemLab - Target Schedule | Layout: Lab1F16-Target-Table-Gantt-Network | Date: 22-09-16 |
|---|---|---|---|

| ID | Act | Prec | Orig Dur | Rem Dur | % Comp | ESD | EFD | LSD | LFD | FF | TF |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 005 | Contract award | | 0d | 0d | 0% | 01-11-16 | | 01-11-16 | | 0d | 0d |
| 010 | Obtain vinyl floor covering | 005 | 5d | 5d | 0% | 01-11-16 | 05-11-16 | 22-11-16 | 26-11-16 | 21d | 21d |
| 015 | Obtain cabinets | 005 | 10d | 10d | 0% | 01-11-16 | 10-11-16 | 04-11-16 | 13-11-16 | 2d | 3d |
| 020 | Strip room | 005 | 3d | 3d | 0% | 01-11-16 | 03-11-16 | 02-11-16 | 04-11-16 | 0d | 1d |
| 025 | Obtain fume hood | 005 | 10d | 10d | 0% | 01-11-16 | 10-11-16 | 05-11-16 | 14-11-16 | 2d | 4d |
| 030 | Obtain chemical sink | 005 | 10d | 10d | 0% | 01-11-16 | 10-11-16 | 08-11-16 | 17-11-16 | 4d | 7d |
| 035 | Painter availability | 005 | 20d | 20d | 0% | 01-11-16 | 20-11-16 | 01-11-16 | 20-11-16 | 0d | 0d |
| 040 | Replace existing fume duct | 020 | 3d | 3d | 0% | 04-11-16 | 06-11-16 | 07-11-16 | 09-11-16 | 2d | 3d |
| 045 | Rough-in plumbing and electrical | 020 | 5d | 5d | 0% | 04-11-16 | 08-11-16 | 05-11-16 | 09-11-16 | 0d | 1d |
| 050 | Repair walls and ceiling | 040, 045 | 4d | 4d | 0% | 09-11-16 | 12-11-16 | 10-11-16 | 13-11-16 | 0d | 1d |
| 055 | Repair floor | 045 | 1d | 1d | 0% | 09-11-16 | 09-11-16 | 13-11-16 | 13-11-16 | 3d | 4d |
| 060 | Install wall cabinets | 050, 015, 055 | 5d | 5d | 0% | 13-11-16 | 17-11-16 | 14-11-16 | 18-11-16 | 0d | 1d |
| 065 | Install new fume hood | 025, 050, 055 | 1d | 1d | 0% | 13-11-16 | 13-11-16 | 15-11-16 | 15-11-16 | 0d | 2d |
| 070 | Install 1/3 base cabinets | 015, 065 | 1d | 1d | 0% | 14-11-16 | 14-11-16 | 16-11-16 | 16-11-16 | 0d | 2d |
| 075 | Install 2/3 base cabinets | 070 | 2d | 2d | 0% | 15-11-16 | 16-11-16 | 17-11-16 | 18-11-16 | 1d | 2d |
| 080 | Install chemical sink | 030, 070 | 1d | 1d | 0% | 15-11-16 | 15-11-16 | 18-11-16 | 18-11-16 | 2d | 3d |
| 085 | Finish plumbing and electrical | 060, 075, 080 | 2d | 2d | 0% | 18-11-16 | 19-11-16 | 19-11-16 | 20-11-16 | 1d | 1d |
| 090 | Paint cabinets | 035, 085 | 6d | 6d | 0% | 21-11-16 | 26-11-16 | 21-11-16 | 26-11-16 | 0d | 0d |
| 095 | Paint walls and ceiling | 035, 085 | 3d | 3d | 0% | 21-11-16 | 23-11-16 | 24-11-16 | 26-11-16 | 3d | 3d |
| 100 | Lay vinyl floor | 090, 095, 010 | 1d | 1d | 0% | 27-11-16 | 27-11-16 | 27-11-16 | 27-11-16 | 0d | 0d |




Actual Work
Remaining Work
Critical Remaining W...
Milestone

| Date | Revision | Checked | Approved |
|---|---|---|---|
| 22-09-16 | Lab1-Rem Chem Lab -Target (DD=0d, T=27d) | PGI | PGI |
| | | | |

Course: CEE501-028
User: P.G. Ioannou

# TABLE 8.2

SCHEDULE 220 REMODELING CHEMICAL LABORATORY

P M A' S TRACE SYSTEM FOR PROJECT MANAGEMENT

SCHEDULE REPORT Sorted: BY EARLY START

BASE DATE 27 SEP 76 DATA DATE 27 SEP 76
FNSH DATE 2 NOV 76 CUTF DATE 30 JUL 76

LOWR SPAN 27 SEP 76 RUN DATE 4 JAN 77
UPPR SPAN 2 NOV 76 PERM 1

Filtered by:

PROCUREMENT ACTIVITIES

| ID CODE | ACTIVITY DESCRIPTION | DAYS LEFT | WORK WEEK | % COMP | START EARLY ( ) MEANS | START LATE ACTUAL | FINISH EARLY ( ) MEANS | FINISH LATE ACTUAL | TOTAL FLOAT | FREE FLOAT |
|---|---|---|---|---|---|---|---|---|---|---|
| 5 | CONTRACT AWARD | 0.0 | 71 | 0 | 27SEP76 | 27SEP76 | 27SEP76 | 27SEP76 | 0.0 | 0.0 |
| 10 | OBTAIN VINYL FLOOR COVERING | 5.0 | 51 | 0 | 27SEP76 | 26OCT76 | 1OCT76 | 1NOV76 | 21.0 | 21.0 |
| 15 | OBTAIN CABINETS | 10.0 | 51 | 0 | 27SEP76 | 30SEP76 | 8OCT76 | 13OCT76 | 3.0 | 2.0 |
| 25 | OBTAIN FUME HOOD | 10.0 | 51 | 0 | 27SEP76 | 1OCT76 | 8OCT76 | 14OCT76 | 4.0 | 2.0 |
| 30 | OBTAIN CHEMICAL SINK | 10.0 | 51 | 0 | 27SEP76 | 6OCT76 | 8OCT76 | 19OCT76 | 7.0 | 4.0 |
| 35 | PAINTER AVAILABILITY | 20.0 | 51 | 0 | 27SEP76 | 27SEP76 | 22OCT76 | 22OCT76 | 0.0 | 0.0 |

ARCHITECTURAL WORK

| ID CODE | ACTIVITY DESCRIPTION | DAYS LEFT | WORK WEEK | % COMP | START EARLY ( ) MEANS | START LATE ACTUAL | FINISH EARLY ( ) MEANS | FINISH LATE ACTUAL | TOTAL FLOAT | FREE FLOAT |
|---|---|---|---|---|---|---|---|---|---|---|
| 20 | STRIP ROOM | 3.0 | 51 | 0 | 27SEP76 | 28SEP76 | 29SEP76 | 30SEP76 | 1.0 | 0.0 |
| 50 | REPAIR WALLS & CEILING | 4.0 | 51 | 0 | 7OCT76 | 8OCT76 | 12OCT76 | 13OCT76 | 1.0 | 0.0 |
| 55 | REPAIR FLOOR | 1.0 | 51 | 0 | 7OCT76 | 13OCT76 | 7OCT76 | 13OCT76 | 4.0 | 3.0 |
| 90 | PAINT CABINETS | 6.0 | 51 | 0 | 25OCT76 | 25OCT76 | 1NOV76 | 1NOV76 | 0.0 | 0.0 |
| 95 | PAINT WALLS & CEILING | 3.0 | 51 | 0 | 25OCT76 | 28OCT76 | 27OCT76 | 1NOV76 | 3.0 | 3.0 |
| 100 | LAY VINYL FLOOR | 1.0 | 51 | 0 | 2NOV76 | 2NOV76 | 2NOV76 | 2NOV76 | 0.0 | 0.0 |

FURNISHINGS/EQUIPMENT

| ID CODE | ACTIVITY DESCRIPTION | DAYS LEFT | WORK WEEK | % COMP | START EARLY ( ) MEANS | START LATE ACTUAL | FINISH EARLY ( ) MEANS | FINISH LATE ACTUAL | TOTAL FLOAT | FREE FLOAT |
|---|---|---|---|---|---|---|---|---|---|---|
| 60 | INSTALL WALL CABINETS | 5.0 | 51 | 0 | 13OCT76 | 14OCT76 | 19OCT76 | 20OCT76 | 1.0 | 0.0 |
| 65 | INSTALL NEW FUME HOOD | 1.0 | 51 | 0 | 13OCT76 | 15OCT76 | 13OCT76 | 15OCT76 | 2.0 | 0.0 |
| 70 | INSTALL 1/3 BASE CABINETS | 1.0 | 51 | 0 | 14OCT76 | 18OCT76 | 14OCT76 | 18OCT76 | 2.0 | 0.0 |
| 75 | INSTALL 2/3 BASE CABINETS | 2.0 | 51 | 0 | 15OCT76 | 19OCT76 | 18OCT76 | 20OCT76 | 2.0 | 1.0 |
| 80 | INSTALL CHEMICAL SINK | 1.0 | 51 | 0 | 15OCT76 | 20OCT76 | 15OCT76 | 20OCT76 | 3.0 | 2.0 |

PERMANENT MECH & ELEC

| ID CODE | ACTIVITY DESCRIPTION | DAYS LEFT | WORK WEEK | % COMP | START EARLY ( ) MEANS | START LATE ACTUAL | FINISH EARLY ( ) MEANS | FINISH LATE ACTUAL | TOTAL FLOAT | FREE FLOAT |
|---|---|---|---|---|---|---|---|---|---|---|
| 40 | REPLACE EXISTING FUME DUCT | 3.0 | 51 | 0 | 30SEP76 | 5OCT76 | 4OCT76 | 7OCT76 | 3.0 | 2.0 |
| 45 | ROUGH IN PLUMBING & ELECTRICAL | 5.0 | 51 | 0 | 30SEP76 | 1OCT76 | 6OCT76 | 7OCT76 | 1.0 | 0.0 |
| 85 | FINISH PLUMBING & ELECTRICAL | 2.0 | 51 | 0 | 20OCT76 | 21OCT76 | 21OCT76 | 22OCT76 | 1.0 | 1.0 |

WORK WEEK = DAYS-PER-WEEK, START DAY, CALENDAR S2 = SCHEDULED DATE, TYPE II
TOTAL FLOAT = MAXIMUM DAY DELAY FREE FLOAT = ALLOWABLE DAY DELAY
TOTAL DURATION (CALENDAR DAYS) = 37

For field use
(e.g., superintendent)

# TABLE 8.3

SCHEDULE 220 REMODELING CHEMICAL LABORATORY

P M A' S TRACE SYSTEM FOR PROJECT MANAGEMENT

WORKPLAN REPORT BY EARLY START

BASE DATE 27 SEP 76 DATA DATE 27 SEP 76
FNSH DATE 2 NOV 76 CUTF DATE 30 JUL 76

LOWR SPAN 27 SEP 76 RUN DATE 4 JAN 77
UPPR SPAN 2 NOV 76 PERM 1

| ACTIVITY | DESCRIPTION | DAYS LEFT | % COMP | EARLY START | EARLY FINISH | ALLOWABLE DAY-DELAY | MAXIMUM DAY-DELAY | REMARKS |
|---|---|---|---|---|---|---|---|---|
| 5 | CONTRACT AWARD | 0 | 0 | 27SEP76 | 27SEP76 | 0 | 0 | |
| 10 | OBTAIN VINYL FLOOR COVERING | 5 | 0 | 27SEP76 | 10CT76 | 21 | 21 | |
| 15 | OBTAIN CABINETS | 10 | 0 | 27SEP76 | 80CT76 | 2 | 3 | |
| 20 | STRIP ROOM | 3 | 0 | 27SEP76 | 29SEP76 | 0 | 1 | |
| 25 | OBTAIN FUME HOOD | 10 | 0 | 27SEP76 | 80CT76 | 2 | 4 | |
| 30 | OBTAIN CHEMICAL SINK | 10 | 0 | 27SEP76 | 80CT76 | 4 | 7 | |
| 35 | PAINTER AVAILABILITY | 20 | 0 | 27SEP76 | 220CT76 | 0 | 0 | |
| 40 | REPLACE EXISTING FUME DUCT | 3 | 0 | 30SEP76 | 40CT76 | 2 | 3 | |
| 45 | ROUGH IN PLUMBING & ELECTRICAL | 5 | 0 | 30SEP76 | 60CT76 | 0 | 1 | |
| 50 | REPAIR WALLS & CEILING | 4 | 0 | 70CT76 | 120CT76 | 0 | 1 | |
| 55 | REPAIR FLOOR | 1 | 0 | 70CT76 | 70CT76 | 3 | 4 | |
| 60 | INSTALL WALL CABINETS | 5 | 0 | 130CT76 | 190CT76 | 0 | 1 | |
| 65 | INSTALL NEW FUME HOOD | 1 | 0 | 130CT76 | 130CT76 | 0 | 2 | |
| 70 | INSTALL 1/3 BASE CABINETS | 1 | 0 | 140CT76 | 140CT76 | 0 | 2 | |
| 75 | INSTALL 2/3 BASE CABINETS | 2 | 0 | 150CT76 | 180CT76 | 1 | 2 | |
| 80 | INSTALL CHEMICAL SINK | 1 | 0 | 150CT76 | 150CT76 | 2 | 3 | |
| 85 | FINISH PLUMBING & ELECTRICAL | 2 | 0 | 200CT76 | 210CT76 | 1 | 1 | |
| 90 | PAINT CABINETS | 6 | 0 | 250CT76 | 1NOV76 | 0 | 0 | |
| 95 | PAINT WALLS & CEILING | 3 | 0 | 250CT76 | 270CT76 | 3 | 3 | |
| 100 | LAY VINYL FLOOR | 1 | 0 | 2NOV76 | 2NOV76 | 0 | 0 | |

| ACTIVITY | DESCRIPTION | WORK DAYS | % COMP | START ( ) MEANS ACTUAL | FINISH | FREE FLOAT | TOTAL FLOAT | REMARKS |
|---|---|---|---|---|---|---|---|---|

For field use
(e.g., foreman)

# TABLE 8.4

SCHEDULE 220 REMODELING CHEMICAL LABORATORY

P M A' S **TRACE** SYSTEM FOR PROJECT MANAGEMENT

WORKPLAN REPORT BY EARLY START

BASE DATE 27 SEP 76 DATA DATE 27 SEP 76
FNSH DATE 2 NOV 76 CUTF DATE 30 JUL 76

LOWR SPAN 27 SEP 76 RUN DATE 4 JAN 77
UPPR SPAN 2 NOV 76 PERM 1

PROCJREMENT ACTIVITIES

| ACTIVITY | DESCRIPTION | DAYS LEFT | % COMP | EARLY START | EARLY FINISH | ALLOWABLE DAY-DELAY | MAXIMUM DAY-DELAY | REMARKS |
|---|---|---|---|---|---|---|---|---|
| 5 | CONTRACT AWARD | 0 | 0 | 27SEP76 | 27SEP76 | 0 | 0 | |
| 10 | OBTAIN VINYL FLOOR COVERING | 5 | 0 | 27SEP76 | 10CT76 | 21 | 21 | |
| 15 | OBTAIN CABINETS | 10 | 0 | 27SEP76 | 80CT76 | 2 | 3 | |
| 25 | OBTAIN FUME HOOD | 10 | 0 | 27SEP76 | 80CT76 | 2 | 4 | |
| 30 | OBTAIN CHEMICAL SINK | 10 | 0 | 27SEP76 | 80CT76 | 4 | 7 | |
| 35 | PAINTER AVAILABILITY | 20 | 0 | 27SEP76 | 220CT76 | 0 | 0 | |

ARCHITECTURAL WORK — LAST PROGRESS REPORT: 27SEP76

| ACTIVITY | DESCRIPTION | WORK DAYS | % COMP | START ( ) MEANS | FINISH ACTUAL | FREE FLOAT | TOTAL FLOAT | REMARKS |
|---|---|---|---|---|---|---|---|---|
| 20 | STRIP ROOM | 3 | 0 | 27SEP76 | 29SEP76 | 0 | 1 | |
| 50 | REPAIR WALLS & CEILING | 4 | 0 | 70CT76 | 120CT76 | 0 | 1 | |
| 55 | REPAIR FLOOR | 1 | 0 | 70CT76 | 70CT76 | 3 | 4 | |
| 90 | PAINT CABINETS | 6 | 0 | 250CT76 | 1NOV76 | 0 | 0 | |
| 95 | PAINT WALLS & CEILING | 3 | 0 | 250CT76 | 270CT76 | 3 | 3 | |
| 100 | LAY VINYL FLOOR | 1 | 0 | 2NOV76 | 2NOV76 | 0 | 0 | |

FURNISHINGS/EQUIPMENT — LAST PROGRESS REPORT: 27SEP76

| ACTIVITY | DESCRIPTION | DAYS LEFT | % COMP | EARLY START | EARLY FINISH | ALLOWABLE DAY-DELAY | MAXIMUM DAY-DELAY | REMARKS |
|---|---|---|---|---|---|---|---|---|
| 60 | INSTALL WALL CABINETS | 5 | 0 | 130CT76 | 190CT76 | 0 | 1 | |
| 65 | INSTALL NEW FUME HOOD | 1 | 0 | 130CT76 | 130CT76 | 0 | 2 | |
| 70 | INSTALL 1/3 BASE CABINETS | 1 | 0 | 140CT76 | 140CT76 | 0 | 2 | |
| 75 | INSTALL 2/3 BASE CABINETS | 2 | 0 | 150CT76 | 180CT76 | 1 | 2 | |
| 80 | INSTALL CHEMICAL SINK | 1 | 0 | 150CT76 | 150CT76 | 2 | 3 | |

PERMANENT MECH & ELEC — LAST PROGRESS REPORT: 27SEP76

| ACTIVITY | DESCRIPTION | WORK DAYS | % COMP | START ( ) MEANS | FINISH ACTUAL | FREE FLOAT | TOTAL FLOAT | REMARKS |
|---|---|---|---|---|---|---|---|---|
| 40 | REPLACE EXISTING FUME DUCT | 3 | 0 | 30SEP76 | 40CT76 | 2 | 3 | |
| 45 | ROUGH IN PLUMBING & ELECTRICAL | 5 | 0 | 30SEP76 | 60CT76 | 0 | 1 | |
| 85 | FINISH PLUMBING & ELECTRICAL | 2 | 0 | 200CT76 | 210CT76 | 1 | 1 | |

| ACTIVITY | DESCRIPTION | DAYS LEFT | % COMP | EARLY START | EARLY FINISH | ALLOWABLE DAY-DELAY | MAXIMUM DAY-DELAY | REMARKS |
|---|---|---|---|---|---|---|---|---|

TABLE 8.5

SCHEDULE 220 REMODELING CHEMICAL LABORATORY

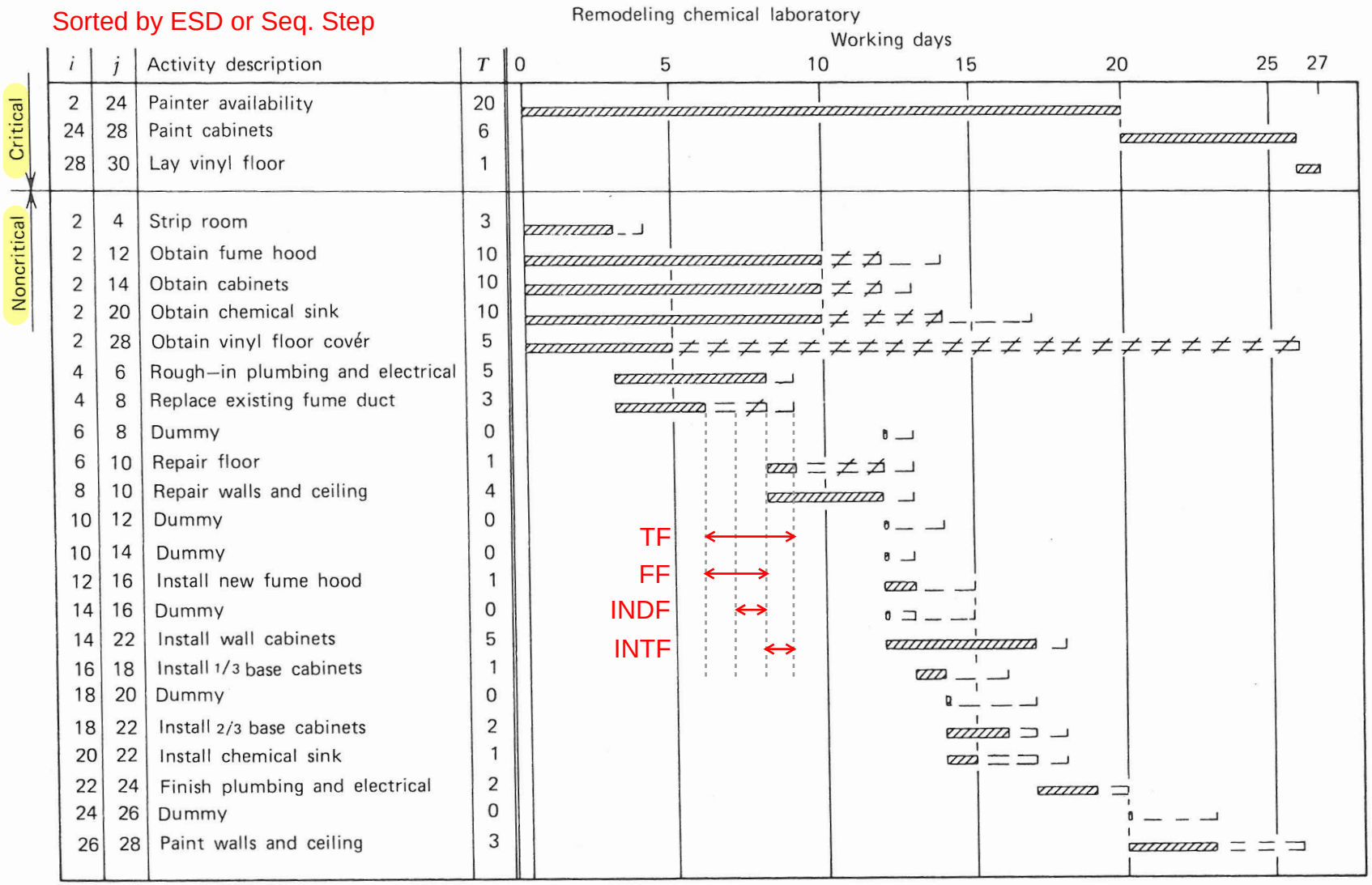
P M A' S **TRACE** SYSTEM FOR PROJECT MANAGEMENT

NETWORK ANALYSIS REPORT BY ACTIVITY CODE

BASE DATE 27 SEP 76 DATA DATE 27 SEP 76
FNSH DATE 2 NOV 76 CUTF DATE 30 JUL 76
LOWR SPAN 27 SEP 76 RUN DATE 31 DEC 76
UPPR SPAN 2 NOV 76 PERM 1
PAGE 1

| PREDECESSOR ID CODE & DESCRIPTION / ACTIVITY ID CODE & DESCRIPTION / SUCCESSOR ID CODE & DESCRIPTION | --LINK-- LEAD TIME | LAG | DAYS LEFT | % COMP | --START DATES-- (ONLY PRINTED FOR RELEVANT LINKS) EARLY | LATE | -FINISH DATES- EARLY | LATE | TOTAL FLOAT | ORGANIZATION CODES LEVL 1 | LEVL 2 | LEVL 3 | LEVL 4 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **5 CONTRACT AWARD** | | | **0** | **0** | **27SEP76** | **27SEP76** | **27SEP76** | **27SEP76** | **0** | **100** | | | |
| 10 OBTAIN VINYL FLOOR COVERING | 0 | 0 | 5 | | 27SEP76 | 26OCT76 | | | 21 | | | | |
| 15 OBTAIN CABINETS | 0 | 0 | 10 | | 27SEP76 | 30SEP76 | | | 3 | | | | |
| 20 STRIP ROOM | 0 | 0 | 3 | | 27SEP76 | 28SEP76 | | | 1 | | | | |
| 25 OBTAIN FUME HOOD | 0 | 0 | 10 | | 27SEP76 | 10CT76 | | | 4 | | | | |
| 30 OBTAIN CHEMICAL SINK | 0 | 0 | 10 | | 27SEP76 | 60CT76 | | | 7 | | | | |
| 35 PAINTER AVAILABILITY | 0 | 0 | 20 | | 27SEP76 | 27SEP76 | | | 0 | | | | |
| 5 CONTRACT AWARD | 0 | 0 | 0 | | | | 27SEP76 | 27SEP76 | 0 | | | | |
| **10 OBTAIN VINYL FLOOR COVERING** | | | **5** | **0** | **27SEP76** | **26OCT76** | **10CT76** | **1NOV76** | **21** | **100** | | | |
| 100 LAY VINYL FLOOR | 0 | 21 | 1 | | 2NOV76 | 2NOV76 | | | 0 | | | | |
| 5 CONTRACT AWARD | 0 | 0 | 0 | | | | 27SEP76 | 27SEP76 | 0 | | | | |
| **15 OBTAIN CABINETS** | | | **10** | **0** | **27SEP76** | **30SEP76** | **80CT76** | **130CT76** | **3** | **100** | | | |
| 60 INSTALL WALL CABINETS | 0 | 2 | 5 | | 130CT76 | 140CT76 | | | 1 | | | | |
| 70 INSTALL 1/3 BASE CABINETS | 0 | 3 | 1 | | 140CT76 | 180CT76 | | | 2 | | | | |
| 5 CONTRACT AWARD | 0 | 0 | 0 | | | | 27SEP76 | 27SEP76 | 0 | | | | |
| **20 STRIP ROOM** | | | **3** | **0** | **27SEP76** | **28SEP76** | **29SEP76** | **30SEP76** | **1** | **900** | | | |
| 40 REPLACE EXISTING FUME DUCT | 0 | 0 | 3 | | 30SEP76 | 50CT76 | | | 3 | | | | |
| 45 ROUGH IN PLUMBING & ELECTRICAL | 0 | 0 | 5 | | 30SEP76 | 10CT76 | | | 1 | | | | |
| 5 CONTRACT AWARD | 0 | 0 | 0 | | | | 27SEP76 | 27SEP76 | 0 | | | | |
| **25 OBTAIN FUME HOOD** | | | **10** | **0** | **27SEP76** | **10CT76** | **80CT76** | **140CT76** | **4** | **100** | | | |
| 65 INSTALL NEW FUME HOOD | 0 | 2 | 1 | | 130CT76 | 150CT76 | | | 2 | | | | |
| 5 CONTRACT AWARD | 0 | 0 | 0 | | | | 27SEP76 | 27SEP76 | 0 | | | | |
| **30 OBTAIN CHEMICAL SINK** | | | **10** | **0** | **27SEP76** | **60CT76** | **80CT76** | **190CT76** | **7** | **100** | | | |
| 80 INSTALL CHEMICAL SINK | 0 | 4 | 1 | | 150CT76 | 200CT76 | | | 3 | | | | |
| 5 CONTRACT AWARD | 0 | 0 | 0 | | | | 27SEP76 | 27SEP76 | 0 | | | | |
| **35 PAINTER AVAILABILITY** | | | **20** | **0** | **27SEP76** | **27SEP76** | **220CT76** | **220CT76** | **0** | **100** | | | |
| 90 PAINT CABINETS | 0 | 0 | 6 | | 250CT76 | 250CT76 | | | 0 | | | | |
| 95 PAINT WALLS & CEILING | 0 | 0 | 3 | | 250CT76 | 280CT76 | | | 3 | | | | |
| 20 STRIP ROOM | 0 | 0 | 3 | | | | 29SEP76 | 30SEP76 | 1 | | | | |
| **40 REPLACE EXISTING FUME DUCT** | | | **3** | **0** | **30SEP76** | **50CT76** | **40CT76** | **70CT76** | **3** | **1500** | | | |
| 50 REPAIR WALLS & CEILING | 0 | 2 | 4 | | 70CT76 | 80CT76 | | | 1 | | | | |
| 20 STRIP ROOM | 0 | 0 | 3 | | | | 29SEP76 | 30SEP76 | 1 | | | | |
| **45 ROUGH IN PLUMBING & ELECTRICAL** | | | **5** | **0** | **30SEP76** | **10CT76** | **60CT76** | **70CT76** | **1** | **1500** | | | |
| 50 REPAIR WALLS & CEILING | 0 | 0 | 4 | | 70CT76 | 80CT76 | | | 1 | | | | |
| 55 REPAIR FLOOR | 0 | 0 | 1 | | 70CT76 | 130CT76 | | | 4 | | | | |

Sorted by ESD or Seq. Step




| | $i$ | $j$ | Activity description | $T$ |
|---|---|---|---|---|
| Critical | 2 | 24 | Painter availability | 20 |
| | 24 | 28 | Paint cabinets | 6 |
| | 28 | 30 | Lay vinyl floor | 1 |
| Noncritical | 2 | 4 | Strip room | 3 |
| | 2 | 12 | Obtain fume hood | 10 |
| | 2 | 14 | Obtain cabinets | 10 |
| | 2 | 20 | Obtain chemical sink | 10 |
| | 2 | 28 | Obtain vinyl floor covér | 5 |
| | 4 | 6 | Rough–in plumbing and electrical | 5 |
| | 4 | 8 | Replace existing fume duct | 3 |
| | 6 | 8 | Dummy | 0 |
| | 6 | 10 | Repair floor | 1 |
| | 8 | 10 | Repair walls and ceiling | 4 |
| | 10 | 12 | Dummy | 0 |
| | 10 | 14 | Dummy | 0 |
| | 12 | 16 | Install new fume hood | 1 |
| | 14 | 16 | Dummy | 0 |
| | 14 | 22 | Install wall cabinets | 5 |
| | 16 | 18 | Install 1/3 base cabinets | 1 |
| | 18 | 20 | Dummy | 0 |
| | 18 | 22 | Install 2/3 base cabinets | 2 |
| | 20 | 22 | Install chemical sink | 1 |
| | 22 | 24 | Finish plumbing and electrical | 2 |
| | 24 | 26 | Dummy | 0 |
| | 26 | 28 | Paint walls and ceiling | 3 |

*Figure 8.1 Bar chart from arrow network computations.*

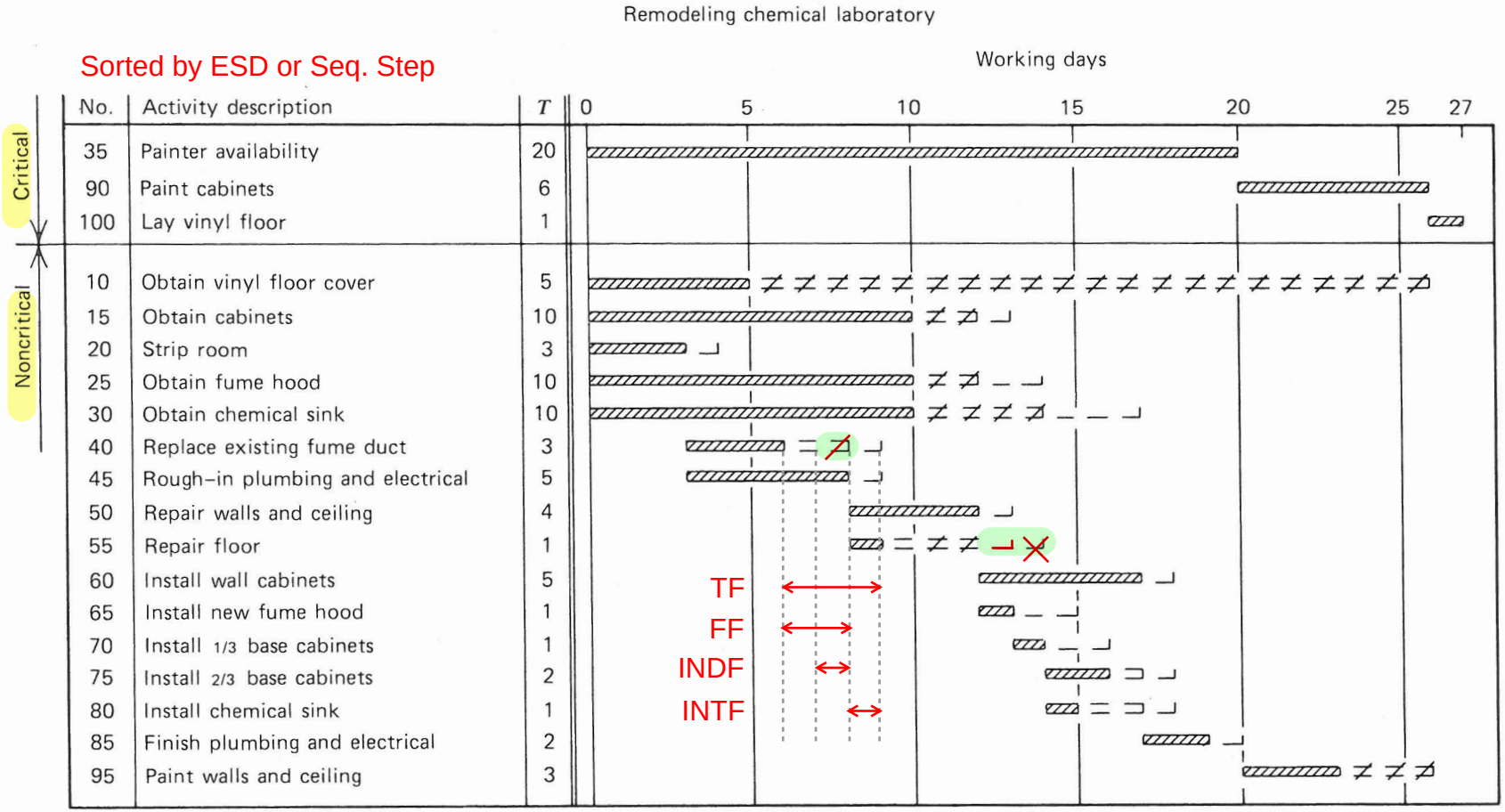



*Figure 8.2 Bar chart from precedence network computations.*

REMODELING CHEMICAL LABORATORY

P M A' S TRACE SYSTEM FOR PROJECT MANAGEMENT

DAILYBAR BY EARLY START

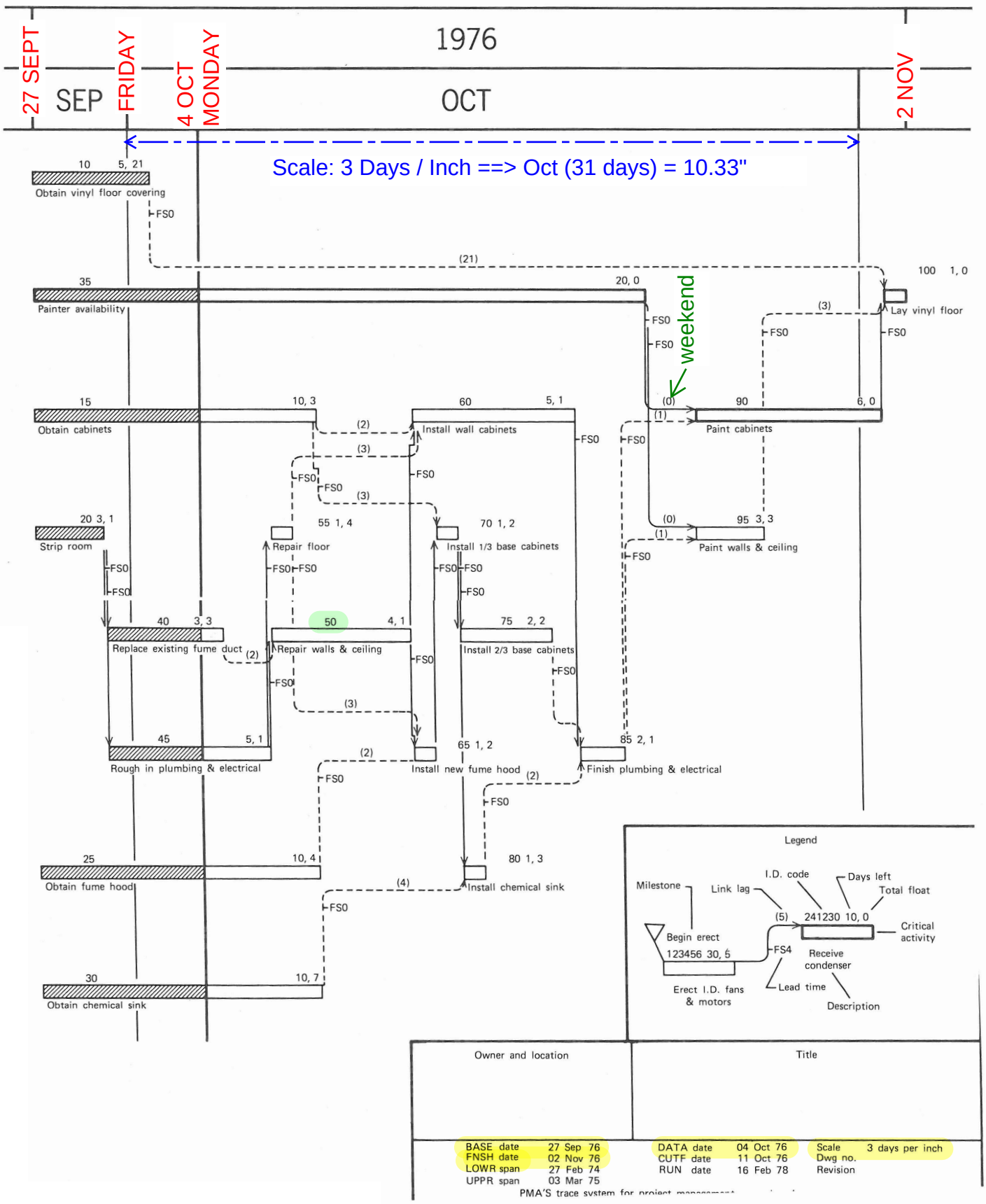
BASE DATE 27 SEP 76 DATA DATE 27 SEP 76
FNSH DATE 2 NOV 76 CUTF DATE 30 JUL 76
LOWR SPAN 27 SEP 76 RUN DATE 4 JAN 77
UPPR SPAN 2 NOV 76 PERM 1

| ACTIVITY | DESCRIPTION | DAYS LEFT | % COMP | MAX DELAY | MTWTFS MTWTFS 27SEP76 | MTWTFS MTWTFS 11OCT76 | MTWTFS MTWTFS 25OCT76 | MTWTFS MTWTFS 8NOV76 |
|---|---|---|---|---|---|---|---|---|
| 5 | CONTRACT AWARD | 0 | 0 | 0 | D. | . | . | . |
| 10 | OBTAIN VINYL FLOOR COVERING | 5 | 0 | 21 | DIIIII | . | . | . |
| 15 | OBTAIN CABINETS | 10 | 0 | 3 | DIIIII | IIIII .FT | . | . |
| 20 | STRIP ROOM | 3 | 0 | 1 | DIIIT | . | . | . |
| 25 | OBTAIN FUME HOOD | 10 | 0 | 4 | DIIIII | IIIII .F_T | . | . |
| 30 | OBTAIN CHEMICAL SINK | 10 | 0 | 7 | DIIIII | IIIII ._F | .T . | . |
| 35 | PAINTER AVAILABILITY | 20 | 0 | 0 | DCCCCC | CCCCC | CCCCC CCCCC | . |
| 40 | REPLACE EXISTING FUME DUCT | 3 | 0 | 3 | D. II | I_FT | . . | . |
| 45 | ROUGH IN PLUMBING & ELECTRICAL | 5 | 0 | 1 | D. II | IIIT | . . | . |
| 50 | REPAIR WALLS & CEILING | 4 | 0 | 1 | D. | . II | IIT . | . |
| 55 | REPAIR FLOOR | 1 | 0 | 4 | D. | . I | .FT . | . |
| 60 | INSTALL WALL CABINETS | 5 | 0 | 1 | D. | . | . III IIT | . |
| 65 | INSTALL NEW FUME HOOD | 1 | 0 | 2 | D. | . | . I T . | . |
| 70 | INSTALL 1/3 BASE CABINETS | 1 | 0 | 2 | D. | . | . I T | . |
| 75 | INSTALL 2/3 BASE CABINETS | 2 | 0 | 2 | D. | . | . I IFT | . |
| 80 | INSTALL CHEMICAL SINK | 1 | 0 | 3 | D. | . | . I .FT | . |
| 85 | FINISH PLUMBING & ELECTRICAL | 2 | 0 | 1 | D. | . | . . IIF | . |
| 90 | PAINT CABINETS | 6 | 0 | 0 | D. | . | . . | CCCCC C |
| 95 | PAINT WALLS & CEILING | 3 | 0 | 3 | D. | . | . . | III F |
| 100 | LAY VINYL FLOOR | 1 | 0 | 0 | D. | . | . . | . .C |

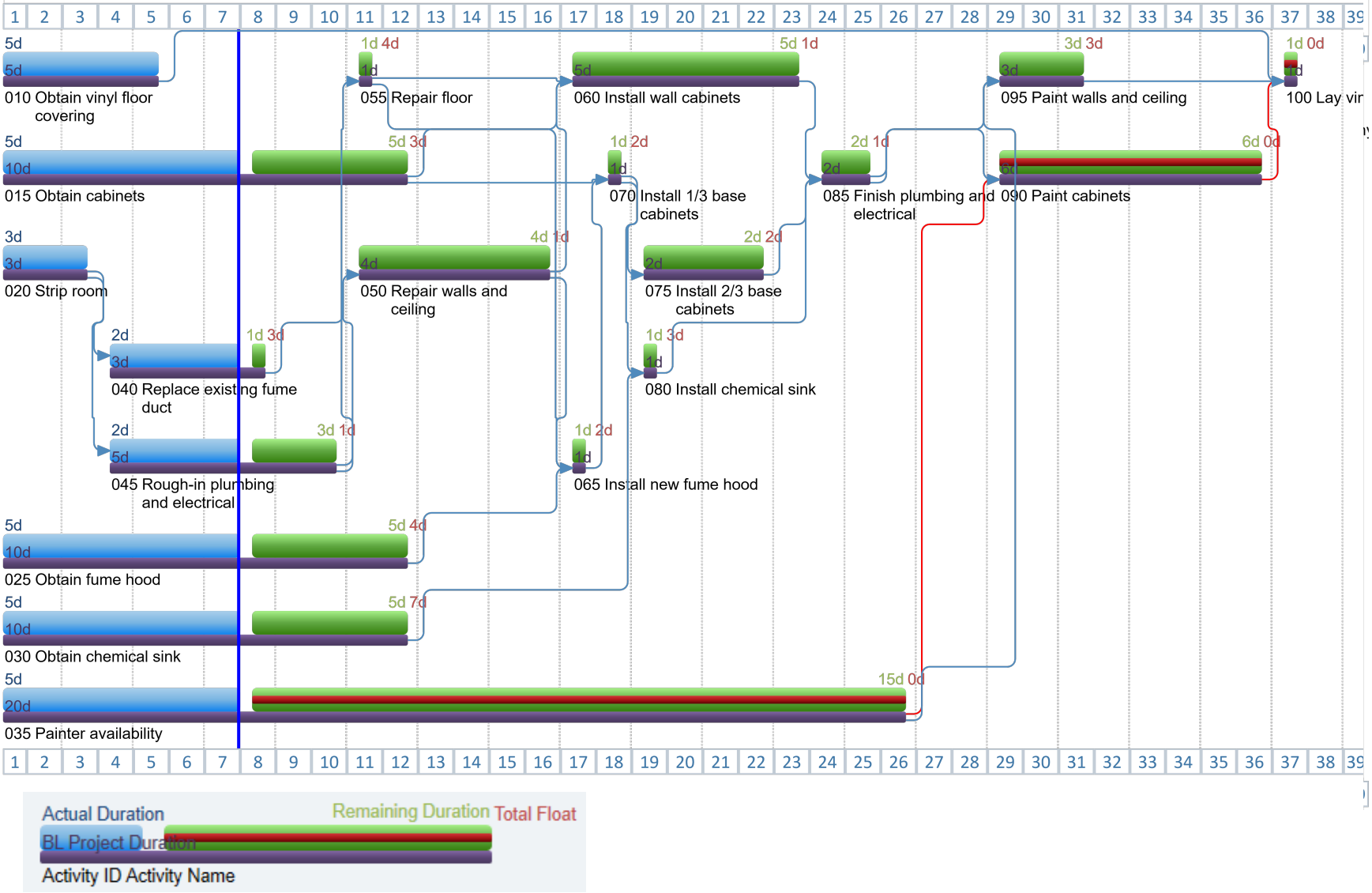
| ACTIVITY | DESCRIPTION | DAYS LEFT | % COMP | TOTAL FLOAT | MTWTFS MTWTFS 27SEP76 | MTWTFS MTWTFS 11OCT76 | MTWTFS MTWTFS 25OCT76 | MTWTFS MTWTFS 8NOV76 |
|---|---|---|---|---|---|---|---|---|

X = COMPLETED DAYS OF WORK; I = REMAINING DAYS, NON-CRITICAL; C = REMAINING DAYS, CRITICAL; F = END OF FREE FLOAT (ALLOWABLE DELAY)
T = END OF TOTAL FLOAT (MAXIMUM DELAY); L = LATE START DATE (INDICATES SCHEDULE OVERRUN); D = DATA DATE (I.E. LAST PROGRESS REPORT)

***Figure 8.3 TRACE daily bar chart.***


27 SEPT
SEP
FRIDAY
4 OCT
MONDAY
1976
OCT
2 NOV
Scale: 3 Days / Inch ==> Oct (31 days) = 10.33"
weekend
10 5, 21
Obtain vinyl floor covering
35
Painter availability
20, 0
100 1, 0
Lay vinyl floor
15
Obtain cabinets
10, 3
60 5, 1
Install wall cabinets
90 6, 0
Paint cabinets
20 3, 1
Strip room
55 1, 4
Repair floor
70 1, 2
Install 1/3 base cabinets
95 3, 3
Paint walls & ceiling
40 3, 3
Replace existing fume duct
50 4, 1
Repair walls & ceiling
75 2, 2
Install 2/3 base cabinets
45 5, 1
Rough in plumbing & electrical
65 1, 2
Install new fume hood
85 2, 1
Finish plumbing & electrical
25
Obtain fume hood
10, 4
80 1, 3
Install chemical sink
30
Obtain chemical sink
10, 7
FS0
FS4
Legend
Milestone
Link lag
I.D. code
Days left
Total float
(5)
241230 10, 0
Critical activity
Begin erect
123456 30, 5
Erect I.D. fans & motors
Receive condenser
Lead time
Description
Owner and location
Title
BASE date 27 Sep 76
FNSH date 02 Nov 76
LOWR span 27 Feb 74
UPPR span 03 Mar 75
DATA date 04 Oct 76
CUTF date 11 Oct 76
RUN date 16 Feb 78
Scale 3 days per inch
Dwg no.
Revision
PMA'S trace system for project management

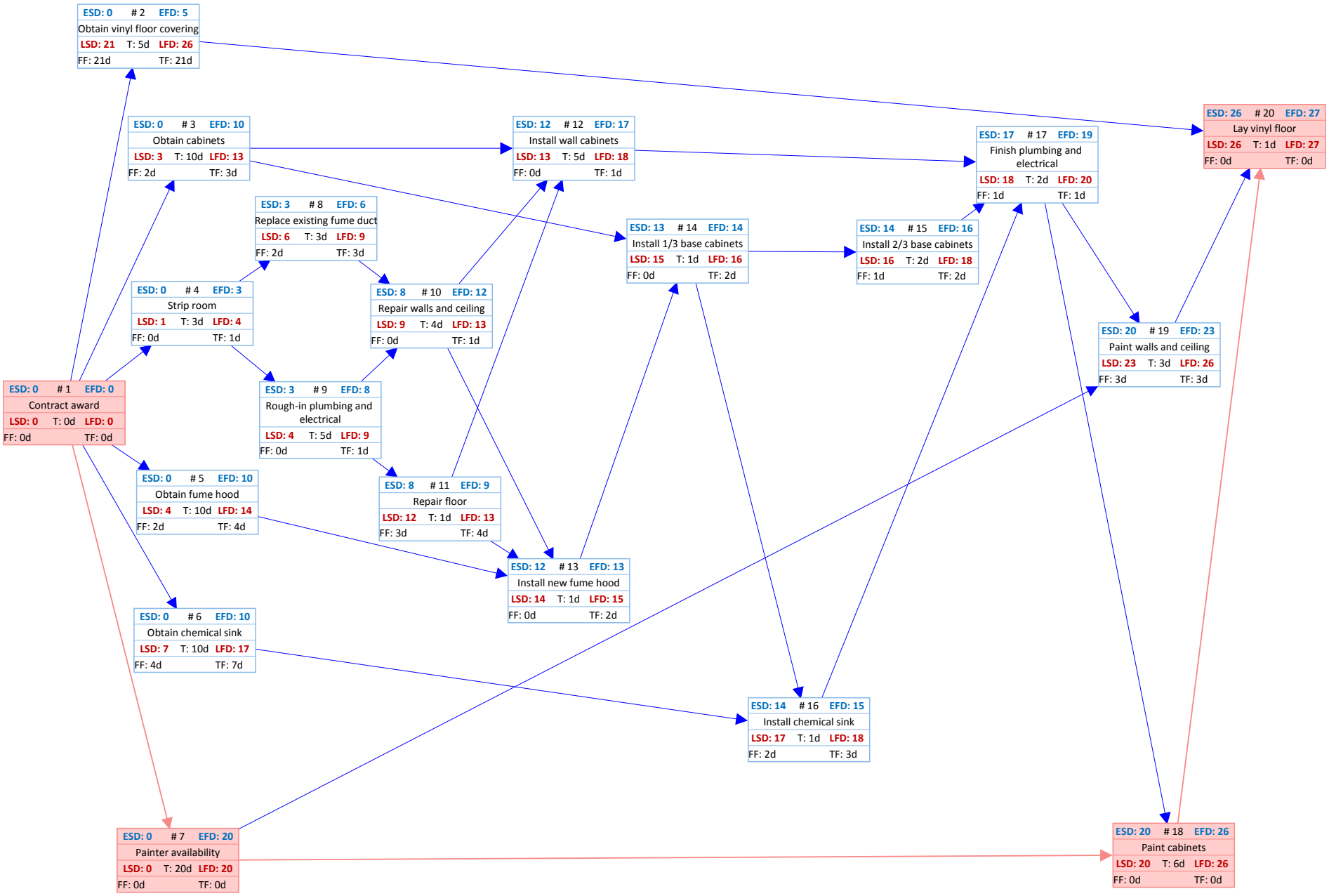
| Primavera P6 Professional - Visualizer | Communicating the Schedule \| Example similar to Fig. 8.4 | |
|---|---|---|



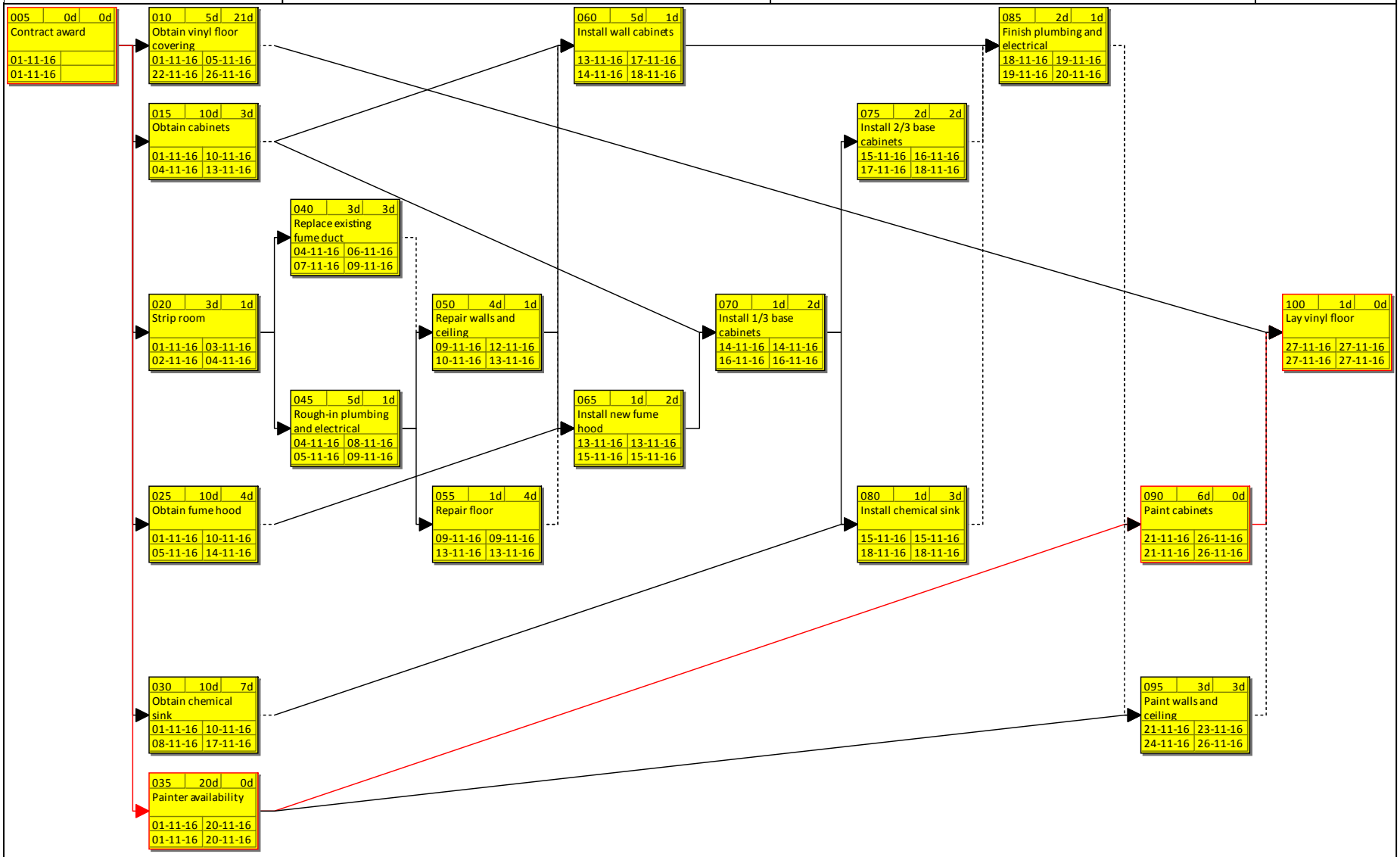




| | | | |
|---|---|---|---|
| Data Date 04-10-21<br>Project Start 27-09-21<br>Project Finish 02-11-21 | Actual Work<br>Baseline<br>Remaining Work<br>Critical Remaining Wor<br>Summary | Time-Scaled Logic Diagram (TSLD)<br>5-Day-Week Standard Calendar<br>Project starts on Monday<br>Schedule shows weekend gaps<br>37 calendar days = 27 working days | User: P.G. Ioannou |


ESD: 0 # 2 EFD: 5
Obtain vinyl floor covering
LSD: 21 T: 5d LFD: 26
FF: 21d TF: 21d
ESD: 0 # 3 EFD: 10
Obtain cabinets
LSD: 3 T: 10d LFD: 13
FF: 2d TF: 3d
ESD: 12 # 12 EFD: 17
Install wall cabinets
LSD: 13 T: 5d LFD: 18
FF: 0d TF: 1d
ESD: 26 # 20 EFD: 27
Lay vinyl floor
LSD: 26 T: 1d LFD: 27
FF: 0d TF: 0d
ESD: 17 # 17 EFD: 19
Finish plumbing and electrical
LSD: 18 T: 2d LFD: 20
FF: 1d TF: 1d
ESD: 3 # 8 EFD: 6
Replace existing fume duct
LSD: 6 T: 3d LFD: 9
FF: 2d TF: 3d
ESD: 13 # 14 EFD: 14
Install 1/3 base cabinets
LSD: 15 T: 1d LFD: 16
FF: 0d TF: 2d
ESD: 14 # 15 EFD: 16
Install 2/3 base cabinets
LSD: 16 T: 2d LFD: 18
FF: 1d TF: 2d
ESD: 0 # 4 EFD: 3
Strip room
LSD: 1 T: 3d LFD: 4
FF: 0d TF: 1d
ESD: 8 # 10 EFD: 12
Repair walls and ceiling
LSD: 9 T: 4d LFD: 13
FF: 0d TF: 1d
ESD: 20 # 19 EFD: 23
Paint walls and ceiling
LSD: 23 T: 3d LFD: 26
FF: 3d TF: 3d
ESD: 0 # 1 EFD: 0
Contract award
LSD: 0 T: 0d LFD: 0
FF: 0d TF: 0d
ESD: 3 # 9 EFD: 8
Rough-in plumbing and electrical
LSD: 4 T: 5d LFD: 9
FF: 0d TF: 1d
ESD: 0 # 5 EFD: 10
Obtain fume hood
LSD: 4 T: 10d LFD: 14
FF: 2d TF: 4d
ESD: 8 # 11 EFD: 9
Repair floor
LSD: 12 T: 1d LFD: 13
FF: 3d TF: 4d
ESD: 12 # 13 EFD: 13
Install new fume hood
LSD: 14 T: 1d LFD: 15
FF: 0d TF: 2d
ESD: 0 # 6 EFD: 10
Obtain chemical sink
LSD: 7 T: 10d LFD: 17
FF: 4d TF: 7d
ESD: 14 # 16 EFD: 15
Install chemical sink
LSD: 17 T: 1d LFD: 18
FF: 2d TF: 3d
ESD: 0 # 7 EFD: 20
Painter availability
LSD: 0 T: 20d LFD: 20
FF: 0d TF: 0d
ESD: 20 # 18 EFD: 26
Paint cabinets
LSD: 20 T: 6d LFD: 26
FF: 0d TF: 0d

| Primavera P6 Professionsl R15.1 | Project: Lab 1:ChemLab - Target Schedule | Layout: Lab1F16-Target-Table-Gantt-Network | Date: 22-09-16 |
|---|---|---|---|




Activity | naining | Total
Activity Name
Early Start | Early Finish
Late Start | Late Finish

| Date | Revision | Checked | Approved |
|---|---|---|---|
| 22-09-16 | Lab1-Rem Chem Lab -Target (DD=0d, T=27d) | PGI | PGI |
| | | | |
| | | | |

Course: CEE501-28
User: P.G. Ioannou

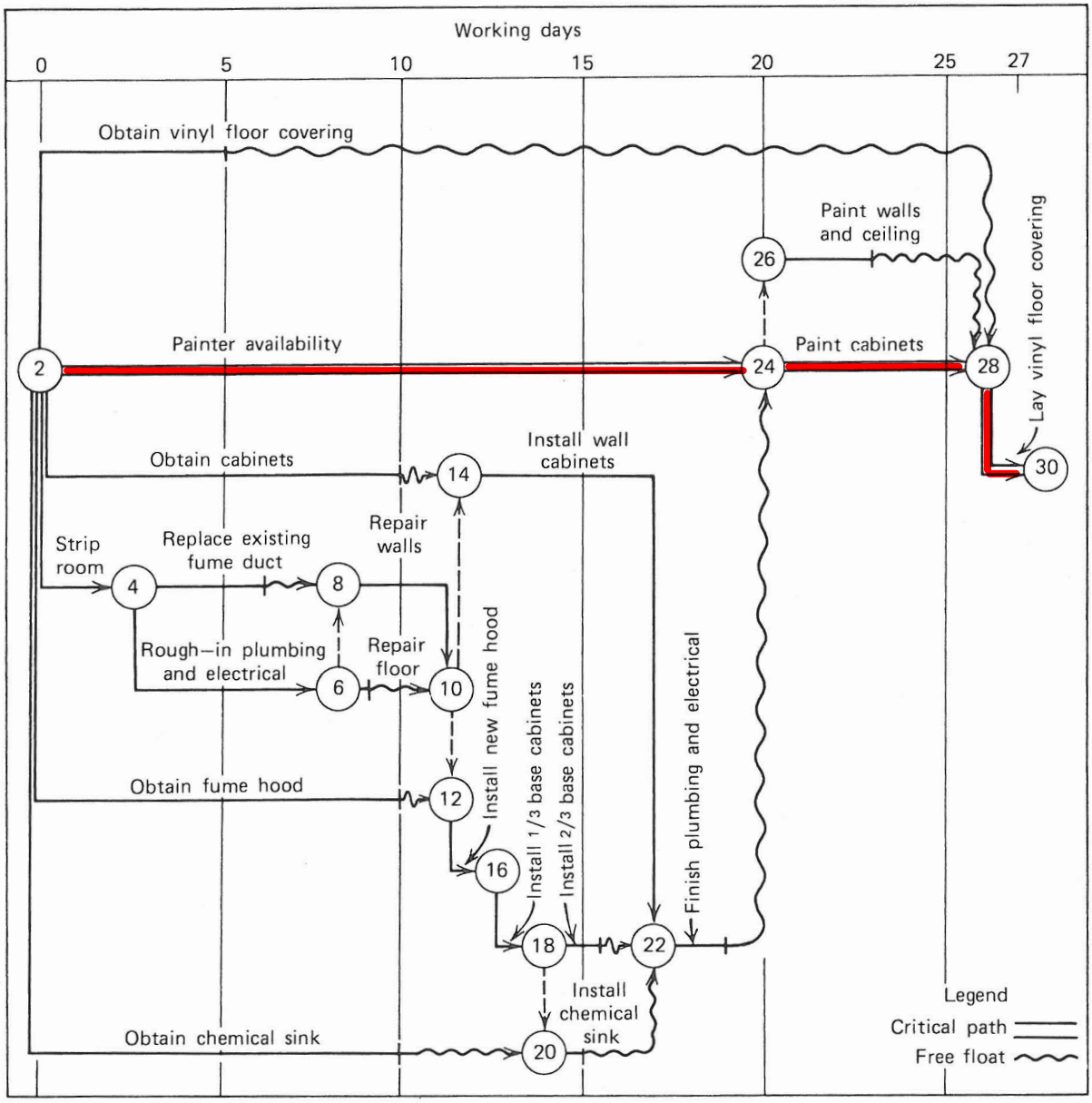



***Figure 8.5 Time-scaled arrow diagram—remodeling chemical laboratory.***

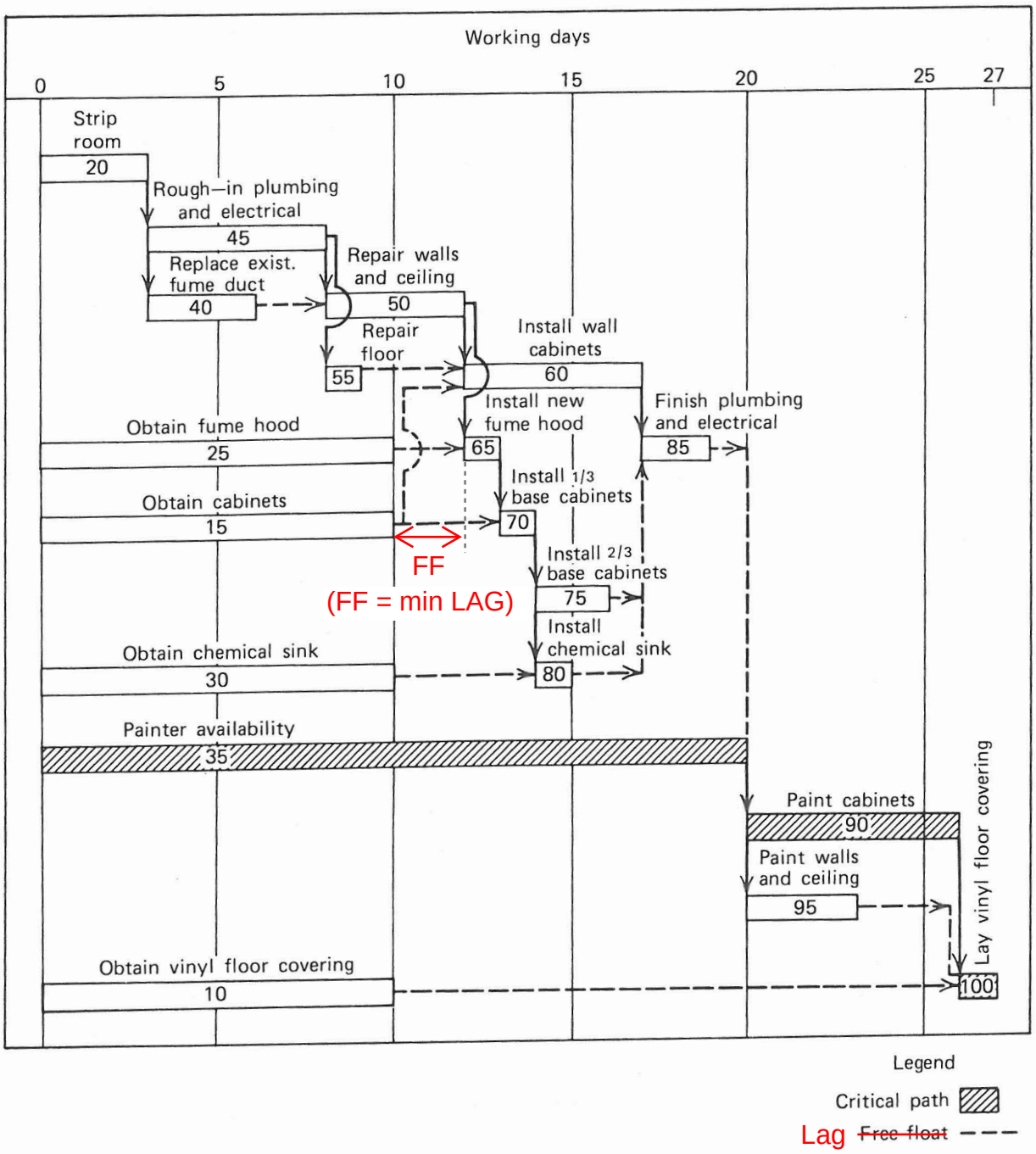
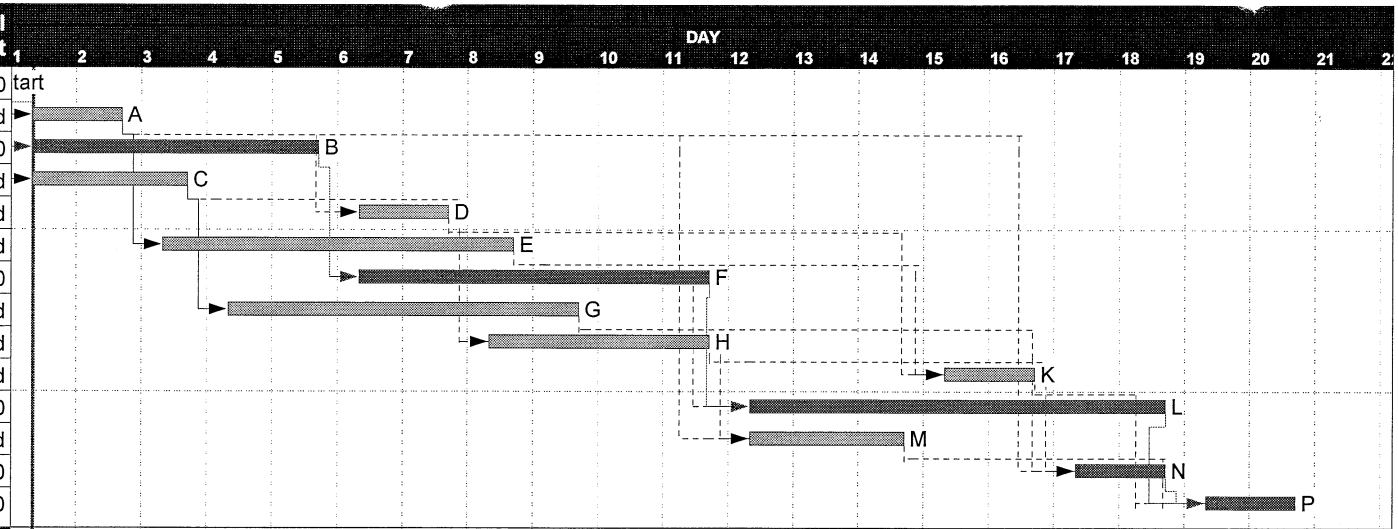
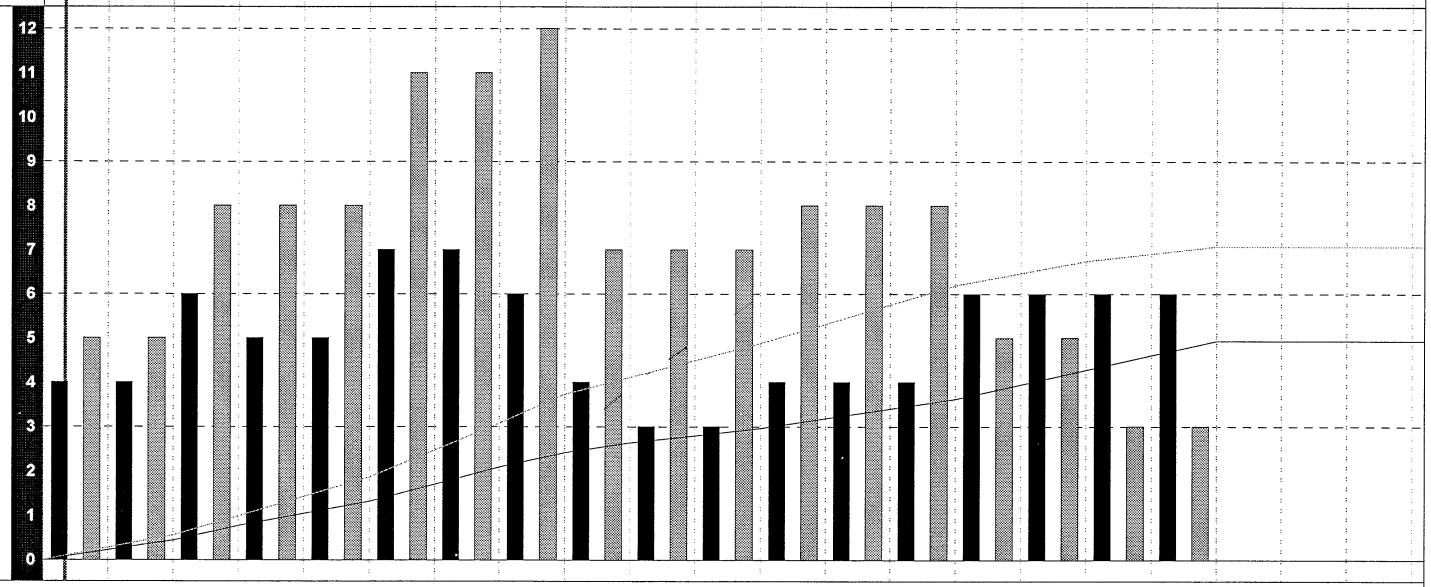


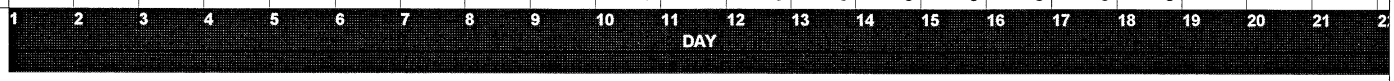

*Figure 8.6 Time-scaled precedence diagram—remodeling chemical laboratory.*

| Act ID | script | Orig Dur | Rem Dur | Early Start | Early Finish | Total Float |
|---|---|---|---|---|---|---|
| 1000 | Start | 0 | 0 | 24SEP97 | 23SEP97 | 0 |
| 1005 | A | 2d | 2d | 24SEP97 | 25SEP97 | 3d |
| 1010 | B | 5d | 5d | 24SEP97 | 28SEP97 | 0 |
| 1015 | C | 3d | 3d | 24SEP97 | 26SEP97 | 6d |
| 1020 | D | 2d | 2d | 29SEP97 * | 30SEP97 | 9d |
| 1025 | E | 6d | 6d | 26SEP97 | 01OCT97 | 3d |
| 1030 | F | 6d | 6d | 29SEP97 | 04OCT97 | 0 |
| 1035 | G | 6d | 6d | 27SEP97 | 02OCT97 | 6d |
| 1040 | H | 4d | 4d | 01OCT97 * | 04OCT97 | 5d |
| 1045 | K | 2d | 2d | 08OCT97 * | 09OCT97 | 2d |
| 1050 | L | 7d | 7d | 05OCT97 | 11OCT97 | 0 |
| 1055 | M | 3d | 3d | 05OCT97 * | 07OCT97 | 4d |
| 1060 | N | 2d | 2d | 10OCT97 * | 11OCT97 | 0 |
| 1065 | P | 2d | 2d | 12OCT97 | 13OCT97 | 0 |




| ID | Description | Units | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| RES1 | Resource 1 | | 4 | 4 | 6 | 5 | 5 | 7 | 7 | 6 | 4 | 3 | 3 | 4 | 4 | 4 | 6 | 6 | 6 | 6 | | | | | |
| RES2 | Resource 2 | | 5 | 5 | 8 | 8 | 8 | 11 | 11 | 12 | 7 | 7 | 7 | 8 | 8 | 8 | 5 | 5 | 3 | 3 | | | | | |




| | |
|---|---|
| Start date | 24SEP97 |
| Finish date | 13OCT97 |
| Data date | 24SEP97 |
| Run date | 25SEP97 |
| Page number | 1A |

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**Level Res. 1, and then Res. 2**
**Leveling Example Fig. 11.16**

Early bar
Progress bar
Critical bar
Summary bar
Start milestone point
Finish milestone point